ENVIRONMENTAL CRIME AND COLLABORATIVE STATE INTERVENTION

EDITED BY **GRANT PINK**
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Environmental Crime and Collaborative State Intervention

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Softcover reprint of the hardcover 1st edition 2016 978-1-137-56256-2

First published 2016 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

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ISBN 978-1-349-55981-7 ISBN 978-1-137-56257-9 (eBook)
DOI 10.1007/978-1-137-56257-9

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

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Foreword

As regulators increasingly organise around *risks* rather than around their own familiar programmes and processes, their focus shifts from their own regulatory performance to the challenge of regulatory orchestration. The reasons are clear. Real-world risks do not conform to national boundaries. Nor do they align neatly with the domains of responsibility carved out for specific regulatory and law-enforcement agencies.

Many of today's most critical environmental risks, including a significant number of transnational environmental crimes, are especially dangerous precisely because of their awkward shape and the difficulty of organising around them. Examples covered in this volume include the transportation and dumping of toxic wastes; illegal logging and fishing operations; trafficking in environmentally critical commodities such as ozone-depleting substances, exotic species, endangered species, ivory, and rhino horns; the illegal transportation of Waste Electrical and Electronic Equipment (WEEE); and the illegal wildlife trade, including flora and fauna.

Networks of collaboration, both within and across national borders, provide platforms for the development of higher-level views for boundary-spanning problems. Networks act as the base for crafting and orchestrating coherent and effective responses, with multiple contributors. As the ICCWC[1] mission statement says, the purpose is to 'usher in a new era where the perpetrators of serious [environmental] crime face a formidable and coordinated response, rather than the present situation where the risk of detection and punishment is all too low'.

Anyone who is interested in how collaborative networks form and what opportunities they offer will find the following collection of chapters rich and inspiring. They describe different types of environmental networks: some are regional;[2] some are topical, focused on specific classes of environmental harms;[3] some are networks of networks,[4] designed to advance the capabilities of regional networks, connect them where necessary on global issues, and advance best practices in the operations of networks.

Several of these chapters highlight other critical forms of collaboration – with industry, with consultants, with civil society, with prosecutors and the courts, with legislatures, with activists, with the not-for-profit sector and with international non-governmental organisations. The last three

chapters focus on the importance of collaboration between practitioners and environmental researchers, which is critical in an area of enforcement so dependent on valid science.

The number and variety of environmental networks that now exist is a direct result of a shift in the portfolio of environmental risks that environmental regulators are required to address. For decades, in industrialised nations, the staple of environmental regulation was the control of emissions from manufacturing and energy plants. Regulated facilities (plants) were fixed in location, and located within a single regulatory jurisdiction. They were operated by corporations which were generally responsible with respect to their environmental obligations. Companies that were less responsible could be made more so by leveraging their reputational concerns and, if necessary, through financial penalties. At issue was compliance with the conditions of their permits, and the principal discovery mechanism for non-compliance was on-site inspection.

Some years ago I was talking with a group of environmental regulators about the growing problem of organised crime infiltrating the toxic waste disposal industry. This problem, they said, 'did not behave well'. It was not amenable to their normal methods of scientific measurement, nor to intervention strategies based on site inspections. The problem was not only invisible by design and geographically fluid, but also involved *adversaries*. The adversaries, often determined and sometimes sophisticated, could adapt rapidly to thwart or blunt the impact of control efforts, and would deliberately search out and exploit blind spots or weaknesses in regulatory controls and operations. Many environmental regulators found that nothing in their scientific training prepared them to deal with determined, aggressive, and potentially violent adversaries.

Shifting the focus to environmental *crimes* elevates the importance of enforcement methods, and forces environmental regulators to consider a set of tools that lie at the sharper end of the enforcement toolkit – covert surveillance, undercover operations, development and use of informants, sting operations, intelligence and counter-intelligence, use of controlled deliveries, asset tracing and seizure, and the use of advanced forensics in mapping criminal operations.

These sharper enforcement tools are relatively familiar to other agencies – law enforcement, security, and intelligence agencies – which deal on a daily basis with determined adversaries such as smugglers, hackers, thieves, and terrorists. But these methods have hitherto not been used much in the environmental arena. Hence one clear reason why environmental regulators must now work hand in hand with a broad range of law-enforcement, border security, and intelligence agencies: these

other agencies confront criminal entrepreneurship routinely, and are familiar with the use of these methods. Another reason for cross-agency collaboration is that many of the criminal groups now engaged in environmental crimes, particularly international trafficking, also engage in other criminal enterprises. Many smuggling operations turn out to be multicommodity.

Stages in the development of collaborative networks

As this collection of historical and descriptive accounts of various network operations makes clear, we are watching a development process unfold. Networks first do what is easiest and most comfortable, and requires lower levels of trust. As trust between parties grows over time, networks take on more ambitious work.

(1) A forum for learning

The easiest and most comfortable way to begin is to create a forum for learning. Environmental agencies can describe their innovations to one another, sharing successes and failures. They can work together to define and disseminate best practices, advancing the state-of-their-art and developing a community of practice. They can share scientific knowledge and collaborate on research. As they recognise commonalities in the skill sets they need, participating agencies may derive economies of scale through shared training, collaborate in setting professional standards, and exchange staff on temporary assignments in order to broaden experience and share expertise.

The focus at this stage is on enhancing skills, knowledge, professionalism, and organisational capacity. The nature of the interaction is primarily educational as opposed to operational.[5] The upside potential is obvious to all participants, and the downside risk is limited. Consequently not much trust is required between parties. Each participating agency might learn lessons, but they are not obliged to act on them. Changes are optional, not driven by commitments made to others.

(2) Collaboration around processes

When collaborations turn operational, they generally do so first around the design and operation of shared processes.

Obvious examples include collaboration at ports of entry. Many different government agencies have special responsibilities at national borders with respect to passengers and cargo, including customs, immigration, police, agriculture, food and drug supply regulators, and environmental

agencies. Efficient collaboration within the confines of a port often demands some degree of workforce integration and cross-training for inspectors. Participating agencies have to recognise the importance of each other's missions, accommodating them all within integrated targeting systems and joint inspection processes.

With respect to international movement of passengers and cargo, surveillance and inspection processes necessarily involve international collaboration. Efficient process design may redistribute monitoring and inspection efforts between source, transit, and destination countries.

Collaboration around processes offers many benefits. Interagency collaboration can eliminate duplication, bottlenecks, and inefficiencies; provide coordination in regulatory decision-making (e.g., granting of import licenses, visas, permits, siting decisions); identify and eliminate inconsistencies in regulatory requirements; provide single-point-of-contact access for applicants, travellers, and industries; support joint (interdisciplinary) inspections; and facilitate compliance, making it more convenient and cheaper for those motivated to comply.

Collaborating around processes demands a degree of trust. The success of each participating agency depends on the contributions and competence of others. The success of the overall network requires agreement on high-priority risk areas and the relative weights to be assigned to process efficiency versus effective detection. Every time one agency trusts another to do a piece of its work, there has to be some mutual recognition of surveillance capabilities and inspection protocols.

(3) Collaboration around environmental problems/risks

A more challenging kind of operational collaboration, requiring even greater trust between parties, tackles risks that straddle jurisdictional borders and regulatory domains, requiring a broad range of distributed contributions.

An important principle in tackling risks is this: *respect the natural shape and size of the risk itself. Organise around it once, and at the right level, with all the relevant players at the table*. When environmental risks turn out to straddle national boundaries and affect many different law enforcement and regulatory agencies, then that straightforward principle leads where this book goes: to the importance of interagency and international collaboration in environmental protection.

This type of collaboration requires the highest level of trust and the highest degree of accommodation. First of all, it demands a shared understanding of the nature and the significance of the threat to the

environment. It requires a holistic view, compiled from partial perspectives. It demands honesty about the inadequacy of previous control efforts.

Second, it demands compatible legal frameworks, especially if enforcement action will be necessary. Relevant crimes must be defined in sufficiently similar terms that the international legal 'net' has no gaping holes in it. Vague definitions and blurred lines constitute vulnerabilities of the control enterprise and opportunities to be exploited by adversaries. For example, efforts to control illegal transportation of 'waste electrical and electronic equipment' are not likely to get very far without first establishing clear international agreement on the categories of items covered, actions to be prohibited, and the seriousness of violations.

Third, collaboration around risks requires an agreed plan of action, with responsibilities distributed across contributors. It requires each contributor to value the role of others. It demands more of a problem-centric than programmatic focus, so that no one agency assumes it has or owns 'the solution'. It demands that all parties get used to sharing credit for success, rather than fighting over it.

(4) Protecting the planet

The most ambitious type of networked endeavour goes beyond orchestrating the efforts of willing partners, and seeks to influence the behaviour of *non-members*. Adopting a protect-the-planet perspective motivates a proactive stance to bring up to snuff those other nations that are less capable or engaged, lest they become dumping grounds for the earth's toxic wastes or easy passage for international traffickers. For many of today's environmental crime problems it makes little sense to adopt any more localised or limited perspective.

The assortment of networks described in this book has produced collaborative action of all four types. So far, types 1 and 2 (collaboration around learning and around processes) are more common than types 3 and 4 (collaboration around risks and fortification of global defences). That is what makes this an important tale to tell and a suitable point in time to tell it. Potential is everywhere, but actual environmental victories are harder to find. There are some, and they are very heartening. For example, Chapter 4 describes substantial operational successes against international trafficking in wildlife. It is probable more success stories exist than found their way into this book, and some probably cannot be shared publicly.

No one should underestimate the difficulty of collaborative action on specific threats to the health of our planet – hence the importance

and timeliness of this volume. We need those who would defend our planet's health to be better organised than those prepared to sacrifice it. This volume celebrates the work of professional regulators who have established the relevant frameworks for collaboration, made important investments, and committed themselves to concerted action.

Malcolm K. Sparrow
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Notes

1 ICCWC (International Consortium on Combating Wildlife Crime). The work of this network is the focus of Chapter 5.
2 Such as AELERT (Australasian Environmental Law Enforcement and Regulators neTwork), AECEN (Asian Environmental Compliance & Enforcement Network), IMPEL (European Union Network for the Implementation & Enforcement of Environmental Law), SAECEN (South American Environmental Compliance & Enforcement Network), and WAECEN (West African Environmental Compliance & Enforcement Network).
3 Such as ARREST (Asian Regional Response to Endangered Species Trafficking), CWIT (Countering WEEE Illegal Trade), GAPIN (Great Apes & Integrity Network), SAWEN (South Asia Wildlife Enforcement Network), SESN (Seaport Environmental Security Network), and ICCWC.
4 Such as INECE (International Network for Environmental Enforcement & Compliance).
5 In Chapter 1, Pink and White distinguish between *networking*, *coordinating*, *cooperating*, and *collaborating*. Learning exchanges fit their definition of *networking*.

Acknowledgements

This book has been and continues to be a work in progress. For ourselves, as editors, it has also reflected the growth of a professional and personal collaboration which has brought our particular practitioner and academic worlds into closer alignment.

We would like to thank the contributors for their willingness to be involved in this book and for being generous with their time. Interestingly, the book itself provided a vehicle for collaboration both within and across organisations and each chapter required collaboration between two or more authors. As such, we are very pleased that the book as a whole embodies the very thing that we are collectively writing about – collaborative practice.

We would like to thank Julia Willan and Dominic Walker as well as the rest of the production team at Palgrave Macmillan for their excellent support and high degree of professionalism throughout.

Finally, we wish to thank and dedicate this book to our families, who have been our most ardent supporters. For Grant, I am grateful to my wife Karen and son Samuel. For Rob, I am especially indebted to my wife Sharyn. Without their support, understanding and patience this book would not have been possible.

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* *Unless otherwise specified the views expressed in these chapters are those of the contributors and not the organisations they represent.*

List of Abbreviations

AECEN	Asian Environmental Compliance and Enforcement Network
AELERT	Australasian Environmental Law Enforcement and Regulators neTwork
AIC	Australian Institute of Criminology
APEC	Asia-Pacific Economic Cooperation
ARREST	Asian Regional Response to Endangered Species Trafficking
ASEAN-WEN	Association of Southeast Asian Nations Wildlife Enforcement Network
Basel Convention	Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
BAT	Best Available Techniques
BCNP	Biodiversity, Cultural and National Protection Branch
BPU	Biodiversity Protection Unit
BREF	Or 'BAT reference document', see BAT above
CARB	California Air Resources Board
CAWT	Coalition against Wildlife Trafficking
CBM	Coordinated Border Management
CBRA	Cross-Border Research Association
CEC	the North American Commission on Environmental Cooperation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COMAH	Control of Major Accident Hazards
CWIT	Countering WEEE Illegal Trade
DEFRA	Department for Environment Food & Rural Affairs (UK)
DoE	Department of the Environment (Australia)
EC	European Commission, and environmental crime
ECC	Environmental Crime Committee (INTERPOL)
ECEC	Environmental Compliance and Enforcement Committee (INTERPOL)
EEN/s	Environmental Enforcement Network/s
Ecomessage	INTERPOL's environmental crime database
ECOSOC	Economic and Social Council (United Nations)

EETI	Environmental Enforcement Training Institute
EIA	environmental impact assessment, and Environmental Investigation Agency
ENPE	European Network of Prosecutors for the Environment
ENVIRONET WCO	the real-time web-based communication platform
EPA/s	Environment Protection Agency/ies
EPANet	Environment Protection Agency Network
ERA/s	Environmental Regulatory Agency/ies
ESRC	Economic and Social Research Council
EU	European Union
EWG	Enforcement Working Group (part of CEC)
FCWG	Fisheries Crime Working Group (INTERPOL)
FLEGT	Forest Law Enforcement, Governance and Trade
FTAs	Free Trade Agreements
FLETC	Federal Law Enforcement Training Center
GAPIN	Great Apes and Integrity
GRASP	Great Ape Survival Partnership
GRI	Global Reporting Initiative
HEEPA	Heads of Environment Protection Agencies
HFCs	hydro fluorocarbons
HSE	Health and Safety Executive
ICCWC	International Consortium on Combating Wildlife Crime
IED	Industrial Emissions Directive
IEEP	Institution for European Environmental Policy
IFAW	International Fund for Animal Welfare
IGO/s	International Governmental Organization/s
ILE	intelligence-led enforcement
ILEA	International Law Enforcement Academies
IMPEL	European Union Network for the Implementation and Enforcement of Environmental Law
INECE	International Network for Environmental Enforcement and Compliance
INTERPOL	International Criminal Police Organization
IPPC	Integrated Pollution Prevention and Control
IUCN	International Union for Conservation of Nature
KE	Knowledge Exchange
LATF	Lusaka Agreement Task Force
MEA/s	Multilateral Environmental Agreement/s
MoU	Memorandum of Understanding
NCBs	National Central Bureau/s (INTERPOL)

NCEA	Netherlands Commission for Environmental Assessment
NEM	Network Evaluation Matrix
NEST	National Environmental Security Taskforce (INTERPOL)
NETI	National Enforcement Training Institute
NHEEPA	the European Network of Heads of Environment Protection Agencies
NGO/s	non-governmental organisation/s
NNEEC	National Network for Environmental Enforcement of Chile
NORAD	Norwegian Agency for Development Cooperation
NRW	Natural Resources Wales
OCEFT	Office of Criminal Enforcement Forensics and Training
ODS	ozone depleting substances
OECD	Organisation for Economic Co-operation and Development
OEFA	Organismo de Evaluación y Fiscalización Ambiental (Peru)
PCWG	Pollution Crime Working Group (INTERPOL)
RILO	Regional Intelligence Liaison Office
RKC	Revised Kyoto Convention
RMCEI	Recommendation on Minimum Criteria for Environmental Inspections
SAECEN	South American Environmental Compliance and Enforcement Network
SA EPA	South Australian Environment Protection Authority
SARS	Severe Acute Respiratory Syndrome
SAWEN	South Asia Wildlife Enforcement Network
SEG	Senior Experts Group (an aspect of ICCWC)
SEPA	Scottish Environment Protection Agency
SESN	Seaport Environmental Security Network (INECE)
SLABs	spent lead acid batteries
SMA	Superintendente del Medio Ambiente (Chile)
SNIFFER	Scotland and Northern Ireland Forum for Environmental Research
SSN	Species Survival Network
SSSI	Site of Special Scientific Interest
TEC	Transnational Environmental Crime
TFS	Transfrontier Shipments
TRAFFIC	the wildlife trade monitoring network
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDSD	United Nations Division for Sustainable Development
UNEA	United Nations Environment Assembly

UNEP	United Nations Environment Programme
UNICRI	United Nations Interregional Crime and Justice Research Institute
UNODC	United Nations Office on Drugs and Crime
UNCTOC	United Nations Convention against Transnational Organized Crime
US AID	US Agency for International Development
US EPA	United States Environmental Protection Agency
VHRM	Flemish High Council of Environmental Enforcement
VROM	Ministry of Housing, Spatial Planning and Environment (The Netherlands)
WCO	World Customs Organization
WCWG	Wildlife Crime Working Group (INTERPOL)
WEEE	waste electrical and electronic equipment
WAECEN	West African Environmental Compliance and Enforcement Network
WWF	World Wildlife Fund

Part I

The Role of Collaboration in Combating Environmental Crime

1

Collaboration in Combating Environmental Crime – Making it Matter

Grant Pink and *Rob White*

Responding to environmental crime involves a wide range of collaborations across many different domains and sectors. This is especially the case when addressing transnational environmental crime and its associated global environmental harms.

This chapter provides an introduction to the *why* and *how* of collaborative state intervention as this relates to environmental crime. It begins by identifying key response agencies and stakeholders and acknowledging the increasing need for and use of collaboration in combating environmental crime. It then engages in general consideration of the component parts and various phases of collaboration. This is followed by an examination of collaboration in practice, a discussion that draws upon examples of horizontal, vertical, and diagonal forms of collaboration. The chapter concludes by considering the challenges and opportunities associated with collaboration, and the importance of improving coordination and cooperation to combat environmental crime.

Responding to transnational environmental crime

Environmental crime is typically defined on a continuum ranging from strict legal definitions through to broader harm perspectives (Bricknell, 2010). For example, it can refer to:

> [A]n unauthorized act or omission that violates the law and is therefore subject to criminal prosecution and criminal sanction. (Situ and Emmons, 2000: 3)
>
> [A]n act committed with the intent to harm or with a potential to cause harm to ecological and/or biological systems and for the

> purpose of securing business or personal advantage. (Clifford and Edwards, 1998: 26)
>
> [C]riminal conduct that may have negative consequences for the environment. (UNODC, 2011: 95)
>
> [E]nvironmental harm is a crime. (White, 2011a: 1)

Specific types of environmental crime as described in law include things such as illegal transport and dumping of toxic waste, the illegal transfer of hazardous materials such as ozone-depleting substances, the illegal traffic in radioactive or nuclear substances, the illegal trade in flora and fauna, and illegal fishing and logging. However, within green criminology there is a more expansive definition of environmental crime or harm that includes transgressions that are harmful to humans, environments, and non-human animals, regardless of legality per se; it also includes environment-related harms facilitated by the state, as well as corporations and other powerful actors, insofar as these institutions have the capacity to shape official definitions of environmental crime in ways that allow or condone environmentally harmful practices (White, 2011a).

For the purposes of this book, however, environmental crime is defined primarily in terms of *illegal* environmental harms (i.e., environmental harms currently defined as unlawful and therefore punishable) rather than including *legal* environmental harms (i.e., environmental harms currently condoned as lawful but which are nevertheless socially and ecologically harmful). The main focus of the book is also on transnational environmental crime. As defined in conventional legal terms (White, 2011a), this refers to:

- unauthorised acts or omissions that are *against the law* and therefore subject to criminal prosecution and criminal sanctions;
- crimes that involve some kind of *cross-border transference* and an international or *global dimension*; and
- crimes related to *pollution* (of air, water, and land), *crimes against wildlife* (including illegal trade in ivory as well as of live animals), and *illegal fishing* (whales, dolphins, lobster and abalone as well as fish).

These are the key areas of attention for national and international laws relating to environmental matters, and are the main task areas for many of the agencies featured in this book. Some of the major international

initiatives that formally specify certain activities as offences include (Forni, 2010):

- Convention for Prevention of Maritime Pollution by Dumping of Wastes and Other Matter,
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),
- International Tropical Timber Agreement,
- Vienna Convention for the Protection of the Ozone Layer,
- Montreal Protocol on Substances that Deplete the Ozone Layer,
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,
- United Nations Framework Convention on Climate Change, and
- Kyoto Protocol.

These, too, form part of the international framework within which environmental law enforcement and regulation take place, and shape which agencies undertake specific activities, how they do so, and with whom.

In technical legal terms, transnational environmental crime has been defined as follows:

> [T]ransnational environmental crime involves the trading and smuggling of plants, animals, resources and pollutants in violation of prohibition or regulation regimes established by multilateral environmental agreements and/or in contravention of domestic law. (Forni, 2010: 34)

This definition embodies huge complexities of scale, scope, and content. For example, the legal framework governing environmental matters in international law is defined by over 270 multilateral environmental agreements and related instruments (Forni, 2010: 34). The laws and rules guiding action on environmental crime vary greatly at the local, regional, and national levels, and there are overarching conventions and laws that likewise have different legal purchase depending upon how they are translated into action in each specific local jurisdiction.

Responding to environmental crime primarily falls to enforcement and regulatory agencies within government, whether at the national, subnational, or local level. In most parts of the world, the main response agencies are police agencies, customs and border protection agencies, and environmental regulatory agencies. These can be considered the 'three core agencies' of environmental law enforcement (Pink, Forthcoming). The mandate, role, and function of response agencies is central to the

issue of collaboration as the various agencies have cultural traits, preferences, and in some instances a statutory predilection or requirement that influences their willingness to, and method of, collaborating with others. Equally the different agencies have their own, sometimes overlapping, interest and stakeholder groups that may or may not be a factor in cross-cutting collaboration.

Collaboration and collaborative approaches have increased significantly in recent years, both at domestic and international levels. They have increased within the three core agencies, and between these and other key government response agencies. They are also increasingly involving wider groups of non-government stakeholders and interest groups, for example, academics and research institutions. Together, intergovernmental organisations (IGOs) and non-governmental organisations (NGOs) are now playing a growing and significant role in and/or are facilitating collaborative interventions (INTERPOL, 2009; Kangaspunta and Marshall, 2009; White, 2012; Wyatt, 2013; UK Economic and Social Research Council, n.d.).

What is collaboration and what does it look like?

In its most basic sense, collaboration simply refers to people or agencies working together for a shared purpose. However, the meaning and processes pertaining to collaboration as a form of social practice can be complicated and variable. This is due to the different functions and missions of specific agencies, and the varied levels at which collaboration can take place.

Different people may understand the term 'collaboration' as meaning different things, depending upon institutional and situational context. For instance, in Australia, there are many diverse agencies engaged in some form of environmental law enforcement. Some of these are engaged in both regulation and enforcement, and individual agencies may be charged with either or both. Agencies dealing with environmental matters work in and across different jurisdictions and deal with a myriad of issues. This is illustrated in Table 1.1 which outlines different tiers of governance involving various bodies engaged in environmental law enforcement.

Each agency, organisation, or network has its own legislatively defined mandate which dictates the parameters of its functions, powers, and interventions. Moreover, NGOs, which also operate in the sphere of environmental law enforcement and regulation, likewise have their own unique purposes and modes of operation. Collaboration within and across governments, as well as involving non-governmental sectors, is thus complicated by the myriad of statutory requirements, distinct organisational cultures, and diverse motivational impetuses.

Table 1.1 Agencies at different tiers: dealing with environmental law enforcement in Australia

Geo-political scale	Examples at the operational level
Local council	Urban and metropolitan councils Regional or rural shires
State	Environmental Protection Agencies State Police services Royal Society for the Prevention of Cruelty to Animals (RSPCA) Parks and Wildlife Services
National	Department of Environment Australian Customs Service Australian Federal Police Australian Fisheries Management Authority
National/State (organisations and networks that involve joint state and federal agencies and initiatives)	The Australasian Environmental Law Enforcement and Regulators neTwork (AELERT) Australian Institute of Criminology Australian Crime Commission
International	INTERPOL International Network for Environmental Enforcement and Compliance (INECE) United Nation bodies

Source: Adapted from White, 2011b: 126.

The nature of interagency interaction, at whatever geo-political scale, is also highly contingent upon the extent of engagement in each instance. The process of engagement, given below, can be seen as being tiered, ranging from least engaged to most engaged:

- *networking* (exchange of information for mutual benefit),
- *coordinating* (exchanging information and altering activities for a common purpose),
- *cooperating* (exchanging information, altering activities, and sharing resources), and
- *collaboration* (all of the above, plus enhancing the capacity of the other partner[s] for mutual benefit and a common purpose) (O'Flynn, 2008: 185–186).

While close collaboration for mutual benefit is the goal, the 'human element' remains crucial to its success. This aspect was evident in research relating to cross-sectoral Police–Customs collaboration which identified individual personal interactions as a central success factor (Mausolf,

2010: 73). Wright comments that '[e]ffective collaboration depends on effective relationships between humans. If the right people are in the room, and if there is time and space for like minds and potential partners to find and engage with each other, then even the worst-designed gathering can be productive' (2014: para. 2). It is not enough to consider collaborating, or to go through the motions of collaboration. For collaboration to be meaningful there has to be development of trust and common purpose, as well as sharing of information and resources. This is supported by Mausolf's research which indicated that 'collaboration and coordination, based on communication and trust, lead to an increased intelligence flow which increases analytical output and quality and subsequently the effectiveness' of the law enforcement responses (2010: 21).

The component parts of collaboration are many and varied, with the precise nature of the collaboration influencing what the eventual component parts are. In our experience, what makes collaborations effective and successful are a series of interrelated factors, a partial list of which includes:

- valuing local knowledge,
- understanding the core business,
- collaborative goal setting,
- valuing different perspectives,
- sensitively challenging the taken-for-granted,
- trust, openness, and honesty (mutual respect),
- selecting the right people for the task,
- leading by example,
- making time for critical reflection,
- establishing the networks and relationships,
- sharing of ideas, knowledge, and intelligence,
- repositories of knowledge (e.g., case studies),
- valuing 'insider' and 'outsider' knowledge and expertise,
- technology transfers (e.g., forensic techniques),
- setting protocols for information sharing,
- mentoring and capacity building by secondment,
- recognising and adapting to difference, and
- maximising individual and collective potential.

It is also worth considering collaboration in terms of: *who*, *what*, *where*, *when*, *why*, and *how*. These questions are commonly referred to by law enforcement and regulatory staff as either the '5w's and 1 h' or the

'six loyal servants', since both denote the approach many investigators and compliance staff follow in breaking down and proving the elements of an offence. In terms of collaboration it is important to:

- identify *who* the relevant partners/stakeholders are,
- determine *what* the focus (or main purpose) of the collaboration is,
- decide *where* the collaboration/s might be coordinated from or take place,
- agree *when* the collaboration will commence and might conclude,
- establish *why* collaboration is considered beneficial, and
- discuss *how* the collaboration will most likely proceed.

The various partners and stakeholders will invariably have different views on several if not all of these aspects. Wyatt highlights the potential of groups having 'conflicting interests in terms of the economy, conservation and enforcement of environmental laws' (2013: 163). It is for this reason that these key questions should be discussed and considered prior to or in the early stages of any collaboration. Afterwards, the agreed position should then be communicated to all parties – to do otherwise can significantly impede if not completely jeopardise the collaboration.

Carnwell and Carson (2005) distinguish between 'partnerships' (who we are) and 'collaborations' (what we do). In so doing, they describe different types of partnerships, ranging from those based on a particular project or particular social problem, through to ideological and ethical partnerships that involve shared perspectives and specific viewpoints. While obvious, there are substantial practical benefits to asking the questions: 'do we need to collaborate in this instance?', and 'for what specific purpose or outcome are we collaborating?' The process of asking, discussing, and answering these simple questions will often save much time, effort, and angst.

Another aspect of collaboration that is somewhat unique to environmental crime, which goes back to the issue of identification of relevant partners or stakeholders, relates to 'crossover crime'. Crossover crimes are crimes that are either committed as part of an 'environmental crime' or in parallel with such offending (Pink, 2013). They include, for example:

- fraud/theft of Carbon Trading Scheme permits (link to cyber-crime);
- fisheries crime involving organised crime (links to trafficking in humans, arms, and drugs); and
- money laundering of the proceeds of illegal logging (link to corruption).

Crossover crimes can also involve the blurring between the licit and the illicit. In explaining this, Elliott (2009: 66) describes parallel trafficking as 'moving environmental contraband along the same smuggling routes used for other illegal commodities, combining illegal shipment, or using ostensibly legal shipment to conceal other forms of illegally sourced or traded goods and resources'. Beyond mere identification of partners and stakeholders, crossover crimes require coordinated responses (involving designated lead, support, and ancillary agencies) from a range of agencies:

- mainstream law enforcement agencies – police, customs/port authorities;
- environmental agencies – scientific, regulatory, and enforcement;
- intelligence agencies – environment, law enforcement, and security;
- prosecuting bodies – criminal, civil, and administrative; and
- financial agencies – tax and other regulatory bodies (Pink, 2013).

Responding to crossover crimes not only highlights the complexities of collaboration, but the necessity of combining forces and resources in combating such intricate and multidimensional crimes.

The dynamics of environmental crime are such that new types of skills, knowledge, and expertise need to be drawn upon as part of the law enforcement and regulatory response effort. The impetus to develop these is also driven by the fact that environmental crime at domestic and international levels is gaining increasing notice as a growing and significant crime type and a major threat to national security (Elliott, 2009; INTERPOL, 2009; UNODC, 2010; White, 2014). One outcome of this heightened interest by national governments and their environmental regulatory and enforcement bodies is recognition that this will involve increased partnering and working with others, including non-traditional partners and stakeholders. Collaboration therefore is an indication of engagement, involvement, and support to assist on an issue, while at the same time it presents as a process and a means by which to measure outcomes. Sparrow (2008: 84) suggests that:

> If practitioners bite off too much, chances are they will choke. Bite off too little, and nobody will much care. Obviously an agency can take bigger bites than an individual or a department; and a consortium of institutions [through collaboration] can presumably take even bigger bites without being overwhelmed.

The next part considers how practitioners and agencies attempt to strike the balance in terms of the scale of collaborations while giving practical effect to collaborations.

Collaboration in practice

Environmental crime poses particular challenges for environmental law enforcement, especially from the point of view of police interagency collaborations, the nature of investigative techniques and approaches, and the different types of knowledge required for dealing with specific kinds of environmental harm. Moreover, many of the operational matters pertaining to environmental crimes are inherently international in scope and substance. The complexity of environmental crime means that greater investment in enforcement policy, enforcement capacity, and performance management is sorely needed in most jurisdictions (see Akella and Cannon, 2004; Dobovsek and Pracek, 2010; White, 2011b).

In response, and in an effort to build capacity and capability, the activities and collaborations of environmental crime response agencies have tended to occur around networks which are geographically based (e.g., regions such as elephant range states in Africa), discipline-based (e.g., environmental prosecutors), and commodity-based (e.g., wildlife) (Pink and Bartel, 2015). Collaboration across these dimensions and involving these networks can be predominantly horizontal, vertical, or diagonal. There is no fixed or usual way in which collaboration occurs – instead the collaboration takes a shape depending on a number of factors, including if and how various networks are constituted.

Horizontal collaboration

Horizontal collaboration refers to forms of collaboration across specific institutional, jurisdictional, and agency settings, as in the case of police officers working with customs officers on particular environmental crime issues. When responding to environmental crime, horizontal collaborations are those that tend to focus on issues that are relevant to a number of agencies of a similar type or that are engaged in similar activities. They can involve a single issue or a group of interrelated issues. Importantly, there is some scope and variation on how the collaboration is done – the most important aspect is that something *is* being done. For example:

- In 2001 the European Commission adopted the Recommendation on Minimum Criteria for Environmental Inspections (RMCEI) initiative. Since then the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) has developed and driven the RMCEI within and across its membership. The RMCEI is an attempt to achieve operational standardisation around inspections in spite of legislation and political differences. It was developed, tested, and is reviewed collaboratively.

- Commencing in late 2014 across a number of states in Australia, the Australasian Environmental Law Enforcement and Regulators neTwork (AELERT) initiated a National Waste Operations Group (NWOG). The NWOG comprises representatives from each jurisdiction to provide an avenue for the national coordination of waste regulatory strategies and operational activities. More specifically it works collaboratively to develop best-practice materials and undertake joint operational and intelligence activities on issues such as asbestos disposal pricing, surveillance tools capabilities, movement of waste across borders, national approaches to authorised officer skills and standards, and legal frameworks (AELERT, n.d.).

Vertical collaboration

Vertical collaboration refers to forms of collaboration among employees within an institutional hierarchy. Vertical collaborations tend to be more focused (or narrow in scope) and often, when considering responding to environmental crime, are confined to a sub-set of response agencies. Importantly, there tends to be little or no scope and variation on how the collaboration is done – the most important aspect is *how* it is done. For example:

- The *INTERPOL Pollution Crime Forensic Investigation Manual* (the Manual) (INTERPOL, 2014) includes practical and low-cost methods to guide investigators through the forensic environmental investigation process, from initial receipt of information of a potential violation, to evidence gathering, analysis, and the preparation and presentation of data for prosecutions.
- The *Controlled Deliveries: A Technique for Investigating Wildlife Crime* (the guidance document – developed for 'law enforcement use only') which was jointly produced by INTERPOL and the Secretariat of CITES (INTERPOL and CITES, 2007). The guidance document provides guidelines on how to carry out 'controlled delivery' of illegal items in order to identify individuals connected with criminal activity and to gather evidence against them. This activity uses techniques primarily developed in combating drugs trafficking (CITES, n.d.).

Diagonal collaboration

Diagonal collaboration refers to forms of collaboration that cut across the horizontal and vertical axis, insofar as they incorporate stakeholders at different levels within and across diverse institutional, jurisdictional,

and agency settings. As such, diagonal collaborations tend to be multifaceted and often involve policy, operational, and strategic elements and generally the largest number of entities/partners. There is a great deal of scope and variation on how the collaboration is done – the most important aspect of this is the *way* it is done (most usually in a joined up and cohesive and integrated manner). For example, different approaches towards collaboration to combat wildlife trafficking include 'by species, by region and by type of agency or agencies' (Wyatt, 2013: 139). The type and form of collaboration is determined by the specific species and concrete situational factors involved in each particular circumstance.

- Examples of species collaboration involve the Great Ape Survival Partnership (GRASP), the Shark Alliance, and the Species Survival Network (SSN). Examples of regional collaboration include the Association of Southeast Asian Nations-Wildlife Enforcement Network (ASEAN-WEN), South Asia Wildlife Enforcement Network (SAWEN), and the Asian Regional Response to Endangered Species Trafficking (ARREST). Those collaborations are informed by type of agency, or agencies have been grouped under global collaborations given that they variously consist of governments, IGOs, and international NGOs (Wyatt, 2013: 139–140).
- In respect to global collaborations, when high profile governments and organisations become involved the view becomes more global and the ensuing collaborations 'may be less about developing on-the-ground programmes . . . and more about raising public and political awareness about the green crime' (Wyatt, 2013: 148). The Coalition against Wildlife Trafficking (CAWT) and the International Consortium on Combating Wildlife Crime (ICCWC) are examples of these types of collaborations.

Environmental crimes may have local, national, regional, and global dimensions, and combinations thereof. They can be difficult to detect (as in the case of some forms of toxic pollution undetectable to human senses). They may demand intensive cross-jurisdictional negotiation, and even disagreement between nation-states, in regard to specific events or crime patterns. Some environmental crimes may be highly organised and involve criminal syndicates, such as illegal fishing and movement of illegal wastes. Others may include a wide range of criminal actors, ranging from the individual collector of endangered species to the systematic disposal of toxic waste via third parties (White, 2011b). All of these elements and issues, in turn, affect collaborative responses.

In the end, governments tend to treat participation in collaborative networks the same as any other form of potential investment. That is, they are to some extent duty bound (given they are expending public money) to assess the value and return of the investment arising from participation in networks and collaborations (Pink, 2015). It is important, however, to recognise that benefits, especially in terms of value, occur within a cycle and/or in phases. On this issue Wenger et al. (2011: 19–21) suggest that there are five phases to a value cycle, namely:

- immediate value: activities and interactions,
- potential value: knowledge capital,
- applied value: changes in practice,
- realised value: performance improvement, and
- reframing value: redefining success.

In order to operationalise collaboration and derive additional benefits participants need to be mindful of the associated challenges as well as being alive to the opportunities that collaboration brings.

Challenges and opportunities

Over a decade ago, Akella and Cannon (2004), in a scoping analysis of environmental law enforcement practices and institutions in Brazil, Mexico, Indonesia, and the Philippines, identified the following common problems:

- poor interagency cooperation,
- inadequate budgetary resources,
- technical deficiencies in laws, agency policies, and procedures,
- insufficient technical skills and knowledge, and
- lack of performance monitoring and adaptive management systems.

In a similar vein, recent research on the policing of hazardous waste disposal found that the capacity of perpetrators to move across borders, and to use differences between jurisdictions to their advantage, has to be matched by the flexibility of law enforcement agencies in undertaking enforcement tasks. This requires collaboration and coordination as core attributes of enforcement (White and Heckenberg, 2013).

Among the many issues pertaining to the engagement of traditional agencies and proliferation of new ones (especially NGOs) in dealing

with environmental crime is that each may be driven by different aims and objectives, different methods of intervention, with different powers, and exhibiting different levels of expertise and collaboration with others. In some cases, and of particular relevance to this chapter, there is a clear need for capacity building in order for collaboration and, especially, for rapid response, to be successfully institutionalised as part of normal agency practice. This is relevant to both government and non-government bodies.

Over the course of a specific collaboration, groups and agencies involved in environmental law enforcement need to be conscious of many different issues regarding their own roles and expertise, such as:

- conflict of interest,
- capacities and levels of competence,
- mechanisms to deal with potential harm or wrongdoing,
- knowledge of codes of conduct,
- consideration of the social composition of the collaborating team,
- storage of materials and data associated with the collaboration,
- confidentiality and anonymity, and
- fair, honest, comprehensive, and accurate reflection and reporting on the collaboration process.

Response agencies have a great opportunity to leverage off of existing partnership networks as part of their collaborative efforts. For example, information provided by the International Network of Environmental Enforcement and Compliance (INECE) Secretariat, at the time of writing, indicated that there are approximately 20 major Environmental Enforcement Networks (EENs) operating around the world. These EENs operate at subnational, national, regional, and internationals levels, focus on issues that are based on geography, discipline, and commodity, and involve a variety of actors across governments, IGOs, NGOs, and academic and research institutions (Pink, 2011; Pink and Bartel, 2015). Many of these EENs have existed for some time during which they have built significant repositories of information and resources. Additional information on these and other environmental enforcement networks, and access to the information and resources they have developed, is available on the INECE website (www.inece.org; see also Faure et al., 2015).

The presence of EENs can foster cross-agency cooperation and intelligence exchanges within specific national contexts (horizontal connections that bring together environmental protection agencies, police,

customs, and other agency personnel), as well as internationally (vertical connections that bring together national representatives from different parts of the world, including United Nations personnel). They also offer the possibility for ongoing cross-sectional alliances involving a diversity of players (diagonal connections that include NGOs as well as global and regional stakeholders).

These EENs thus act as nodal hubs for collaborative efforts across policy, project, research, and enforcement areas, and incorporate geographically based, discipline-based and commodity-based activities. Pink and Bartel (2015) highlight the vital enabling roles that regulator networks and learning and capacity-building play in assisting environmental regulatory agencies perform their regulatory roles. It is argued that such activity needs to be seen as integral to core business for environmental law enforcement agencies. Gemmell and Scott (2013: 134) further suggest that regulatory responses need to be informed by what Sparrow refers to as 'regulatory craftsmanship' which is based upon three core elements – a *clear focus on results*, a *problem-solving approach*, and *collaborative partnerships* – all of which combine to inform an emerging new approach to environmental regulatory practice.

Conclusion

Environmental crimes and the offenders that perpetuate them do not respect borders, the sovereign rights of states, or the mandate, role, and function of response agencies. In fact, it is frequently the case that they deliberately manipulate and exploit gaps and weaknesses that exist between response agencies, whether these are mainstream law enforcement agencies or environmental regulatory agencies, and this is especially so at borders.

The success of collaborative state intervention in combating environmental crime is dependent upon positive relationships, suitable collaborative mechanisms, and the specific approach to collaboration adopted by those involved. Trust between individuals is critical to this process. Collaborations in the area of environmental law enforcement will occur because they *need* to occur, and it is in the interest of all parties that they *do* occur. The challenge is that they need to occur in the most effective, inclusive, and respectful way possible. For those who have a role in working with others to combat environmental crime there is much to be gained. A possible blueprint or toolbox for this to happen is the hope and promise of the present book.

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2

International Compliance and Enforcement Networks: The Critical Role of Collaboration in Environmental Protection*

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Introduction

Over the past four decades, considerable efforts have been made to improve management of human relationships with the environment (UNEP, 2007). Countries have created environmental agencies, negotiated multilateral agreements, and undertaken new initiatives at the local, national, and international levels to protect human health, limit greenhouse gas emissions, conserve biodiversity and wildlife, and manage natural resources and sustainable development. These efforts have increasingly shown a collaborative nature and involved leaders in governments, parliaments, and the judiciary, in international organisations, businesses, and civil society, and in other sectors. Environmental officials have often been at the forefront of efforts to promote the rule of law and good governance through work to advance sustainable development objectives. These efforts and achievements have depended on significant collaboration at the individual, group, and agency/organisational levels.

Although these achievements may be significant, global environmental assessments acknowledge growing challenges (UNODC, 2010). There is a continuing loss of biodiversity, climate change, reduction in natural capital, and worldwide proliferation of waste. Air and water pollution continue to cause significant health risks, particularly to many people in the developing world. There is a need to further strengthen the stewardship of the Earth and its natural resources, which are the foundation of social and economic development and the heritage of our children and the generations to come.

The GEO-4 Report from the United Nations Environment Programme (UNEP) recognises that the environmental issues transcend borders. 'Protecting the global environment is largely beyond the capacity of individual countries. Only concerted and coordinated international action will be sufficient. The world needs a more coherent system of international environmental governance' (UNEP, 2007: xvi).

Intergovernmental networks, such as the International Network for Environmental Compliance and Enforcement (INECE) and other regional and topical environmental compliance and enforcement networks, enable and facilitate the required cooperation among government regulators, other governmental actors, international and non-governmental organisations (NGOs) and private actors. This collaboration helps deliver the required concerted and coordinated efforts that are needed to tackle the international environmental implementation challenges.

International cooperation on common environmental concerns can help resolve transboundary environmental problems, increase efficiencies in the development of tools and programmes, create a level playing field for the regulated community among countries, and ultimately foster the political will needed to reform weak implementation of environmental standards (INECE, 2011a). This collaboration is, however, not without challenges.

Operating as transgovernmental networks focused on environmental compliance and enforcement, INECE and its regional and topical networks provide the forums and mechanisms that enable direct interaction and collaboration between and among domestic officials, international institutions and private actors. INECE plays an instrumental role in the compliance and enforcement community by communicating and advancing best practices, fostering mutual learning both vertically and horizontally across organisations responsible for enforcement and compliance, and facilitating information exchange.

This chapter outlines the different 'collaboration models' – the techniques and methods used individually and in combination through different phases of INECE's history. More specifically it sketches case studies to detail and demonstrate the role of collaboration.

History of INECE

INECE's evolution as a network has reflected the broader global trend towards the 'flat world': the levelling of the playing field for business, the rise of the Internet to support knowledge transfer and the increasing

capacity for international communications (Freidman, 2005). Launched in 1989, INECE was an early leader in understanding the value of transgovernmental networks in responding to global challenges by facilitating collaboration and information exchange among environmental compliance and enforcement officials (Slaughter, 2004). At a time when countries were increasingly introducing new legal requirements to protect human health and the environment and to comply with obligations under multilateral treaties (Kaniaru, 2002), there was a clear need for flexible mechanisms to quickly disseminate information, harmonise regulations, and respond to common problems from a shared perspective shaped by practical experience with regard to environmental regulation and its implementation (Zaelke et al., 2005: ch. 12). During this period, INECE demonstrated that it was a highly effective channel for informal information sharing and served as the impetus for a surge in the number of publications that addressed environmental compliance and enforcement issues.

Network phases and corresponding approaches to collaboration

Precursor activities: bilateral collaboration (1985–1989)

Collaboration in this phase was bilateral and involved the national governments and, more specifically, the lead environmental regulatory and enforcement agencies in the United States and the Netherlands. The activities not only facilitated the exchange of information and knowledge, but most importantly established informal, unofficial personal contacts between government officials. In a similar manner, contacts were established with other countries and international organisations. The building of country-specific networks was part of this approach.

The seeds of INECE were planted in 1985 with two key activities: a research project on compliance monitoring and enforcement, and a bilateral Memorandum of Understanding (MoU) expressing collaboration between the United States Environmental Protection Agency (USEPA) and the Netherlands' Ministry of Housing, Spatial Planning and Environment (VROM).

First, the Organisation for Economic Co-operation and Development (OECD) commissioned three national case studies from the United States, the Netherlands and the United Kingdom on 'Improving the Efficiency and Effectiveness of Compliance Monitoring and Enforcement of Environmental Policies'. Ensuing discussions and debates over the final report made it clear that few nations had examined the extent to

which environmental policies and requirements were complied with. The report also found that the term 'enforcement' had different meanings and that there was a divergence in efforts to change behaviour once requirements were established (Wasserman, 1984).

Second, in the same year, the USEPA and VROM entered into an MoU to promote mutual exchange and transfer of ideas and environmental enforcement was singled out for exchange. In the Netherlands, an enforcement intensification programme was launched in response to a highly publicised scandal involving chemical waste. A thorough inquiry revealed that organisational and legal deficiencies and a lack of adequate knowledge were the critical weaknesses in the government organisations involved. The MoU led to a series of seminars, the outcomes of which were used by the Dutch government to reach consensus on better structures for environmental enforcement. They also provided both the Dutch Ministry of Environment and USEPA new strategies for improved programmes. For example, the Dutch Ministry of Environment used the infrastructure of the national and regional police to collaborate in strengthening their enforcement approach, recognising that police have 'eyes and ears' everywhere. In addition, both the USEPA and the Dutch Inspectorate for the Environment (as part of the Dutch Ministry of Environment) had leaders with the vision and political backing to move these important developments forward. This momentum led to three conferences being organised: Utrecht, The Netherlands, in 1990, Budapest, Hungary, in 1992 and Chiang Mai, Thailand, in 1994. The conferences assisted by firstly shaping the initial focus and activities of INECE and secondly by providing a foundation for the growth of INECE.

Early activities: multilateral collaboration and international commitments (1990–1995)

Building on the foundations described above, there was a move towards broadening the range of countries and agencies participating in INECE. An important result of and follow-up to the bilateral seminar series was the first international environmental enforcement workshop held in 1990 in Utrecht, the Netherlands. Representatives from 13 countries and a number of international organisations attended this important extension of the bilateral cooperation. At the workshop, a strategic framework describing the United States' compliance and enforcement programme was presented. This framework was intended both to reinvigorate enforcement and to better articulate a consistent philosophy

and approach that would foster improved enforcement among the 50 US states and local government entities. The framework received a positive reception at the workshop, where attendees strongly supported the idea that specific cultural factors were less of a driver of compliance and non-compliance than the intrinsic nature of human behaviour.

INECE's early work focused on generating international commitment to build the capacity for compliance and enforcement as an essential element of environmental management, and on establishing a common set of definitions and framework for exchange. The latter is particularly important, since an univocal language is a prerequisite for effective cross-border interaction and collaboration. It turned out that in some languages the word 'enforcement' did not exist.

An international mandate – Agenda 21 of the United Nations Conference on Environment and Development (UNDSD, 1992) – confirmed broad consensus on the importance of dedicated programmes for environmental compliance and enforcement for the achievement of domestic and international environmental goals, sustainable development, and free trade.

Chapter 8 of Agenda 21 stated (in part):

> 8.21. Each country should develop integrated strategies to maximize compliance with its laws and regulations relating to sustainable development, with assistance from international organizations and other countries as appropriate. The strategies could include:
>
> (a) Enforceable, effective laws, regulations and standards based on sound economic, social and environmental principles and appropriate risk assessment, incorporating sanctions designed to punish violations, obtain redress, and deter future violations;
>
> (b) Mechanisms for promoting compliance;
>
> (c) Institutional capacity for collecting compliance data, regularly reviewing compliance, detecting violations, establishing enforcement priorities, undertaking effective enforcement, and conducting periodic evaluations of the effectiveness of compliance and enforcement programmes;
>
> (d) Mechanisms for appropriate involvement of individuals and groups in the development and enforcement of laws and regulations on environment and development;
>
> (e) National monitoring of legal follow-up to international instruments. (UNDSD, 1992: 60)

This mandate strengthened the idea that environmental compliance and enforcement were critical to achieving sustainable development. It also gave international organisations the confidence to move forward and support capacity-building activities that could result in improved sustainability and a level playing field for people and businesses.

During its first decade, 1985–1995, the outcomes of the growing partnership also included:

1. Adoption of common definitions, principles and a framework for international exchange;
2. Exchange of experiences of well over 65 country programmes and expert views on over 25 special topics in widely disseminated conference proceedings;
3. International conferences;
4. Exponential growth in networking supported by an accessible electronic repository of resources developed through the increased participation in international conferences;
5. Emergence of new institutional arrangements for ongoing regional and international networking and cooperation.

In this decade collaboration was mostly at the multilateral level and occurred on an unofficial basis, while anticipating movement towards a more formal and international level.

Expanded activities: expanded collaboration (1995–2005)

In its second decade of operations, INECE continued its work to advance environmental compliance and enforcement as the foundation of a stronger and more global rule of law, good environmental governance, and, ultimately, sustainable development. In this period, collaboration was critical in expanding and improving upon INECE's successful international conference series.[1] These work conferences were complemented by interim thematic workshops to educate practitioners; foster practical, on-the-ground enforcement cooperation; and promote compliance and enforcement as key to achieving sustainability objectives.

During these years, INECE re-launched its website with a greater focus on topical work areas and on its broad collection of resources on environmental compliance and enforcement.

The environmental leaders of the United States, Canada, Italy, France, Germany, Japan, Russia, the UK, and the EU convened in Miami, Florida, in May 1997 and addressed environmental enforcement issues for the first time in the context of the G-8 Summit process. US Environmental

Protection Agency Administrator Carol Browner chaired the Environmental Leaders' Summit of the Eight, which produced a strong agreement on environmental enforcement and access by citizens and groups to environmental information.

At the conclusion of the Environmental Leaders' Summit, the chairs summary stated, in part, that:

> Effective enforcement of environmental law is essential to punish and deter environmental violations, ensure fairness for those who pay the costs associated with environmental compliance, and provide a basis and give incentives for voluntary efforts to improve environmental performance. (Environment Leaders' Summit of the Eight, 1997)

With this statement, the environmental leaders agreed to move forward domestically with efforts to improve the integration of environmental enforcement with traditional law enforcement institutions and other agencies and also committed themselves to support and enhance the emerging international cooperative efforts among their governments and international bodies. They noted the value of compliance mechanisms under international environmental agreements and the importance of public access to environmental information as well as effective administrative and judicial mechanisms. The leaders also agreed to enhance a collective focus on trade that is illegal under international environmental law, including shipments originating in their countries and those that have adverse impacts on developing countries (Devany and Penders, 2000).

In response to the increasing focus on understanding how compliance approaches and activities influenced behaviour of the regulated community, a major INECE project during this time was the development of guidance on performance measurement indicators. This work included the development of a guidance document, a collection of international good practices, and the development of a comprehensive capacity-building programme, and resulted in training hundreds of enforcement programme managers around the world on this topic (INECE, 2008b).

In 2005 the leading resource on environmental compliance theory and practice *Making Law Work: Environmental Compliance & Sustainable Development* was published as a two-volume set (*Making Law Work*, Vols 1 and 2) (Zaelke et al., 2005). During the same time period, a large number of technical support documents were produced which reviewed enforcement and compliance approaches by sector, including forestry, mining, industrial waste, tourism, and hazardous waste.

Though *Making Law Work* was published in 2005, some 90 per cent of the contributions were written after 1990. Similarly, the nine INECE International Conferences held since 1990 have produced more than 580 articles that have been published as proceedings.[2] It is clear that INECE has been a catalyst for practitioner and academic writings on environmental compliance and enforcement.

Therefore, it is no coincidence that this decade also saw the expansion of the regional environmental compliance and enforcement networks, with new networks launched in Australia, Africa's Maghreb region, Asia, North America, the Caucasus and Central Asia, and Central Europe joining the already established European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL).[3]

Expanding reach and support: collaboration to build capacity (2005–2015)

In its ten years of work since 2005, INECE has emphasised two key themes: (1) understanding how environmental compliance and enforcement programmes create value across all areas of society and (2) the importance of enforcement cooperation in strengthening environmental governance and, with it, sustainable development. These themes were underscored by INECE's two international conferences held during this period. The first, *Linking Concepts to Action* was held in Cape Town, South Africa, in April 2008 and affirmed that environmental compliance and enforcement programmes create public and private value (INECE, 2008a). The second, *Enforcement Cooperation: Strengthening Environmental Governance* was held in Whistler, Canada, and demonstrated how enforcement cooperation at all levels is essential for achieving sustainable development objectives.[4] Consistent with global dialogue, INECE broadened its topical scope to include assuring compliance with and enforcement of laws with climate protection benefits, including those related to controlling emissions of short-lived climate forces such as black carbon (particulate) emissions.

The societal values that environmental compliance and enforcement programmes create are public value through strengthened rule of law, protected ecosystem goods and services, and improved human health and private value through increased investor confidence, reduced business risks, stimulated innovation, increased competitiveness, and new jobs and markets (NHEEPA, 2005).[5] This added value is further increased through enforcement cooperation among government officials, which creates a more level playing field for economic operators. Parallel to work on capacity building to support environmental compliance and

enforcement, INECE also developed collaborative network activities in specific topical areas. Examples of priority activities during this period are discussed below.

International cooperation on monitoring, reporting, and verification mechanisms in emissions trading

Climate compliance is a topic that increasingly became a priority for international cooperation during this time and an important area of INECE's work. Through a groundbreaking series of workshops beginning in 2004, INECE identified, explored, and made recommendations on the role of compliance in assuring trust and integrity within and among carbon emissions trading platforms. Much of INECE's work focused on catalysing discussion on the development of robust procedures for the monitoring, reporting, and verification of climate pollutants, including where emission reductions must be accurately reported in registries in the context of both regulatory and non-regulatory compliance regimes. Outcomes of this collaborative work include the *INECE Special Report on Climate Compliance* (INECE, 2009) and the *INECE Compliance Strategies to Deliver Climate Benefits* (INECE, 2013).[6]

Enforcement cooperation at seaports

Another identified gap in compliance and enforcement collaboration at the international level was (and continues to be) effective cooperation across and within national borders to detect, prevent, and control illegal shipments of hazardous waste, electronic waste, and ozone depleting substances. Accordingly, INECE presented a workshop on illegal transboundary waste issues at its 8th International Conference in 2008. Out of this activity, the international network that became known as the INECE Seaport Environmental Security Network (SESN) was developed. The SESN has worked extensively since its founding on identifying and facilitating avenues of collaboration between and among port officials, including through two international inspection projects, workshops, and capacity-building activities.[7]

Enforcement of EIA requirements

The enforcement of requirements that result from the environmental impact assessment (EIA) and permitting process has been an increasingly important topic for INECE members. Although issues related to EIA have frequently been addressed by presenters and participants at the international conferences organised by INECE, it became a special area of focus for the network in 2012, beginning with the INECE *Roundtable*

Discussion on the Enforcement of EIA Requirements. The outcome document that emerged from this online-facilitated discussion provided a valuable set of expert perspectives into many of the challenges faced by government environmental authorities in assuring compliance with project-specific obligations (INECE, 2012). In May of 2012, INECE received the Global Environment Award by the International Association for Impact Assessment for its substantial contributions to the practice of environmental assessment. Later in 2012, INECE began a six-month study of mechanisms for funding government EIA-related tasks, with a special focus on Central Africa. The study, conducted on behalf of the Netherlands Commission for Environmental Assessment (NCEA), resulted in two documents published by the NCEA, one of which related to systems for funding government EIA tasks in four African countries, and a document covering funding mechanisms and considerations in general (NCEA, 2013, 2014). Looking ahead, INECE is focused on helping put lessons learned into practice. As countries around the world pursue critical economic development objectives, INECE will seek to engage and collaborate with the institutions that ensure development activities are carried out in a sustainable manner in accordance with environmental permit requirements.

Collaboration: the future (2015 and beyond)

2015 is the approximate midpoint of INECE's current five year Strategic Plan (2012–2017), which provides guidance on future directions for the network. Thematic priorities for INECE identified in the Strategic Plan, and supported by the outcomes of the 2011 International Conference, include governance and rule of law, air pollution and climate change, illegal trade of waste, environmental impact assessment and permitting, biodiversity, natural resources, illegal trade in protected species, water pollution and management, and enforcement and compliance activities that promote sustainable consumption.

In 2015 and beyond, priorities for INECE will include innovative and practical activities to advance INECE's mission and priorities under its Strategic Plan. One priority will be studying examples of 'next generation environmental compliance'. In January 2015 INECE produced the *INECE Special Report on Next Generation Compliance* (the Report) as follow-up to a 2013 USEPA conference on the same topic (INECE, 2015). INECE invited colleagues around the world to contribute to the Special Report, which introduced a range of innovative views, methods, and solutions for increasing effectiveness of environmental compliance and enforcement. With the Report, INECE sought to bridge the gap between

emergent technologies and practitioners to strengthen compliance with the relevant national, regional, and international laws, such as INECE is doing with its work to support the implementation of new air pollution controls in China. INECE's Next Generation Compliance initiative will continue to identify and promote the best next-generation technologies and regulatory strategies for environmental compliance and enforcement practitioners.

Advancing next-generation compliance undoubtedly will require the use of different forms of collaboration and networking. For example, it is anticipated that alternative paradigms for collaboration with those members of the private sector that have shown to be in control of their compliance management will become available (e.g., covenants with industry). Technological and informational tools will provide new ways to understand how rules are being implemented in real time, while more effective requirement design can help actively facilitate environmental compliance. Collaboration with academia, for example, to foster applied knowledge from behavioural sciences, may help the development of more effective approaches towards environmental compliance. The same would apply to effective collaboration with civil society.

Another priority will be further work on promoting compliance with existing and emerging laws that have climate co-benefits, as well as other regulatory tools to support mitigation and adaptation. A 2014 study by the global environmental legislators organisation 'GLOBE' found that 500 climate laws have been passed in the 66 countries covered by the study and that much of the substantive progress on legislative activity on climate change in 2012 took place in emerging economies, including China (Michal et al., 2014). Assuring full implementation of these new laws is critical to their success in achieving intended energy security, resource-efficiency, and cleaner, lower carbon economic growth benefits. INECE is already working with national authorities to design strategies to assure compliance with laws that directly limit climate pollutants through carbon emissions trading programmes as well as laws that govern certain short-lived climate pollutants, including black carbon (soot), tropospheric ozone, and methane, all three air pollutants, along with factory-made hydro fluorocarbons (HFCs) and other fluorinated gases.

INECE will continue its work on seaport environmental security, as an ongoing priority, with a renewed focus on capacity building, coordinated simultaneous environmental inspection work at seaports, and expanding beyond illegal transboundary shipments of hazardous waste to include illegal transboundary shipments of electronic waste and ozone

depleting substances. In partnership with international and domestic governmental organisations, and NGOs where appropriate, INECE will continue to give priority to foster and support interinstitutional collaboration to fight against illegal transnational shipments of waste.

Another area of future collaboration will be continued support for the growth of environmental compliance and enforcement networks. INECE, sometimes referred to as a 'network of networks', has been a driving and guiding force providing catalytic support for the establishment of regional and topical networks (Pink, 2010; Zaelke et al., 2011) and then ongoing stimulus via international conferences, regional capacity building events, and thematic projects. INECE anticipates that strong national networks, like those in China, Kenya, Uganda, Tanzania, and Jordan, will increasingly play a role in the success of regional environmental compliance and enforcement networks.

Central to effective collaboration is effective communications. Looking to the future, INECE will expand www.inece.org, the world's most extensive online library on environmental compliance and enforcement materials. INECE will use social media tools and other modern information and communication technology to engage practitioners and new audiences through its website and to enhance connections among practitioners.

Collaboration: lessons learned

During its more than 25 years of operations, INECE has identified a number of lessons learned about collaboration with and across individuals, groups, and organisations. The next section briefly outlines three of those lessons.

The importance of establishing, maintaining, and then collaborating through networks

Based on INECE's experience in supporting regional networks and the experiences of those networks in developing effective work programmes, INECE convened the first Summit of Regional Network Leadership in Whistler, Canada, in 2011 (the Summit). Thirty-one practitioners from ten networks shared practical experiences and charted future collaboration on substantive issues of mutual concern, including good practices for network management and governance (INECE, 2011b).

Exploring ways to cooperate with other networks was identified as an aspect of sustainability. Respondents identified priority areas for collaboration among networks to include sharing information on institutional arrangements (e.g., membership involvement, generating funding,

engaging development partners), exploring cross-regional collaboration that could open up additional development partner support, sharing information on effective programming (e.g., on transboundary issues), and communicating lessons learned to emerging networks.

Following the Summit, INECE produced an online manual on *Creating and Sustaining Regional Enforcement Networks* (the Manual).[8] The Manual was the result of an ongoing effort to gather the collective lessons and experiences of successful networks from around the world and to provide useful guidance for network participants and stakeholders to consider. It also presents a concise overview of the principal areas of practice that relate to the start and the operation of successful regional networks. This manual is designed to demonstrate how cross-border cooperation can be leveraged to acquire significantly greater capabilities than those of domestic government agencies and staff acting alone.

The importance of assessing networks to ensure they are effective and meeting needs

Establishing a network is not enough. Network assessment is the process of evaluating an organisation's performance and progress, relative to its mission and goals. It is a key tool for helping networks identify and prioritise areas for improving the value, including shared expertise, capacity building, and cooperation, that they provide to their members. Grant Pink and James Lehane, then office holders of the Australasian Environmental Law Enforcement and Regulators neTwork (AELERT), developed an assessment tool which emerged from AELERT's specific experience in self-assessment and which is particularly informative. This Network Evaluation Matrix (NEM) is a tool that can be used by environmental enforcement networks to evaluate their maturity and capacity levels. By tracking a network's maturity level across a range of individual criteria, the network can (1) identify weaknesses and improvements; (2) prioritise specific areas needing improvement across a range of key network functions; (3) obtain data for future review, management, and evolution; and (4) benefit from a process for both internal and external quality review (Pink and Lehane, 2011).

The importance of maintaining momentum

Assessing a network is not enough. Momentum must be maintained, and new partnerships need to be developed. On the topic of momentum, Ken Markowitz, Managing Director of the INECE Secretariat, refers to the importance of 'networks that do, not networks that are' (Markowitz, 2013).

One innovative strategy INECE has used to maintain momentum is the Correspondents Program. Launched in March 2013, the Program was designed to increase information exchange between and among environmental compliance and enforcement practitioners and theorists. The Program invites leading environmental compliance and enforcement practitioners, network secretariats, and others to share short updates, news, and announcements with the broader community through the INECE website.

In terms of new partnerships, INECE actively pursues and promotes linkages with organisations and networks with complementary mandates. Recent examples of effective partnerships include collaboration with international organisations like the World Customs Organization, the United Nations Office on Drugs and Crime, Interpol Environmental Crime Programme, and the UNEP on activities to build capacity to control hazardous wastes at seaports, partnering with organisations including academia on next-generation compliance,[9] and partnering with national government organisations in regions including South America and China. The *Environmental Enforcement Networks: Concepts, Implementation and Effectiveness* conference in Brussels, Belgium, in November 2013 was another example of how INECE combined forces with another environmental enforcement network – in this case the Flemish High Council of Environmental Enforcement (VHRM) – to generate activity within a region on a specific topic.

INECE is also preparing for a 10th international conference to explore best practices for achieving environmental results through compliance and enforcement, including next-generation compliance approaches, as well as to focus on compliance strategies for requirements relevant to climate change mitigation and adaptation.

Conclusion

The 1985 OECD study and the MoU between the United States and the Netherlands initiated a series of international enforcement meetings held around the world that engaged regulators, inspectors, prosecutors, judges, and other stakeholders in a global discussion about the importance of environmental compliance and enforcement for achieving sustainable development objectives.

The experiences of INECE and the regional and topical environmental compliance and enforcement networks that emerged from this initiative offer lessons learned and good practice for emerging networks, such as those in East Africa, West Africa, and South America as well as

for networks in existence that are interested in assessing their growth, strategic direction, and work programmes. Also, through collaborative design and development within the networks, numerous effective tools and instruments for the work of environmental compliance and enforcement practitioners around the world became available.

In his 2010 research, Pink notes that '[t]he literature indicates that networks have been established and utilised in ever increasing amounts over the last twenty-five years' (Kaniaru, 2002). He also notes:

> The environmental enforcement field like much of public administration relies heavily on networks especially as the field does not, relatively speaking, have great depth in terms of history, precedent and legal principles. This reflects the rapidly increasing importance of environmental issues within contemporary cultural, political and economic dialogues. (Pink, 2010: 4)

As a pioneer since 1990 in developing informal networks to enable peer-to-peer collaboration and information sharing on environmental compliance and enforcement, INECE has acted to both catalyse and support initiatives to develop similar networks on a regional, national, or topical scale. INECE provides programmatic and strategic support and guidance for network design and development, while also acting as a model for this type of collaboration. INECE has directly and indirectly influenced the development and growth of the approximately 25 networks currently in existence that focus on building capacity among government officials to improve environmental compliance and enforcement, and is referred to as 'the network of networks'.

Assuring compliance with national environmental laws and with international treaty obligations is an important strategy in fulfilling our 'moral and ethical responsibility to meaningfully address and to reverse the continuing deterioration of the global environment' (Miko, 2005: 500). Over the past 24 years, INECE and the regional and topical environmental compliance and enforcement networks have been instrumental in ensuring that environmental laws are meeting their objective to protect human health and the environment, and will continue to act to 'make laws work'.

Notes

* This chapter is a complimentary piece to Jo Gerardu, Meredith Koparova, Ken Markowitz, Durwood Zaelke, and Gunnar Baldwin Jr (2015) 'Developing and Sustaining Environmental Compliance and Enforcement Networks:

Lessons Learned from the International Network on Environmental Compliance and Enforcement', in Michael Faure, Peter De Smedt, and An Stas (eds), *Environmental Enforcement Networks: Concepts, Implementation and Effectiveness* (Cheltenham, UK: Edward Elgar), pp. 334–349. Specifically, this earlier piece focuses more on the governance and institutional arrangements that go into developing and sustaining networks while this chapter considers the different techniques, forms, and stages of collaboration that underpin and inform such institutional arrangements.

1 INECE held conferences in Oaxaca, Mexico, in 1996; Monterey, California, USA, in 1998; San Jose, Costa Rica, in 2002; and in Marrakech, Morocco, in 2005.
2 Conference proceedings are available electronically at http://inece.org/resource/inece-conference-proceedings-directory/
3 Documentation of the founding and evolution of many of these networks is available in the *Proceedings of INECE's 9th International Conference* (2011), pp. 743–835, available at http://inece.org/conference/9/confproceedings/
4 For the purposes of this chapter, a notable part of the Whistler Conference was the Summit of Regional Networks, which is covered in detail later in 'Collaboration: lessons learned' section.
5 This is known as the Prague Statement.
6 *INECE Compliance Strategies to Deliver Climate Benefits* (2013) is available at http://inece.org/resource/climate-report/; *INECE Special Report on Climate Compliance* (2009) is available at http://inece.org/resource/inece-special-report-on-climate-compliance/
7 See Chapter 9 (Ruessink, Heiss, Kopsick, and Koparova) of this book for a more detailed overview of the INECE SESN.
8 INECE, *Online Manual on Creating and Sustaining Regional Enforcement Networks*. Available at http://inece.org/resource/network_manual/
9 Key partners in the Next Generation Compliance initiative are the US Environmental Protection Agency, the Netherlands Human Environment and Transport Inspectorate, the George Washington University Law School, Erasmus University, the UNEP, the International Union for the Conservation of Nature World Commission on Environmental Law, and the Environmental Law Institute.

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3

Capacity Building and Collaboration: Enforcement Training to Build Capacity that Ensures Environmental Protection

Davis Jones and *Ivan Honorato*

In order for any environmental regulatory approach to be effective, there must be a strong rule of law with a comprehensive enforcement programme that promotes and enforces compliance with the law, and that will encourage the regulated community to comply with the law (Zaelke et al., 2005). In addition, there must be adequate capacity within the country to implement the laws, both by the regulated community and by the government and civil society (Jones, 2008). 'Capacity' should be considered widely: the capacity for legislatures and parliaments to write enforceable laws; the capacity for environmental ministries to translate the law into effective regulations, permits, and other controls; the capacity for industry and other polluters to understand and comply with the law; the capacity for civil society and the public to oversee and hold accountable the government and the regulated community; and the capacity for police, inspectors, prosecutors, and judges[1] to inspect for compliance, investigate violations, and enforce the law.

How training helps build enforcement capacity

Institutional capacity

Building capacity is not limited to training staff. Each component in a comprehensive regulatory cycle (INECE, 2009) needs strengthening, and different approaches are required for the different actors involved in each component. Any inadequacies or failures along the individual links in the enforcement chain can eliminate the deterrent effect of sanctions and penalties (Akella and Cannon, 2004) and each link requires adequate capacity to effectively perform the required function/s. Legislators with limited environmental experience may need outside legal experts

from academia or consultants to advise on the science of environmental problems and solutions, the economics of controls and limits, and the implementation of regulatory programmes. Environmental ministries that detail the regulations and issue permits will need to consult with lawyers, scientists, engineers, doctors, and industry experts on the legal, technical, and health issues involved and build their own technical capacity to write clear, enforceable rules. Ministries must also consult with civil society groups and the public to ensure acceptance of the rules and to solicit suggestions for improvements. These interest groups, particularly at the local level, may not have the technical capacity to understand and fully participate in the process without some capacity-building support. Finally, enforcers[2] also need to be trained in the law, process and procedure, science, and technology to ensure they can adequately verify compliance, document and prove violations, and understand the legal ramifications and responses available to resolve the problems and prosecute violators in a fair, consistent manner.

Physical capacity

There are physical capacity needs as well, without which the best-intentioned regulated entity cannot demonstrate its own compliance nor can the most capable enforcer/inspector prove a violation. These types of limitations should be addressed in the regulatory structure. For example, if the law or regulation in a particular country requires a certain type of laboratory analysis to verify compliance (or equally prove non-compliance) but there is no laboratory in the country that has the equipment necessary to run that type of test, then the law is merely an unenforceable suggestion and cannot be implemented as written. Similarly, if the burden of compliance monitoring is placed solely on the environmental ministry as opposed to the permittee or discharger, then the cost of monitoring may make it prohibitively expensive to conduct adequate inspections and prove discharge violations. Physical capacity also includes the basic tools needed to investigate and respond to violations. These 'inputs' include staff, salaries, transportation, computers and IT resources, and administrative support (INECE, 2008). The best trained inspector in the world is completely ineffective if they cannot get to the problem sites because of budget or travel constraints and/or a lack of vehicles.

Programmatic capacity

In addition to the laws, regulations, and permits that are passed to enforcement practitioners from other institutions or departments, the

enforcement programme must develop policies, guidelines, and standard protocols to provide the instructions for consistency and equity in practice. These procedural documents ensure that staff know 'what' to do, 'how' to do it, and actually 'do' it in a consistent and repeatable way which ultimately establishes the programme's credibility to the regulated community, the public, and the judicial system. This capacity must be built over time and may change as programmes become more mature, but it should be a primary component of capacity-building efforts and continual staff training.

Intellectual capacity

Staff and managers must have appropriate educational background and on-the-job training to do their job, both individually and collectively as a unit. Environmental law enforcement is complex and variously requires adequate understanding of science, technology, economics, law, and policy that may require advanced academic instruction. Recruitment policies, hiring criteria, and educational requirements should be established for different job positions to ensure an adequate mix of expertise within the unit. Ideally, staff would possess relevant educational training prior to hire as well as practical experience in the field through working in the regulated sector or in other areas of law enforcement.

However, due to comparably low salaries, government positions can be seen as an entry-level position and programmes often hire junior employees or individuals with little or no enforcement experience. Nonetheless, these individuals can quickly learn the specific skills needed for the job that are not generally speaking taught in universities.[3] Capacity-building programmes are essential to fill the gap between academic instruction and professional experience in a very detailed and specific career. Minimum training criteria, including requirements for continuing education, ensure that staff know their job and keep up with ongoing legal and technical changes. In addition, a well-trained staff can help provide the credibility at the individual and institutional level that is essential to proving and winning cases, gaining the public's trust, and earning the respect of the regulated community.

Minimum requirements for job performance should drive capacity building

Before designing a capacity-building programme, managers must carefully analyse the job requirements, the gaps in staff capabilities, and training needed to meet those requirements. Clear definitions of performance

expectations must be based on well-elaborated policies and procedures delineating what defines a successful outcome and what steps are required to reach the objectives. This should be done at the programmatic level to see what unique skills are required within the organisation, and at the individual level to determine how best to prepare the employees to meet their performance expectations. Different countries and regions approach these procedures in different legal contexts ranging from recommended practices to formal regulations that bind the enforcement agency to follow their own procedures.

The EU offers an excellent example of a regional approach to setting a baseline for individual country enforcement programmes. As early as 1996, the EU Parliament recognised 'the need to ensure that minimum inspection tasks are carried out', because: 'the wide disparity which exists until now cannot be considered as satisfactory with reference to the objective of correct and level enforcement at Community level' (European Commission, 1997). As the EU began to evaluate the performance of different countries' environmental enforcement programmes, it recognised the need for a standard or benchmark to compare programmes. The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) was formed as the environmental enforcement network for the EU, and one of their early tasks was to develop the 'Minimum Criteria for Environmental Inspections' (IMPEL, 2003). This guidance was adopted by the EU parliament in 2001 and IMPEL was encouraged to work with the European Commission and member states to develop and promote best practices for the qualifications and training of inspectors throughout the region (European Parliament, 2001). IMPEL has since used the criteria for training and programme evaluation throughout the network and with countries seeking to enter the EU.

The United States Environmental Protection Agency (hereafter USEPA or EPA) also provides an excellent example for training of its staff. It recognised the need for minimum training requirements for inspectors and in 1988 developed 'EPA Order 3500.1', which was revised to the current version in 2002 (EPA, 2002). This order applies to all EPA inspection programmes and establishes minimum training requirements, both in terms of topics and total qualification hours, that all EPA inspectors must meet before being authorised as a 'lead inspector' able to conduct an inspection independently or direct an inspection with others, in a supporting role. In addition to introductory training, all inspectors are required to attend at least eight hours of refresher training each year.

The order sets out three components of required training:

1. Occupational Health and Safety Training – that, at a minimum, meets the requirements under the Occupational Safety and Health Act for the specific job prior to conducting any field activities.
2. Completion of a Basic Inspection Curriculum – that 'provides a comprehensive overview of the knowledge and skills needed for compliance inspections/field investigations under any of EPA's statutes' (USEPA, 2002).
3. Programme-specific requirements – that cover the regulatory and technical requirements and the individual legal framework under which the inspectors will work.

The training consists of a mixture of self-paced study, classroom activities, and on-the-job training. Completion is verified and tracked by the inspector's supervisor. Each of the major statutory programmes (e.g., Clean Air Act, Clean Water Act) has since established the training requirements necessary to comply with the third component of the order. While the training may be delivered by a mix of providers, core courses have been developed and are presented through the National Enforcement Training Institute (NETI) described later.

Other countries have established inspection procedures through a regulatory process that publicises the expectations on the enforcement programme and its inspectors. This allows regulated and inspected entities to know what will happen during the inspection, what conduct they should expect from the inspectors, and what their responsibilities are during and post inspection. This is particularly important for countries where recent legal reforms have granted expanded authority to new institutions, where the regulations help establish programmatic credibility by clearly defining the limits of the inspectors' authority and help to maintain transparency and accountability in the enforcement process.

Chile's Superintendent of the Environment (Superintendente del Medio Ambiente, SMA) provides an example of a regulatory model common to many countries. Shortly after the creation of Chile's SMA, the agency developed and released formal resolutions that defined an environmental inspection; introduced principles such as efficiency and impartiality; outlined procedures for the inspection including planning, access to the facility, identification of the inspectors and facility representatives, information gathering authorities; and set forth the requirement that inspectors prepare and leave a summary report of

their findings with the facility manager at the end of the inspection. These clear, public requirements form the basis of training for inspectors to ensure everyone learns their responsibilities (Ministerio del Medio Ambiente de Chile, 2013). Peru's Agency for Environmental Evaluation and Enforcement (Organismo de Evaluación y Fiscalización Ambiental [OEFA]) has similar regulations for inspections that outline the responsibilities of the inspectors and the inspected, the content of inspection reports, and the response to the inspection findings (Consejo Directivo, Organismo de Evaluación y Fiscalización Ambiental, 2013). While both Peru and Chile define inspectors, neither outlines the minimum for training requirements for inspectors.

Environmental enforcement training in the United States

The USEPA and each of the state environmental agencies work to ensure compliance with environmental laws by using multiple tools, including aggressive enforcement against violators. The EPA has both civil (judicial and administrative) and criminal investigatory authorities and maintains both inspectors as well as criminal investigators with full law enforcement power. Legal requirements for evidence collection differ depending on the forum; a much higher burden of proof is required for criminal convictions that may take away a person's freedom than for civil or administrative judgements with compliance orders and financial sanctions. Different skills are necessary for inspectors and investigators because of the nature of their work and the risks presented. As such, training is usually separate and focused on the particular requirements of each task and job.

In 1990, the US Congress passed the Pollution Prosecution Act of 1990 in order to 'provide better enforcement of the environmental laws of the United States' (United States Pollution Prosecution Act, 1990). The law served two primary purposes: to increase the number of criminal and civil investigators and to create the NETI. NETI was tasked to 'train Federal, State, and local lawyers, inspectors, civil and criminal investigators, and technical experts in the enforcement of the Nation's environmental laws'.[4] Since its creation, NETI has worked with partners in EPA's Regional offices and the state environmental enforcement agencies to determine specific priorities for training, share existing course materials, and develop new courses as needed (NETI, n.d.). While continuing to utilise traditional classroom training when appropriate and if resources allow, NETI has shifted towards more online presentation

of training through self-paced training, eLearning courses, and webcast seminars that can be watched remotely, either in real time or after the fact, through online recordings. This has enabled NETI to reach a much larger audience nation-wide at a much lower cost. NETI has also worked to strengthen training presented by EPA Regions, states' environmental agencies, regional enforcement associations, and academic institutions. It serves as a clearing house for information and resources on enforcement training.

While staff in EPA's criminal enforcement programme do participate as learners and teachers in NETI's training courses, EPA's Office of Criminal Enforcement Forensics and Training (OCEFT) offers more specific training designed for law enforcement officers who have the legal authority to investigate environmental crimes, carry firearms, and arrest suspects. OCEFT shares space with 90 other federal law enforcement agencies at the Federal Law Enforcement Training Center (FLETC) and is able to provide classroom training and field scenarios based on environmental crimes as well as in-depth training on firearms, driving tactics, and other traditional police skills. Special Agents initially attend the 11-week basic Criminal Investigator Training Program followed by the 8-week Environmental Investigations Basic Training Course. The course includes a two-week continuing case investigation that affords the agent the experience of initiating, conducting, and prosecuting an environmental crime. It includes such topics as interviewing, surveillance, identifying information sources, execution of a search warrant, witness preparation, and testifying in court. In addition to EPA Special Agents, the training centre welcomes state, local, and sometimes international enforcement authorities who need the special skills for their enforcement efforts (McAtee and Dillon, 2012).

In addition to these organised, national training organisations, the EPA Regional Offices offer training to their staff and state counterparts as needed, in both formal classroom structures and on-the-job field mentoring. One example is EPA Region 4[5] and its Science and Ecosystem Support Division which has developed a long list of technical courses for field operations for domestic and international delivery ranging from air quality monitoring to wastewater treatment plant inspections. Another example is a periodic Multi-Media Inspector/Enforcement Officer Training Workshop held in EPA Region 6.[6] The workshop is designed as an opportunity for enforcement personnel from Region 6 states and beyond to learn about new regulatory and technical developments across different statutory programmes as well as to get a refresher on common skills, policies, and procedures.[7] While the primary responsibility for these efforts

resides in the Regional Offices, NETI serves as a national connection between the local efforts.

EPA's enforcement training programme through NETI, FLETC, and the Regional Offices drives collaboration between EPA Headquarters, the ten Regional Offices, and the States as co-regulators. By bringing the practitioners together from different institutions and levels of government, relationships are established in the classroom that strengthen the relationships necessary for effective vertical and horizontal collaboration in the field. As with inspections, collaboration on joint enforcement cases is critical to maintaining an effective federal–state partnership.

Environmental enforcement training and environmental enforcement networks

The California Air Resources Board (CARB) provides another example of state-to-state training collaboration. Because of the extensive demand within California for training local and state regulators and the regulated community, CARB has created a very long list of training courses primarily focused on air pollution monitoring, inspection, and enforcement. Depending on the topic, enrolment may be open to the public and to personnel from other states or only available for state inspectors and enforcement personnel. Upon demand, CARB will offer the courses in other states when funding is provided. These types of academies are critical, especially in smaller states that may not have high enough demand or in-house expertise to produce their own training as required.

State-to-State collaboration is also important, and the different US state enforcement agencies and four Canadian provinces have formed four Regional Environmental Enforcement Associations. These associations provide a forum to create and present training for local, state, and federal authorities, to facilitate professional collaboration, to share best practices, enforcement successes and challenges, and to support integrated enforcement.[8] Funding for the networks is provided by member-state fees and contributions, grants from the USEPA, and by directing penalties from state enforcement cases and settlements towards the networks.

Similar networks between states and/or national governments have developed in other regions of the world. In Australia and New Zealand, the Australasian Environmental Law Enforcement and Regulators neTwork (AELERT) was created in 2003 as a 'collective of environmental regulators from all levels of government across Australia and New Zealand' (AELERT, n.d.). AELERT sponsors conferences, forums, training,

staff exchanges, and mechanisms to connect and share best practices between members and to provide access to a larger suite of training courses across the network than could otherwise be developed by individual organisations. One of AELERT's first priorities was to develop and promulgate standardised training which had been customised for environmental regulatory staff, but which satisfied national training standards (Pink, 2008).

The Asian Environmental Compliance and Enforcement Network (AECEN) was formed in 2005 and now has members from 17 countries across the region. AECEN began by conducting a regional assessment of institutional capacity that helped focus further work towards common gaps in the network. Based on the findings and member input, AECEN has held regional forums and classroom training on environmental inspections, compliance and enforcement indicators, and other topics. In response to more specific, country-level needs, AECEN has also helped facilitate 'twinning' relationships between two countries where one can provide detailed capacity to a second country struggling with a common issue. AECEN then attempts to replicate the outcomes of the twinning to other countries to provide regional capacity on the topic.[9]

International capacity building

The USEPA is primarily a domestic agency. However, the National Environmental Policy Act (NEPA) mandates that EPA and other federal agencies 'recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programmes designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment'.[10]

In addition, provisions are included in US Free Trade Agreements (FTAs) to ensure that the lack of environmental enforcement is not used as an incentive for environmentally devastating activities. These provisions recognise that an environmental legal regime can only reach its goal of protecting human health and the environment if the regulated entities put the requirements in practice and polluters comply with those requirements (Jones, 2008). The United States–Chile FTA provides a good example: 'each Party shall ensure that its laws provide for high levels of environmental protection and shall strive to continue to improve those laws'. It goes further in to stipulate that 'a Party shall not fail to effectively enforce its environmental laws, through a sustained

or recurring course of action or inaction, in a manner affecting trade between the Parties, after the date of entry into force of this Agreement' (United States–Chile Free Trade Agreement, 2004: ch. 19).

As a side-agreement to the FTAs, most countries have established an Environmental Cooperation Agreement that emphasises 'the importance of building capacity to protect the environment in concert with the strengthening of trade and investment relations' (Government of the United States of America and the Government of the Republic of Chile, 2003). This has provided extensive opportunities for the USEPA to collaborate with funding agencies such as Department of State and the US Agency for International Development (US AID) to develop enforcement capacity-building programmes with regulators, Environmental Impact Assessment (EIA) reviewers, permit writers, inspectors, criminal investigators, police, customs inspectors, prosecutors, and judges. Through these FTAs, USEPA, the Department of Justice, the Department of Interior, and other agencies have provided enforcement training for Jordan, Morocco, each of the countries of Central America, the Dominican Republic, Peru, Colombia, and Chile.

While trade is a high priority, the EPA has also established successful capacity-building programmes in other countries bilaterally and through regional enforcement networks in Asia, Africa, and Eastern Europe. The US State Department's International Law Enforcement Academies (ILEA) in Botswana, Hungary, El Salvador, and Thailand have brought law enforcement officials and environmental inspectors together from multiple countries in those regions for train-the-trainer courses with materials the participants can then use in their own countries. Collaboration with the International Network for Environmental Compliance and Enforcement (INECE) and the INTERPOL Environmental Crimes Committee has provided EPA with a vehicle to share training materials worldwide. In fact, one of the most frequently downloaded files from the INECE website[11] is EPA's 'Conducting Environmental Compliance Inspections', a training course developed for the programmes listed above.[12]

Institutional collaboration between the USEPA and Chile's SMA

The multiyear programme of environmental enforcement cooperation between the USEPA and Chile's SMA[13] provides an excellent example of capacity building that has yielded important results on the ground. The formation of institutions seeking to promote environmental compliance requires not only the efforts of their own officials, but also requires

the support of other organisations that have experience in the development of environmental compliance and enforcement programmes. The environmental themes dealt with today are complex as is the diversity of interactions occurring between project funders/donors, promoters, beneficiaries, and affected communities, as well as the State institutions that regulate them and non-governmental organisations that question them. Experienced advisors can help navigate through some of the complexities, avoiding some barriers and stumbling blocks and accelerating programme development towards successful outcomes.

During the establishment of the SMA in 2011, the SMA requested support from the USEPA. Within the framework and collaborative approach of the FTA signed by both countries in 2003, a work plan for environmental enforcement capacity building was developed between the two institutions with financial support provided by the US Department of State.

The training of officials was of foremost importance with field inspections being one of the cornerstones of interinstitutional cooperation. Additionally, the implementation of geographical visualisation tools for environmental information[14] was determined to be a priority to focus work and more efficiently enforce environmental compliance. In addition, EPA professionals worked together with officials of the SMA to develop tools and financial models which help calculate the fines for breaching the national regulations.

SMA conducted a gap analysis in the relevant subjects, and found that it would be necessary to standardise environmental enforcement criteria and protocols. So, SMA and EPA collaborated on the adaptation of protocols for sampling and analysis originally generated by the USEPA for domestic use. These were then validated and written into Chilean standards. Out of this collaborative work of interpretation and adaptation, Chile now has standard operating methods and protocols that can be used in the monitoring and control of Chilean industries.

SMA and EPA developed training workshops for environmental inspectors in 2011, modelled after EPA's domestic inspection training courses for US federal and state officials carrying out inspection tasks. This was the first step in generating capacity in more than 15 Chilean state agencies with responsibilities for environmental compliance. EPA conducted a series of three train-the-trainer courses. At the first, EPA instructors presented the materials and offered sessions on adult learning and facilitation skills. The second mixed SMA and EPA instructors together, while the third almost exclusively relied on Chilean instructors using adapted presentations that better matched the Chilean context, with coaching and evaluation from EPA.

Once in-house capabilities and standard operating procedures had been established, SMA began to work with other Chilean agencies that supported environmental enforcement by monitoring compliance of environmental rules in their sectors, such as the Ministry of Mines and Ministry of Health. Considering that SMA's new legal authority included oversight of the sector ministries, and recognising that many of the other organisations had vast experience on particular aspects of industries and environmental regulations, SMA began with mutual respect for the capabilities that existed in those bodies.

In recent years, SMA's trained facilitators have presented workshops for officials carrying out environmental enforcement activities in all of Chile's regions after adapting the presentations provided by USEPA as an example. These workshops have served to reinforce procedures, standardise the different environmental enforcement activities, and unify and strengthen the capacities housed in the inspectors and experts in the other institutions. As a result of these activities, SMA can assert that more than 520 professionals of all sector agencies in the country that collaborate with the Superintendence are duly certified in their areas of responsibility.[15] This collaboration between different ministries has been further enhanced though the creation of the National Environmental Enforcement Network in Chile launched in August 2014.[16]

In 2012, roles reversed and EPA requested SMA's support to help deliver joint enforcement training in Peru under the US–Peru FTA. The Peruvian Ministry of Environment had received new enforcement authorities and was eager to learn from both the EPA's many years' experience and the SMA, as they were building their programme in much the same context as Peru. This was a very effective example of south–south cooperation between peers and led to further discussion of expanded cooperation throughout the region. SMA, EPA, and other partners joined efforts to create the South American Environmental Compliance and Enforcement Network (Red Sudamérica de Fiscalización y Cumplimiento Ambiental [REDSuFiCA]), which was formalised at its first meeting in November 2013. Colombia, Ecuador, Peru, and Chile were the signatory countries to the Declaration of Santiago formally establishing the network. Chile had a key role as convener, and for that reason, its Superintendent of the Environment became the first secretariat of the REDSuFiCA. The formative objectives were to strengthen the capacity of professionals dedicated to environmental compliance and enforcement in the region through training and skills development, to share regional and international best practices, to disseminate information on innovative strategies and tools for environmental compliance

and enforcement, and to seek approaches to common and emerging environmental issues.

The second meeting of the network was held in Lima, Peru, in November 2014. SMA, with the cooperation of the other members, invited Brazil and Paraguay to join for a more expanded discussion of regional issues. At that meeting, the secretariat passed to Peru's Organism for Environmental Evaluation and Enforcement (Organismo de Evaluación y Fiscalización Ambiental [OEFA]).[17]

Under the collaborative framework of the South American Network, SMA worked with the USEPA and the INECE to develop an additional international training course on *Forensic Investigations for Determining Environmental Violations* based on the *Pollution Crime Forensic Investigations Manual* (INTERPOL, 2014) developed by the INTERPOL's Pollution Crimes Working Group. The course was designed to introduce the forensic techniques required for the collection of legally sound evidence in environmental enforcement investigations and allow professionals from Colombia, Ecuador, Peru, Chile, and United States to share experiences.[18]

One can recognise that work among institutions allows the generation of improved capacity and improved interinstitutional communication that are required today. In addition, the establishment of formal and informal enforcement networks, nationally, regionally, and globally, enhances and strengthens the promotion of environmental compliance around the world.

Challenges and solutions

As discussed previously, a lack of adequate resources, both in terms of capable staff and funds, is one of the biggest challenges to an effective enforcement programme as well as to capacity-building efforts. Managers often believe that training is not the highest priority when funds are limited. This can lead to a workforce that may not be able to fulfil their responsibilities which in turn damages the reputation and credibility of the programme and potentially compromises enforcement actions. However, there are inexpensive ways to deliver training by using in-house experts, remote technologies, and partnering with other organisations such as fire departments, industry groups, or universities for low-cost training. There may also be creative ways to generate resources through enforcement settlements that compel violators to either offer training to the government authorities, or to fund a third-party training provider, such as the Regional Environmental Enforcement Associations discussed above.

To truly build capacity, training programmes must become sustainable and responsive to changing needs. Programmes must prepare new employees, refresh existing staff, and develop new materials to adapt to changes in technology, practices, policies, or law. While it can be helpful to have outside experts work on a particular topic, the long-term outcomes will be extremely limited if there is no plan, and insufficient budget, for the ongoing use of outside consultants. One solution is for the outside experts to not only train the immediate staff that participate in the training, but also train in-house experts so they can present the training to their colleagues. Materials should be developed, adapted, and maintained such that others can access the materials and use them, with some appropriate modifications, in future capacity-building efforts. In addition, internal technical experts are usually not familiar with adult learning techniques or practices in capacity building, so train-the-trainer courses should include information and practice on training skills.

Another potential problem often encountered, particularly with international training, is with the level of specificity on the national laws, policies, procedures, and practices that outside trainers can offer another country or programme. While outside experts may be very experienced in the technical and scientific methods involved in enforcement, those techniques may not translate into different legal systems particularly where a national enforcement programme is new or under-resourced and does not contain the same range of tools, technologies, or guidance as more mature programmes. The USEPA has attempted to overcome these limitations by coupling experts in US procedures with senior staff from the host country. The US trainer is able to present the 'best practices' used in the United States while the local trainer is able to put the guidance into the local context. This allows the course material to reach the audience 'where they are', while showing them how to improve their programme in the future by identifying programmatic or technical gaps and investigating ways to fill gaps as the programme matures. One example comes from El Salvador where a trainer from the USEPA presented the EPA procedures for determining civil penalties that include the calculation of the economic benefit accrued by the violator through the violation. A local counterpart presented the Salvadorian penalty policy but realised a potential shortcoming in that the policy did not consider the profits made through violations of the law. As a result, the Ministry of Environment and Natural Resources of El Salvador is creating their own economic model to support the inclusion in their penalties of any profits gained from avoided and delayed expenditures through failing to comply with the environmental laws in a timely manner.

Despite a long career of successful experience and expertise, many people will not recognise and respect the expertise and skills of their immediate colleagues or countrymen and women.[19] As a result programme managers believe that only outsiders can add value to their capacity-building needs. Instead of using in-house staff, managers want outside trainers to bring an appearance of superior experience. Despite the false assumption that others know more, perception can be important in how learners listen to a trainer. Networks, both domestic and international, can help overcome this hurdle by exchanging experts. Senior staff from one office can train staff in another office, or through an international network, countries can offer an expert to the network in exchange for an expert from another country helping train their own staff, preferably in conjunction with the local expert. Not only does this resolve issues with perceived credibility, it also provides a mechanism for information exchange that may provide a new way of looking at old problems or a different solution to entrenched programmatic gaps – and provides opportunity for collaboration.

Conclusion

Capacity building for environmental enforcement officials is not the same as academic training in a university setting. The top-down, professor–student relationship is not effective with professionals who work much better on a peer-to-peer basis. In addition, the academic model does not drive or benefit from collaboration that comes through an exchange of experience and expertise between different practitioners in the same field. Successful capacity-building efforts must recognise that collaborative efforts can yield results far beyond the number of people trained and hours spent in a classroom and can achieve measurable improvements in environmental protection through widespread compliance with the law.

Notes

1 Noting that in those countries where the Inquisitorial Court System is used judges take a lead role in investigations.
2 The term enforcer here is used in a broad and inclusive manner. Throughout this chapter enforcers cover roles performed by auditors, compliance officers, inspectors, investigators, rangers, wardens, and police officers, as well as attorneys and prosecutors that develop and present enforcement cases.
3 A number of universities are now offering qualifications such as Forensic Crime Scene Analysis, Compliance and Investigations, and Intelligence Analysis at both undergraduate and postgraduate levels.

4 United States Pollution Prosecution Act, 1990, Section 5.
5 Serving Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and six tribes. For more information see http://www2.epa.gov/aboutepa/about-epa-region-4-southeast
6 The USEPA's Region 6 covers the states of Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and incorporates 66 tribes. For more information see http://www2.epa.gov/aboutepa/epa-region-6-south-central
7 The National Inspection/Enforcement Multi-media Workshop, 2014, http://www.epa.gov/region6/6en/x/workshops/2014-july/index.html
8 Regional Environmental Enforcement Associations, http://regionalassociations.org
9 Asian Environmental Compliance and Enforcement Network, http://www.aecen.org/
10 National Environmental Policy Act of 1969, Section 102(F)., http://www.epw.senate.gov/nepa69.pdf
11 See www.inece.org
12 See http://www.inece.org/manual/supplement.html
13 See www.sma.gob.cl
14 See the Territorial Information System, Superintendence of the Environment, Chile, http://gis.sma.gob.cl/NEPA/login.aspx
15 See SMA Finishes Enforcement Workshops in Iquique, 26 June 2014, http://www.sma.gob.cl/index.php/noticias/notas/413-en-iquique-sma-finaliza-talleres-de-fiscalizacion.
16 See OOSKAnews Correspondent, 20 August 2014, 'Chile Launches National Environmental Enforcement Network', https://www.ooskanews.com/story/2014/08/chile-launches-national-environmental-enforcement-network_161857
17 Brazil and Paraguay Join REDSUFICA at Meeting in Peru. See http://www.sma.gob.cl/index.php/noticias/notas/459-brasil-y-paraguay-se-suman-a-la-red-sudamericana-de-fiscalizacion-y-cumplimiento-ambiental-tras-encuentro-en-peru
18 *Successful International Course on Environmental Forensics Ends*, 8 August 2014, http://www.sma.gob.cl/index.php/noticias/notas/426-finaliza-curso-internacional
19 This is a real obstacle for local trainers. It is often associated with various versions of sayings associated with a prophet in his own land. For example, 'Prophets are not without honor except in their own country and in their own house' (Matthew 13:57, New Revised Standard Version of the Bible).

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Part II

The Role of Institutions in Collaboration

4

Interagency Collaboration and Combating Wildlife Crime[1]

Mariya Polner and *Daniel Moell*

Introduction

During the last decade the illegal wildlife trade reached unprecedented levels internationally. Due to its covert nature, there are different methodologies to estimate its volumes and magnitude in monetary terms. Estimates from Global Financial Integrity, INTERPOL, the Organisation for Economic Co-operation and Development (OECD), and the United Nations Office on Drugs and Crime (UNODC), to name a few, range from 7 to 23 billion US dollars annually (Haken, 2011; Nellemann et al., 2014). This makes illegal wildlife trade a highly lucrative business along with and in the same magnitude as the trafficking in drugs, arms, and human beings. However, unlike illegal wildlife trade, the last three cited categories are deemed serious crimes, while the illegal wildlife trade is frequently considered to be a soft crime, meaning that it is regarded as a low-risk enterprise with high gains where, even in cases of apprehension, penalties are weak (Nellemann et al., 2014). With the black market price of rhinoceros horns fetching approximately 60,000 US dollars per kilogram, which is almost twice the price of gold and platinum, this trade is more profitable and less risky than the trafficking of narcotics.

Nevertheless, the consequences of illegal wildlife trade have wide implications, affecting national and international security, the social and economic development of countries, and biodiversity and habitat, as well as global health. In March 2014, UN Secretary-General Ban Ki-moon reaffirmed the wide-scale negative impact of this illegal trade by saying that 'the environmental, economic and social consequences of wildlife trade are profound. Of particular concern are the implications of illicit trafficking for peace and security in a number of countries

where organized crime, insurgency and terrorism are often closely linked' (United Nations, 2014).

There has been a lot of evidence of the involvement of organised criminal groups and militias in the illegal wildlife trade. In an interview with Al-Jazeera in June 2014 John Scanlon, the Secretary-General of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[2] called this new trend 'industrial scale poaching and smuggling' (Al Jazeera, 2014). In one notorious case in February 2012, approximately 450 elephants were poached with machine guns in Bouba N'Djida National Park in northern Cameroon. It was reported that elephants were killed by armed groups from Chad and Sudan, who are believed to be trading poached ivory to fund their operations in Africa (CITES, 2012a). Moreover, large-scale seizures of ivory of more than 500 kg during the last several years suggest that this is not an isolated incident – instead, well-organised and coordinated criminal groups, rather than individuals, are regularly involved (CITES, 2012b).

According to data received through the Elephant Trade Information System (ETIS), managed by TRAFFIC[3] on behalf of the CITES parties, more than half of the large-scale ivory seizures that have occurred since 2000 have taken place between 2009 and 2011, resulting in 45 seizures of approximately 72 tonnes of ivory in total. From January to November 2013, 18 seizures totalling 41.7 tonnes of ivory were registered in ETIS, a clear indicator of the continuous increase in poaching (CITES, IUCN, SSC, TRAFFIC, 2013). This seizure data also demonstrates that two-thirds of all large-scale seizures occur at seaports, suggesting that seaborne means of transport is most frequently used for this type of ivory trafficking (CITES, IUCN, SSC, TRAFFIC, 2013). The activity of organised criminal groups also poses a risk to local rural communities through the exploitation and killing of law enforcers and wildlife rangers.

The depletion of natural resources through illegal trade has a negative impact on the social and economic development of countries. This impact is twofold: governments do not receive taxes and revenues; and local populations are deprived of their income, because wildlife tourism, which in particular provides the major means of living in many least-developed and developing countries, is severely affected (Schroeder and Lamb, 2006). The corrupt practices of local officials also facilitate this illegal trade, while adding to poverty and placing sustainability of communities under threat.

Illegal logging is another area of growing concern. It destroys the habitat of many species and has a direct negative impact not only on biodiversity, but also on the sustainability of ecosystems. In some countries the situation is extremely severe: the 2012 World Bank study estimates

that up to 80 per cent of Peruvian timber export is a result of illegal logging (Goncalves et al., 2012). And recently, global health specialists have established clear links between illegal wildlife trafficking and the risk of global epidemics, such as avian influenza and Severe Acute Respiratory Syndrome (SARS) (WWF/Dalberg, 2012).

The overall multifaceted impacts of illegal wildlife trade touch upon a wide variety of spheres which are crucial for national welfare and security. The past three to five years have seen the emergence of new voices from around the world, a plethora of advocates, who are collectively urging that there be a more decisive fight against this crime type.

Combating wildlife crime: a view from a customs perspective

The issue of cooperation and collaboration is not new for customs and other enforcement agencies. Being at the forefront of cross-border trade flows, customs is in a unique position as a nation's 'gatekeeper'. Subject to national legislation, it may have powers related to the detention, seizure, and investigation of illegal trade. Depending on the type of trade, cooperation with various national and foreign authorities – as well as with specialised laboratories, the shipping industry, the private sector, and non-governmental organisations (NGOs) – is an important prerequisite for customs to fulfil its tasks.

As the global voice of the international customs community the World Customs Organization (WCO) is an organisation uniquely positioned to develop, streamline, and harmonise customs standards and disseminate best practices. Throughout its 60 years of existence, the WCO has been constantly promoting the idea of 'bridging the gap', not only between different customs administrations but also between customs and other border agencies. This led to the development of the Coordinated Border Management (CBM) approach.[4]

The WCO Revised Kyoto Convention (RKC) on the Simplification and Harmonization of Customs Procedures[5] that entered into force in 1974 and was revised in 1999 touches upon the major principles of CBM by introducing concepts such as 'juxtaposed offices', 'joint controls' and better cooperation among customs agencies, as well as with other border stakeholders. The RKC also devotes two specific Standards (Standard 7.3 and 7.4) to the Single Window, a major tool underpinning CBM by promoting information exchange between the trade and various governmental actors, including customs, other border regulatory agencies, and related ministries. These tools and instruments not only allow border procedures to be streamlined and harmonised, which are the major

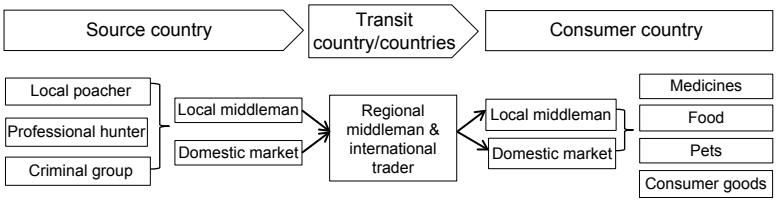

Figure 4.1 Generic illegal wildlife trade value chain
Source: Adapted by authors from WWF/Dalberg, 2012.

objectives of the RKC, but they also contribute to better CBM (Polner, 2011). In practice, the situation is more complex, and successful CBM implementation depends on multiple variables.

In order to define the most efficient use of CBM in the sphere of wildlife trade, a preliminary analysis of the nature of this trade is needed. Figure 4.1 represents a simplified scheme of wildlife trafficking. Overall, there are three kinds of actors involved in illegal wildlife trafficking: poachers, middlemen, and buyers. Poachers can be distinguished as (1) individual local poachers who are hunting animals for personal gain, mainly due to the absence of other legal income; (2) professional hunters who may possess a legal hunting licence, but nevertheless engage in illegal activities (see Box 4.1); and (3) criminal groups, which are a recent and growing phenomenon.

Box 4.1 Abuse of hunting licences

In 2013, customs and police in the Czech Republic conducted an investigation on illegal trade in rhinoceros horns, involving Czech citizens without previous hunting experience and without a gun license. These 'pseudo hunters' were recruited by Vietnamese traders to hunt and subsequently sell the trophies. As a result of the investigation, 22 rhinoceros horns worth approximately 3.7 million euro were seized. The investigation also revealed numerous cases of so-called 'bona fide hunters', that is, with valid licences, belonging to hunting associations, who subsequently sell their trophies on the black market. Due to the phenomenon of pseudo hunting, in April 2012, South Africa, being the major source country, introduced new norms and standards for hunting rhinoceros.

Source: WCO, 2014.

Unlike opportunistic poaching, which mainly refers to local hunters whose activity does not depend on market demand, professional hunters and criminal groups participate in commissioned poaching, executing a concrete order and poaching larger quantities of animals (UNODC, 2013). Moreover, organised criminal groups have human capital to act both as poachers and middlemen – they organise the procurement, processing, and transportation of wildlife. Blending of these functions is possible through access to global supply chains via larger networks developed by these groups. There are also clearly defined source, transit, and consumer countries that might have well-established links due to the criminal networks providing logistics and distribution channels.

Illegal wildlife trade becomes even more complex not only due to the type of actors involved, but also by the way enforcement agencies deal with it. Unlike other types of illegal trade that may fall within a specific agency's area of responsibility, wildlife trade is dealt with by different authorities in various countries, such as wildlife protection agencies, quarantine authorities, customs, police, border patrol, and, in some countries, the military. Stemming from its multi-agency dependence and international character, CBM becomes not only a desired objective but rather a necessity.

Moreover, the role of customs in illegal wildlife trade is rather limited in most instances due to four major reasons:

1. External factors;
2. Powers and authority;
3. Adequate training;
4. Appropriate legislation.

External factors

Firstly, although customs, through its border enforcement actions, may be a strong deterrent for criminals involved in this type of trade, in most cases, when the consignment is seized, it is a grim reminder of the magnitude of the crime: once animals are poached and timber illegally logged, the irreversible damage has already been done. When live animals are smuggled, the death rates among them are rather high. Every rare case where customs and other agencies manage to save animals and subsequently return them to the exact location where they were taken from (otherwise, their chances of survival are very low) is a big success (see Box 4.2). Defining the exact location is one challenge, while another is ensuring good working relations with officials in the country of origin to ensure the smooth transfer and release of these animals.

Box 4.2 Iguana case study

On 3 February 2014, UK Border Force officers conducting customs checks at London's Heathrow Airport discovered 12 San Salvador rock iguanas, a rare species controlled under CITES, in the baggage of Romanian smugglers. The iguanas were wrapped in socks and stored inside the suitcases. Officers from the Border Force's CITES team worked with the Bahamas High Commission in London to arrange the repatriation of the iguanas. Due to cooperation among the Bahamian authorities, British Airways, the City of London Corporation, and other partners, the repatriation was successfully conducted five months later, in July 2014. They were transported to the government research centre in San Salvador for further monitoring and subsequent release into the wild.

Source: Border Force and Home Office, 2014.

Powers and authority

Secondly, the scope of customs enforcement and investigation powers in relation to wildlife crimes varies depending on the country and its legislation. Since customs is usually responsible for the control and management of the flows of goods and means of transport, it is frequently empowered by legislation to enforce the regulations of other authorities.

However, according to the latest WCO survey (Han, 2014), out of six WCO regions covering its 179 Members, only 50 per cent of customs administrations in three of these regions have investigative powers, namely East and Southern Africa, Europe, and Asia-Pacific.[6] In particular, the customs authorities of the United Kingdom, Germany, and Switzerland can investigate wildlife crimes, while in most African countries customs have powers only to detain and seize illegal commodities. Only in the Europe region did more than 50 per cent of customs administrations have the authority to impose fines on violators, whereas in the other five regions this percentage rate is less than 45 per cent (see Table 4.1). These results clearly show that, from a global perspective, a high percentage of customs administrations do not have authority to conduct CITES-related investigations, and therefore, their cooperation with other authorities that have such enforcement competencies is crucial.

Table 4.1 CITES enforcement competence (%)

	Detention	Seizure	Fine	Investigation
Asia-Pacific	95	70	35	70
Europe	90.2	80.5	51.2	63.4
East & Southern Africa	100	68.8	43.8	56.3
West & Central Africa	80	50	40	30
Americas & the Caribbean	94.1	35.3	41.2	29.4
Middle East & North Africa	100	22.2	11.1	22.2

Note: This is a multiple-choice question.
Source: Han, 2014.

One of the reasons for such a high percentage of investigative powers being concentrated in the hands of customs authorities in the Europe region is due to the activities of the European Commission (EC) and the Member States of the EU. Since the first EU enlargement, Member States realised that freedom of movement of goods and people within the EU is not only an achievement, but also one of its major challenges because of the absence of systematic border controls. In order to implement CITES regulations in a uniform manner throughout the EU, a set of regulations known as the EU Wildlife Trade Regulations, was adopted.[7] Moreover, Article 12 of EC Regulation 338/1997 stipulates that there should be designated customs offices for the import and export of wildlife specimens and that such offices should have 'sufficient and adequately trained staff'. Article 14 also provides for the establishment of 'an enforcement group . . . consisting of the representatives of each Member State's authorities for ensuring the implementation of this Regulation'. This particular Regulation also provided the basis for customs authorities in the EU to undertake CITES enforcement actions at external EU border crossing points.

Some countries have gone further than just providing their customs administrations with enforcement powers to investigate wildlife crimes by creating special units for CITES enforcement. Sri Lanka customs established its specialised unit 20 years ago (see Box 4.3), and other administrations have since followed suit: for example, Belgium's Groupe anti-drogue (GAD) based at Zaventem Airport in Brussels, although working primarily on drug control, also targets CITES-protected species, or the UK Border Agency's CITES team at Heathrow Airport. However, overall, the percentage of special investigation units to tackle illegal wildlife trade is still low (Han, 2014).

Box 4.3 First specialised customs CITES enforcement unit celebrates its 20th anniversary

In 2013, Sri Lanka customs celebrated the 20th anniversary of the world's first specialised Biodiversity Protection Unit (BPU), later renamed the Biodiversity, Cultural and National Protection Branch (BCNP). Its legal basis to act on trans-boundary environmental and archeological crimes is provided through the customs Ordinance (Chapter 235) No.17 of 1869, as amended, and through the delegation of enforcement powers as stipulated by the Fauna and Flora Protection Ordinance, the Plant Protection Act, the Agricultural Products Ordinance, the Forest Ordinance, the Fisheries and Aquatic Resources Act, and the Antiquities Ordinance.

Throughout its history, the BCNP has been involved in conducting investigations into wildlife crime, as well as making seizures that have included sandalwood, endangered plants, seahorses, pangolin scales, rare birds, turtles, and other CITES-protected species. The BCNP has developed a unique set of tools and instruments, such as risk profiles, databases and identifications manuals, and Contraband Team Inspection Kits. It also conducts officer training, research, and awareness-raising activities to prevent environmental crimes, thereby facilitating legitimate trade.

In parallel with its 20th anniversary, the BCNP also organised a forum on the gap analysis of issues arising from the import and export of biodiversity products and archaeologically important articles. The forum was attended by officers from agencies representing customs, forests, wildlife, quarantine, fisheries, and archeology.

Source: Kaushalya, K. P. D. C. H., 2013.

Adequate training

Thirdly, the majority of customs administrations do not have specialised training in wildlife enforcement. Wildlife enforcement forms part of general customs training for these agencies. According to the survey (Han, 2014), the highest percentage of customs administrations that run specialised training on wildlife enforcement is concentrated in the Europe and Asia-Pacific regions – 39 per cent and 25 per cent respectively, however these rates are still rather low.

The lack of adequate training is a real limitation for enforcement agencies, especially given the volume and velocity of the international

movement of goods and passengers and noting that as the volumes of movements increase, a more specialised and targeted approach needs to be developed. Although there is a growing body of evidence that wildlife smugglers use the same concealment methods and routes as drug syndicates (WCO, 2014), there are many peculiarities to wildlife crime that necessitate it being addressed separately. The enhancement of risk management capabilities and intelligence analysis of this particular type of trade, as well as information exchange with other agencies at national and international levels are critical areas for successful enforcement. There is also a need to conduct national, sub-regional, and regional workshops as customs and other border agencies do not represent a homogenous group in terms of their capabilities, so their specific needs require addressing in a tailor-made way.

Being aware of this limitation, different NGOs, such as TRAFFIC and the World Wildlife Fund, as well as international organisations, such as the CITES Secretariat, INTERPOL, and the WCO, have been continuously organising regional and national workshops and training sessions to assist customs and other enforcement agencies in tackling the trade in illegal wildlife. In order to formalise the ongoing cooperation in the sphere of enhancing customs' capabilities in this area, in October 2013, WCO Secretary General, Kunio Mikuriya, and TRAFFIC's Executive Director, Steven Broad, signed a Memorandum of Understanding between the two organisations. In particular, the WCO and TRAFFIC agreed to exchange existing, and develop new, training material, such as the timber trade guideline for frontline customs officers, as well as conduct joint training activities, including the exchange of information for customs enforcement purposes (WCO, 2014).

The WCO is also a founding member of the International Consortium on Combating Wildlife Crime (ICCWC), founded in late 2010 by five international organisations – the CITES Secretariat, INTERPOL, the UNODC, the WCO, and the World Bank – with the aim of providing 'coordinated support to national wildlife law enforcement agencies and to the sub-regional and regional networks that, on a daily basis, act in defence of natural resources' (UNODC, 2014). In July 2012, the ICCWC launched the Wildlife and Forest Crime Analytic Toolkit (United Nations, 2012), which was developed to provide a comprehensive overview on issues related to wildlife and forest crimes, and aimed at government officials in wildlife and forestry authorities, as well as customs and other relevant agencies.

Within the scope of Project GAPIN (Great Apes and Integrity), a WCO project funded by the Government of Sweden that started in October

2010 and was initially planned for five months, a workshop addressing CITES enforcement and the integrity capacity of customs officers in 15 African countries was conducted. Apart from the preparation of specific training material and workshop delivery, a trans-regional joint operation was conducted during January and February 2011. The CITES Secretariat, WCO Regional Intelligence Liaison Offices (RILOs), the Association of Southeast Asian Nations' Wildlife Enforcement Network (ASEAN-WEN), the Lusaka Agreement Task Force (LATF), and national CITES management authorities took part in the operation, supported by 23 European and Asian countries affected by the trafficking routes of wildlife originating in Africa. The operation yielded impressive results, including seizures of more than 22 tonnes and 13,000 pieces of protected wildlife.

These excellent results led to the continuation of the project – Project GAPIN II, which started in 2012 and not only included great apes but also other species under threat, such as elephants, rhinoceros, and pangolins. Nineteen countries participated in the project through two workshops for frontline customs officers at airports (Brussels airport for English speakers and Zurich airport for French speakers), and one workshop for frontline customs officers at the seaport in Durban, South Africa. These workshops covered topics such as risk management, detection techniques, modus operandi, controlled deliveries, and X-ray image analysis.

Additionally, two seminars, including open sessions for customs, partner organisations, and NGOs, were organised. In the follow-up to the workshops, with the support of the CITES Secretariat, INTERPOL, the LATF, and two RILOs, and with the participation of 41 customs administrations from Africa, Asia, and Europe, the WCO organised Operation Hope in October 2012. The operation resulted in several arrests and seizures of 2,200 items, including two rhinoceros horns, 53 pieces of rhinoceros skin, 497 kg of raw ivory, 393 pieces of worked ivory (mainly jewellery), 140 tortoises (only 49 survived the smuggling attempt), 161 dried seahorses, 25 kg of pangolin scales, 21 bags made from reptile skin, one leopard skin, and 20 orchids (WCO, 2013).

Overall, Project GAPIN is one of the interagency efforts under the auspices of the WCO which enhance communication, cooperation, and the exchange of best practices among key stakeholders in the fight against illegal wildlife trade. Having a coordinating and oversight role, the WCO, along with its international partners, is not only engaged in building the capacity of customs administrations, but also in providing the tools and means for enforcement activities. The WCO's experience,

gained through Project GAPIN, demonstrates that joint training and capacity building are a good stepping stone to enhanced cooperation between and among agencies, leading not only to participation in joint operations but also to the possibility of establishing joint units at airports and seaports, and organising controlled deliveries.

Appropriate legislation

Fourthly, customs administrations highlighted an absence of appropriate legislation as one of the biggest impediments to cooperation with other agencies. The legislation is mainly needed for information-exchange purposes, the authorisation of direct contacts between offices working on CITES issues, the setting up of cross-jurisdictional joint investigative teams to investigate and prosecute transnational crimes, and the establishment of interagency committees and working groups (Milieu Ltd and Orbicon Consulting, 2006). In cases where a legislative basis exists, the extent to which customs can cooperate with other agencies varies from very limited dialogue to accessing information in real-time and joint investigations (Han, 2014).

Being one of the three largest wildlife consumer markets in the world along with the United States and Japan, the EU has taken a number of steps since mid-2000 to enforce the implementation of the CITES. In addition to its core legislation, namely the EU Wildlife Trade Regulations, in June 2007 the EC launched the EU Enforcement Action Plan[8] to improve wildlife trade enforcement in the EU that includes a number of measures, such as the adaptation of national action plans for enforcement, imposing sufficiently high penalties for wildlife trade offences, and the use of risk and intelligence assessments to detect and seize illegal wildlife products. The Action Plan also stipulates the need for close cooperation and exchange of information not only between EU Member States and third countries, but also with international organisations such as INTERPOL and the WCO.

In cases where the development of appropriate legislation remains a challenge, there are other efficient 'soft' measures providing opportunities for cooperation in a more informal setting: participation in regional or international joint operations with specific targets and timelines that not only allow relevant agencies to mobilise, but also enable trust and mutual understanding to be built; and stationing customs and other law enforcement officials abroad as liaison officers to provide expertise and advice to the host State and create an additional communication channel (United Nations, 2012), including the use of information-exchange platforms provided by international organisations.

In order to facilitate information exchange and cooperation among customs and other authorities, as well as keep them informed about the latest trends and patterns in illegal wildlife trade and other environmentally sensitive goods, following the decision of the Enforcement Committee, at its 27th Session in February 2008, the WCO launched a real-time web-based communication platform, known as ENVIRONET, in early 2009. The platform serves as an encrypted information-exchange system for a closed user group and contains operational information and alerts, and a library on training material and identification guides, as well as lists of experts, latest publications, and research provided by different organisations. ENVIRONET has a functionality that allows for bilateral and multilateral information exchange on seizures and other matters through a secure messaging system. To date, approximately 270 accounts for customs, police, wildlife authorities, and regional and international organisations have been created and are in use.

Despite various existing obstacles to cooperation, there are also positive examples from different parts of the world on ways and means to overcome legal and other challenges. Like in many other cases, political will and commitment remain the cornerstones for any further action.

Drawing international attention to wildlife crime

The growing body of evidence on wildlife crime and sustained massive killing of CITES-listed animals forced the international community to seriously review its approach to wildlife crime and the instruments currently in use to fight it.[9] All major international organisations either started running dedicated programmes or created specialised units to deal with the issue: in 2009, INTERPOL established its Environmental Crime Unit that grew into the organisation's Environmental Security Sub-Directorate in 2013; in 2011, the WCO Enforcement Committee took a decision to develop the WCO Environmental Programme, launched in March 2012; in 2013, the UNODC launched the Global Programme for Combating Wildlife and Forest Crime. Apart from these institutional changes, there has been heightened rhetoric at the political level at various fora, such as the African Development Bank Annual Meeting, Asia-Pacific Economic Cooperation (APEC) meetings, meetings of the CITES Conference of the Parties (CoP), the G8, the European Parliament, the UN General Assembly, and the UN Security Council.

A number of countries organised specialised events and created task forces to address the issue of illegal wildlife trade: for example, in July 2013, US President Barack Obama established a Presidential Task Force

on Wildlife Trafficking and committed 10 million US dollars in funding to Africa; in 2013, the UK government pledged 10 million pounds sterling to fight illegal wildlife trade, followed by the Chinese Premier, Li Keqiang, who pledged 10 million US dollars in aid for wildlife preservation in Africa (WWF and TRAFFIC, 2014); in October 2013, 21 countries united under the framework of the CITES Task Force to combat illegal trade in rhinoceros horn; in February 2014, the UK government organised the London Conference on the Illegal Wildlife Trade, which led to the endorsement of the London Declaration by 41 countries and the EU, and in June 2014 the WCO adopted the Declaration on the Illegal Wildlife Trade supported by its 179 Members. This development was followed by the adoption of the Resolution by INTERPOL in November 2014, Kasane Statement by 32 governments and the EU in March 2015, and the Doha Declaration, unanimously adopted at the Thirteenth Congress on Crime Prevention and Criminal Justice in April 2015, which includes a whole paragraph on measures to prevent and counter the trafficking in wildlife, timber, and timber products, as well as poaching (see Table 4.2).

Table 4.2 Major global and regional high-level events addressing illegal wildlife trade

Date	Event
2012–2014	Presidents of Botswana, Kenya, South Africa, and Tanzania, and the Prime-Minister of Thailand, are calling for more action against wildlife crime
June 2012	UN Conference on Sustainable Development (Rio+20) recognises the importance of CITES as standing at the cross-roads between trade, environment, and development
September 2012	APEC Leaders' Summit Declaration expresses concern over escalating illicit trafficking
December 2012	UN Security Council acknowledges links between wildlife crime and regional security (in the context of the involvement of the Lord's Resistance Army in poaching and ivory smuggling)
December 2012	UN General Assembly expresses concern at the impact of transnational organised crime, including wildlife crime (A/RES/67/189)
March 2013	CITES CoP16 – a 'watershed moment' for combating illegal wildlife trade: a powerful suite of decisions adopted by CITES Contracting Parties

(*continued*)

Table 4.2 (continued)

Date	Event
May 2013	Marrakech Declaration calling for the combating of illegal wildlife trade undermining Africa's development adopted
June 2013	G8 Summit recognises need to combat wildlife trafficking
July 2013	UN Economic and Social Council (ECOSOC) urges States to make wildlife crime a serious crime (Resolution 2013/40)
September 2013	UN General Assembly highlights wildlife trafficking as a major foreign policy issue at its opening
October 2013	UN Security Council Resolution 2021 notes poaching among factors fueling crisis in Central Africa
October 2013	Asia-Pacific Economic Cooperation (APEC) Bali Declaration aims to combat wildlife trafficking
December 2013	Paris Declaration against poaching and illegal trade of threatened species adopted at the Elysée Summit on Peace and Security in Africa
December 2013	UN General Assembly (68/193) reaffirms ECOSOC Resolution 2013/40
January 2014	UN Security Council Resolution 2134 and UN Security Council Resolution 2136 on the UN sanctions regime targeting armed groups in the Central African Republic and the Democratic Republic of the Congo financed by the illegal exploitation of natural resources, including wildlife poaching and trafficking
February 2014	London Declaration on the Illegal Wildlife Trade adopted at the London Conference
June 2014	UN Environment Programme's (UNEP) UN Environment Assembly (UNEA) Ministerial Dialogue on Illegal Trade in Wildlife
June 2014	WCO Declaration on the Illegal Wildlife Trade adopted by its Members
November 2014	Resolution No. 3, titled 'INTERPOL response to emerging threats in Environmental Security' (AG-2014-RES-03) adopted at the INTERPOL General Assembly
March 2015	Kasane Statement on the Illegal Wildlife Trade endorsed by 32 governments and the EU
April 2015	Doha Declaration adopted at the Thirteenth UN Congress on Crime Prevention and Criminal Justice dedicates a paragraph on measures to prevent and counter the trafficking in wildlife, timber, and timber products, as well as poaching

Sources: CITES, 2014; WWF and TRAFFIC, 2014.

Conclusion

All these international events have allowed momentum to be gained, awareness to be raised, and concrete unilateral and multilateral steps to be adopted, enabling illegal wildlife trade to be fought in a more coherent and coordinated way. Turning political attention to this kind of trade and securing funding for future capacity-building and awareness-raising programmes will enable governments to take a proactive stance, thereby ensuring that the fight against illegal wildlife trade is placed on the top of their agenda.

Moreover, the recognition of the necessity to cooperate and unite efforts, as well as the first steps that were taken through the creation of the ICCWC and other similar initiatives, are a necessary and important baseline to prevent further destruction of the environment and bring criminals to justice. In light of the complexity of this trade, interagency cooperation, from wildlife protection services to prosecutors' offices, at the national, regional, and international levels is a vital prerequisite for the success of the global effort to fight wildlife crime effectively and efficiently.

Notes

1 This chapter is © World Customs Organization, and used with permission. The information and views set out in this publication do not necessarily reflect the official opinion of the WCO or its State Members. Neither the WCO and bodies nor any official acting on their behalf may be held responsible for the use which may be made of the information contained therein.
2 The CITES Convention is a multilateral environmental agreement on the International Trade in Endangered Species of Wild Fauna and Flora that entered into force in 1975 and currently has 180 Parties.
3 TRAFFIC, the wildlife trade monitoring network, is an NGO working in the area of trade in plants and wild animals in the context of sustainable development and biodiversity conservation.
4 For history and definitions of CBM see Polner (2011).
5 The Convention serves as a blueprint for modern Customs procedures that includes the major principles to make them more effective and efficient.
6 Out of 179 WCO Members, 113 participated in the survey (63.1%).
7 Council Regulation (EC) No. 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein (the Basic Regulation), Commission Regulation (EC) No. 865/2006 (as amended by Commission Regulation [EC] No. 100/2008, Commission Regulation [EU] No. 791/2012 and Commission Implementing Regulation [EU] No. 792/2012) laying down detailed rules concerning the implementation of Council Regulation (EC) No. 338/97 (the Implementing Regulation), and Commission Implementing Regulation (EU) No. 792/2012 of 23 August 2012 laying down

rules for the design of permits, certificates and other documents provided for in Council Regulation (EC) No. 338/97 on the protection of species of wild fauna and flora by regulating the trade therein and amending Regulation (EC) No. 865/2006, known as the Permit Regulation.

8 Commission Recommendation No. 2007/425/EC identifying a set of actions for the enforcement of Regulation (EC) No. 338/97 on the protection of species of wild fauna and flora by regulating trade therein.

9 For more information on major wildlife cause lobbyists, see Finger and Princen (1994).

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5

Organisational Consortiums: The International Consortium on Combating Wildlife Crime (ICCWC)

John E. Scanlon and *Lisa Farroway*

Illicit trafficking of wildlife and forest products is a global issue with devastating consequences for the conservation of wild fauna and flora, the sustainability of commercially important natural resources, and the national economies and rural livelihoods that depend upon them (see Scanlon, 2012a). Despite considerable efforts over many years to combat it, wildlife crime remains an intractable challenge. It is precipitated by a complex and interacting array of economic, social, and environmental factors (ICCWC, 2012; Lawson and Vines, 2014), and the efficacy of responses against it are hampered by issues as diverse as insufficient law enforcement capacity, weak governance and corruption, and a lack of coordination across the enforcement chain (Bennett, 2011; ICCWC, 2012; CITES, 2013a). The complexity of the challenge has been exacerbated by the involvement of transnational organised crime groups (UNODC, 2010), raising further capacity constraints among frontline enforcement authorities and drawing attention to potential links between wildlife crime and national and regional security (INTERPOL, 2014a).

The international profile of illicit wildlife trafficking has been heightened in recent years as decision makers and policy makers alike grapple with the severity and complexity of these crimes. This attention has highlighted that combating wildlife crime requires not only additional financial and human resources, but also a more holistic response – the development and deployment of integrated approaches that are more aligned to the immediacy and severity of the risks posed, and that mirror the multifaceted nature of the problem.

This chapter analyses the use of a consortium as a mechanism to improve the effectiveness of global responses to wildlife and forest crime. It details the establishment and operation of the International Consortium on Combating Wildlife Crime (ICCWC), a collaboration

between four intergovernmental organisations and the Secretariat of a multilateral environmental agreement. While there are many transboundary and regional collaborative efforts to address wildlife crime (e.g., the Lusaka Agreement Task Force, and the Association of Southeast Asian Nations [ASEAN] Wildlife Enforcement Network), ICCWC is the first formal collaboration at a global level. Since its establishment in 2010, ICCWC has delivered a range of activities to build national and regional enforcement capacity, using integrated and multidisciplinary approaches that leverage the skills and capacity of the five partners. It is increasingly recognised as a powerful alliance and important contributor to global efforts to combat wildlife crime (e.g., see Horne, 2013a; London Declaration, 2014; Nellemann et al., 2014; UNEP, 2014).

This chapter begins by providing background information on wildlife and forest crimes, highlighting the scale and multifaceted nature of these crimes and the ineffectiveness of current responses to them. It then details the establishment and administration of ICCWC, providing a practical guide on how to organise a consortium involving intergovernmental organisations. This is followed by an exploration of the activities delivered by ICCWC and the benefits of the consortium approach, applying a framework that defines a multifaceted response to wildlife and forest crimes. The chapter concludes with some lessons learnt from this experience of using an organisational consortium and thoughts on how ICCWC might evolve.

Background

Wildlife crime – a multifaceted challenge

Wildlife and forest crimes are taking place at unprecedented levels. Such is the scale of trafficking that it is estimated that wildlife crime is worth up to 20 billion US dollars annually (excluding illegal fishing and logging; Haken, 2011; Wyler and Sheikh, 2013). This is overshadowed by the revenue generated by illegal logging and forest crime, which could constitute up to 100 billion US dollars per year (see Nellemann, 2012, and references therein). These valuations make wildlife and forest crimes among the most lucrative criminal activities worldwide (UNODC, 2011).

Wildlife crime takes place in many forms. While there is no universally accepted definition for wildlife crime, it refers to the taking, trading, importing, exporting, processing, possessing, obtaining, and consumption of wild fauna and flora (including timber and other forest products) in contravention of domestic or international law (most notably the

Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES]).[1] It starts with the initial act of poaching an elephant, uprooting a rare orchid, or unauthorised logging. It can also include subsequent acts, such as the processing of fauna and flora into products, their transportation and offer for sale, and the concealment and laundering of the resultant financial benefits. Wildlife crime can involve a wide variety of actors – including subsistence users, commercial hunters, middlemen, and end users – with illicitly harvested products changing hands as they move along illegal supply chains from countries of origin, through transit points to destination markets (ICCWC, 2012; Wyatt, 2013). In recent years, the dynamics of illicit wildlife trafficking have changed through the increased involvement of organised crime groups that operate transnationally (UNODC, 2010).

One thing that the various wildlife and forest offences have in common is their multifaceted nature. These are complex crimes, resulting from the interplay of many factors – economic, social, cultural, and environmental in nature. Contributing factors can include rural poverty, food insecurity, unequal distribution of agricultural lands, domestic laws regarding natural resource use, economic interests, legal markets for wildlife and forest products, the disposable wealth of consumers, and social upheavals such as war and famine (ICCWC, 2012; Lawson and Vines, 2014; Nellemann et al., 2014). The personal motivations behind wildlife crime are also variable and complex, with some driven by need and others by the greed of financial returns (ICCWC, 2012). Irrespective of the drivers or form of these crimes, it is increasingly clear that collectively they are causing widespread and irreversible consequences.

An identified need for strengthened and broadened strategies to combat wildlife crime

The UN Conference on Sustainable Development has recognised the economic, social, and environmental impacts of illicit trafficking in wildlife (see Scanlon, 2012b). This has been mirrored by many other declarations expressing concerns at the scale and impact of wildlife crime (including resolutions by the UN Crime Commission, Economic and Social Council, Security Council, and the General Assembly)[2] along with national and global events on wildlife crime (see overview in CITES, 2014a). Several issues have emerged through this increasing attention. Prime among them is the understanding that the existing responses deployed against wildlife crime – the frontline enforcement actions and the policy interventions used as deterrents – are not sufficient to

combat it. This is in part due to the challenges that national wildlife law enforcement agencies often face, including inadequate legislation, lack of equipment, limited training opportunities, difficulty accessing modern enforcement tools, poor governance, and limited understanding of wildlife crime among prosecutors and the judiciary (ICCWC, 2012, 2014a; CITES, 2013a; Horne, 2013b). It also stems from the shifting nature of the challenge brought about through the involvement of organised transnational crime networks. This change has exacerbated the capacity constraints of enforcement agencies that are now faced with professional operations using sophisticated smuggling techniques and forming part of global networks to which wildlife regulatory authorities are typically ill-prepared to respond to (Bennett, 2011; CITES, 2013a).

Many States, organisations, and independent experts have called for strengthened and enhanced responses to wildlife and forest crime (see overview in CITES, 2014a; see also Bennett, 2011; Scanlon, 2012a; CITES, 2013a, 2014b; Lawson and Vines, 2014; Nellemann et al., 2014; UNEA, 2014). There are a number of threads to this plea. Firstly, additional human and financial resources need to be deployed against wildlife and forest crime. Despite the increasing political attention, the scale of the response to wildlife crime is not yet commensurate with the severity and immediacy of the risks posed by it. Secondly, approaches are needed that are aligned to the multifaceted nature of illicit wildlife trafficking and that address enforcement-side and demand-side matters in parallel. Thirdly, the transboundary nature of wildlife crime and forest crime requires increased coordination and cooperation to bridge gaps across geographic boundaries and between enforcement disciplines. Finally, wildlife crime involving transnational organised crime groups should be treated the same as other transnational organised crimes. In July 2013, the UN Economic and Social Council adopted a resolution (E/RES/2013/40) which urged Member States to make illicit wildlife trafficking involving organised criminal groups a serious crime, as defined under the UN Convention against Transnational Organized Crime (UNCTOC), and to use the specialised investigation techniques deployed against other organised crimes against wildlife crime too. This re-definition would also facilitate the application of harsher sanctions for such crime.

Combined, this growing awareness of the daily challenges faced by national wildlife law enforcement agencies, the increasing complexity of wildlife crime, and the need for strengthened and more coordinated responses precipitated the development of the idea that became ICCWC.

The evolution of a global consortium to combat wildlife crime

Five partners with responsibilities related to wildlife law enforcement agreed to collaborate as ICCWC, specifically:

- The CITES Secretariat – CITES is the principal instrument for regulating international trade in protected species of wild fauna and flora, with over 35,000 species listed on its three Appendices, and 180 Parties to the Convention. The CITES Secretariat provides support to these countries as they implement the Convention to help ensure that all international trade in wildlife is legal, sustainable, and traceable.
- INTERPOL – the world's largest international police organisation, with 190 member countries and a mandate of facilitating cross-border police cooperation and supporting and assisting organisations and authorities whose mission is to prevent or combat international crime, including environmental crimes.
- The United Nations Office on Drugs and Crime (UNODC) – the recognised global leader in the fight against transnational organised crime such as trafficking in drugs and arms. UNODC addresses wildlife crime through the frameworks provided by UNCTOC and the UN Convention Against Corruption, and also its Global Program on Wildlife and Forest Crime.
- The World Bank – a vital source of financial and technical assistance to developing countries around the world, with a mission of fighting poverty and helping people help themselves and their environment by providing resources, sharing knowledge, building capacity, and forging partnerships in the public and private sectors.
- The World Customs Organization (WCO) – the only intergovernmental organisation exclusively focussed on Customs matters and as such the recognised voice of the global Customs community, with 179 members, that collectively manage approximately 98 per cent of world trade.

The agreement among these organisations to form ICCWC evolved out of the relationships and mutual respect that had been built through many successful collaborations in the past. For example, the CITES Secretariat had worked with both INTERPOL and the WCO to facilitate the exchange of information among enforcement agencies, and to provide targeted enforcement training to CITES Parties (CITES, 2002, 2007; CITES resolution Conf. 11.3 [Rev. CoP16]). Among other examples, UNODC and WCO had worked collaboratively to deliver the

global UNODC-WCO Container Control Programme to minimise the use of shipping containers for illicit drug trafficking and other transnational organised crimes, including environmental crimes (UNODC and WCO, 2013).

Yet it was not until the idea of a common global strategy to support wildlife law enforcement efforts emerged that the five formally worked in unison. In 2009, the CITES Secretariat convened a meeting with INTERPOL, UNODC, and WCO to establish a 'blueprint' that could be used to develop and support coordinated approaches to wildlife law enforcement and identify the form of organisational collaboration required to deliver it (CITES, 2009). The interest of the World Bank in joining the fledgling partnership also emerged at this time.

The establishment and administration of ICCWC

ICCWC Letter of Understanding

The formal establishment of ICCWC on 23 November 2010 was enacted by a 'Letter of Understanding' (CITES et al., 2010) signed by the Executive Heads of the five organisations.[3] While not a binding legal agreement, this provided a public declaration of their willingness to collaborate in combating wildlife crime. It also clarified expectations among partners of the principles on which ICCWC was being founded and intentions of what the consortium would do. Through the Letter of Understanding, the five organisations agreed to work collaboratively to support national law enforcement agencies to respond to transnational wildlife crime through, inter alia, highlighting within their institutions the importance of the fight against wildlife crime, assisting countries to review their current responses to wildlife crime, developing and disseminating capacity-building materials (including existing tools of partner organisations) and undertaking research into the causes and scale of wildlife crime. Importantly, the organisations agreed to pursue this collaboration 'within the context of their respective responsibilities, capabilities and priorities' (CITES et al., 2010). This emphasises the suitability of the consortium approach to the collaboration, as it enabled the five organisations – each with their own governance and decision-making processes – to retain their operating autonomy and ensure that any collaboration through ICCWC was aligned with their individual mandates and forward work programmes.

ICCWC governance

Within ICCWC all five organisations are equal partners. The CITES Secretariat acts as the Chair of ICCWC, providing secretariat support

and speaking on behalf of the consortium as required. The governance model supporting this partnership (Figure 5.1) is centred on the ICCWC Senior Experts Group (SEG), which comprises technical experts from each organisation. The SEG is the primary point of collaboration between partners and is responsible for overseeing ICCWC programming, delivery, and communications. An ICCWC 'protocol' (an operational procedure) specifies that the SEG must meet at least once per year and can hold ad hoc meetings as required. In practice, the SEG typically meets three times per year. These face-to-face meetings are used to plan upcoming ICCWC activities and discuss other matters related to wildlife crime or the operation of the consortium (e.g., see CITES, 2014c). Any decisions of the SEG must be made by consensus. The SEG conducts teleconferences in intervening months, although these are typically not decision-making.

Each organisation has a designated 'focal point' that has been nominated to represent it on the SEG. These focal points also have an information dissemination role, both to take matters of potential interest from within their organisations to the SEG, and to share information and outcomes from SEG meetings with their organisations and networks. This helps support the role of ICCWC members in 'highlighting within

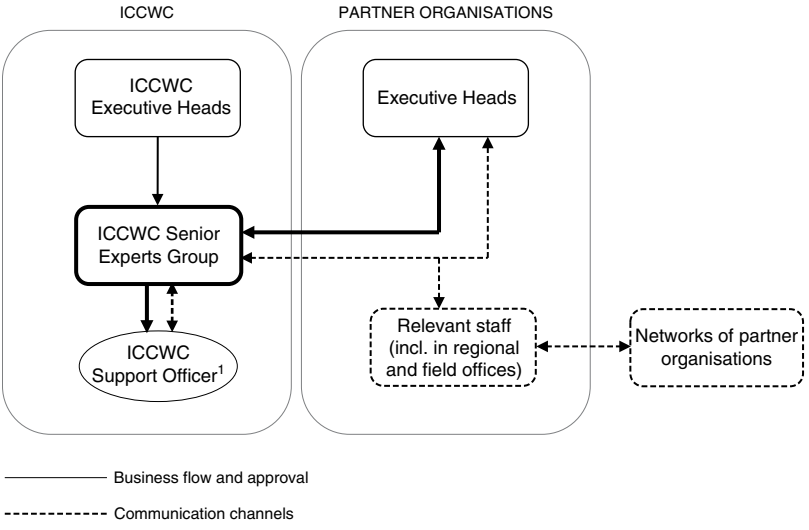

Figure 5.1 ICCWC governance model

[a]The ICCWC Support Officer is hosted by the CITES Secretariat.

their institutions the importance of the fight against wildlife crimes', as specified in the Letter of Understanding (CITES et al., 2010).

The governance model also includes the 'ICCWC Executive Heads'. This relatively informal mechanism comprises the Executive Head of each of the five organisations, who come together on an ad hoc basis (typically around once per year) to discuss the operation of the consortium and its future directions (e.g., see CITES, 2013b). While this helps ensure engagement in ICCWC at the highest level within partner organisations, this body does not have a large role in the day-to-day delivery of ICCWC, with operational decision-making falling to the SEG in accordance with the technical support focus of ICCWC's activities.

ICCWC strategy

Shortly after its establishment, ICCWC adopted the following mission statement:

> ICCWC's mission is to usher in a new era where the perpetrators of serious wildlife and forest crime face a formidable and coordinated response, rather than the present situation where the risk of detection and punishment is all too low. (ICCWC, 2014a)

This mission and the broad guidance on the type of activities to be pursued by ICCWC detailed in the Letter of Understanding provided the foundation for initial activities (CITES, 2011a). Together, they focussed ICCWC on building national enforcement capacity and identified the immediate priorities to achieve this, such as the development of a 'toolkit' to assist countries to review their existing responses to wildlife crime – activities that allowed momentum to be built in the early days of the consortium.

This broad guidance on directions was expanded through the release of the *ICCWC Strategic Mission 2014–2016* (ICCWC, 2014a), which outlines five focus areas to be pursued in support of ICCWC's mission:

1. Strengthening cooperation and coordination in combating wildlife and forest crime;
2. Facilitating analysis of national responses to wildlife and forest crime;
3. Building capacity to prevent and respond to wildlife and forest crime;
4. Raising awareness and support for measures to combat wildlife and forest crime;
5. Improving use of knowledge and innovation to inform contemporary approaches to wildlife and forest crime.

Each of the five focus areas is supported by a number of strategies to guide the type of activities to be pursued by ICCWC. The *ICCWC Strategic Mission 2014–2016* also reaffirms the operating autonomy of the five partners by recognising the strategic settings and specific mandates of each organisation and their influence over the work of ICCWC.

ICCWC administration and financing

As the Chair of ICCWC, the CITES Secretariat coordinates the operation of the SEG, drafts correspondence on behalf of ICCWC, and develops ICCWC communications and outreach material.[4] The Secretariat has found that these tasks require a full-time professional staff member dedicated to ICCWC – a post that requires external funding support.[5]

At the time of ICCWC's establishment no set financial contributions or 'membership dues' from the partner organisations were proposed. Rather, it was anticipated that partners would provide the necessary in-kind support towards the consortium – most notably their interaction in the SEG – and that ICCWC would seek external funding to support its work programme. To date, ICCWC has acquired more than 4.6 million US dollars of external funding, from donors such as the EU, the World Bank Development Grant Facility, and the governments of the Netherlands, Norway, Sweden, United Kingdom, and the United States (ICCWC, 2014b). Further opportunities for funding are pursued as they emerge in accordance with the *ICCWC Strategic Mission 2014–2016*, the priorities of partner organisations, and those of donors themselves. A protocol for the development of funding proposals on behalf of ICCWC and the administration of secured funds has been established.

ICCWC in action – delivering a multifaceted response to wildlife crime

The establishment of ICCWC was principally about delivering integrated – and subsequently more effective – support to national enforcement agencies that in practice required the expertise and resources of more than one organisation to deliver. The five ICCWC partners have different mandates and experience related to wildlife and forest crime, yet each makes a clear contribution to the holistic and multidisciplinary response that these crimes demand. The WCO and INTERPOL provide access to extensive global networks of national Customs and Police organisations respectively, along with a wealth of experience in supporting cross-border enforcement cooperation and the secure sharing of intelligence. The UNODC provides valuable experience and capacity in combating organised crime that can be deployed against

the sophisticated criminal networks involved in illicit wildlife trafficking. These efforts are complemented by the role of CITES in establishing and regulating frameworks for legal international trade in wildlife, and the Secretariat's mandate of ensuring that all international trade is legal, sustainable, and traceable. Finally, the World Bank, while not an enforcement organisation per se, provides a wealth of complementary experience in the development and mobilisation of holistic in-country development programmes, along with technical expertise in anti-money-laundering techniques.

In this section, a range of the activities delivered by ICCWC are outlined to show that they reflect a multifaceted approach to combating wildlife crime. For this purpose, and building on the characteristics of an optimal policy response to transnational wildlife crime detailed by Horne (2013a),[6] five characteristics of a multifaceted response are defined, namely:

- *Thinks and plans holistically* – responding to many parts of the problem and its drivers in parallel.
- *Responds to the organised nature of contemporary wildlife and forest crime* – applying an appropriate range of techniques in response.
- *Deploys coordinated and multidisciplinary responses across the enforcement chain* – involving all agencies with responsibility for wildlife law enforcement.
- *Deploys coordinated and multilateral responses across illegal supply chains* – bringing together source, transit, and destination countries.
- *Engages all actors with a role in combating wildlife crime* – from building the capacity of frontline enforcement officers to raising the awareness and support of politicians and policy makers.

Thinks and plans holistically

Combating wildlife crime is not a simple ambition due to the complex and interacting factors behind it. To be most effective, interventions should target different parts of the problem and be applied at multiple places of the crime chain (Bennett, 2011; ICCWC, 2012; Horne, 2013a). ICCWC adopts such an approach, as reflected in strategy 1.5 of the *ICCWC Strategic Mission 2014–2016* which is to 'promote holistic responses to wildlife and forest crime that address prevention of crime as well as reactive enforcement, and that help build understanding of the relationship between wildlife and forest crime and broader rural and sustainable livelihood issues' (ICCWC, 2014a). While ICCWC's technical

expertise is on law enforcement, the consortium also promotes and conducts activities to address market demand for illicit wildlife products, institutional constraints such as weak governance and corruption, and key knowledge and intelligence gaps that hamper the development and deployment of appropriate interventions.

The broad nature of ICCWC's work is perhaps best shown through the *ICCWC Wildlife and Forest Crime Analytic Toolkit* (ICCWC, 2012) – the flagship product of the consortium. This was one of the first products developed by ICCWC, to provide the mechanism for national governments to analyse and review their existing responses to wildlife crime. It uses a five-part analysis covering legislation, law enforcement measures, prosecutorial and judicial capacities, factors that drive wildlife and forest offences, and the availability of data and any knowledge gaps related to wildlife crime. Underpinning the analysis are over 150 'tools' that provide analytical questions on a diverse range of topics that could be contributing to wildlife crime or limiting the effectiveness of responses to it.

The value of the Toolkit in strengthening national enforcement systems has been recognised by governing bodies of ICCWC partners (e.g., CITES resolution Conf. 11.3 [Rev. CoP16]; UN Economic and Social Council resolution E/RES/2013/40) and in global strategies to address wildlife crime (e.g., INTERPOL, 2014b; London Declaration, 2014). Perhaps most importantly, several national governments have commenced Toolkit assessments and are now being supported in this by ICCWC. The first in-country use of the ICCWC Toolkit was completed in Bangladesh and resulted in 40 targeted recommendations to improve the effectiveness of Bangladesh's law enforcement and preventative responses to wildlife and forest crime (UNODC, 2013). Toolkit assessments have since been completed in Gabon, Nepal, and Peru, and are in underway in Angola, Botswana, Kenya, Mexico, the United Republic of Tanzania, and Viet Nam (CITES, 2014d). Additional countries continue to show interest in using the Toolkit as understanding of its value grows.

Responds to the organised nature of contemporary wildlife and forest crime

With the recognition that wildlife crime involving organised criminals should be treated as serious crime has come the acknowledgement that the specialised techniques deployed against other organised crimes – covert operations, controlled deliveries, the use of modern forensics, and asset seizure and recovery – need to be used against wildlife crime (UNODC, 2010). The specific skills brought together through ICCWC

directly respond to this need and facilitate the delivery of responses that reflect the modern reality of transnational organised wildlife crime. For example, the UNODC provides unparalleled experience in responding to organised crime, such as trafficking in drugs and arms – experience that is complemented by the World Bank's knowledge of best practice anti-money-laundering techniques.

One of ICCWC's strategies is to increase the use of specialised investigation techniques in combating wildlife and forest crimes (see ICCWC, 2014a). One of the consortium's first activities was to hold an international workshop on the use of controlled deliveries for forest and wildlife law enforcement (CITES, 2011b) – a long-used tool for investigating drug and tobacco smuggling but one that had seldom been used for illicit wildlife trafficking. The consortium has since delivered a number of further activities to improve the capacity of frontline enforcement officers in using specialised investigation techniques including a workshop for 21 countries participating in a global enforcement operation known as Operation COBRA II (CITES, 2013c). The combined experience of partners allowed for the training to cover controlled deliveries, anti-money-laundering and asset recovery, and best practice techniques in Customs enforcement, information and intelligence, and the questioning of wildlife smugglers. The benefits of this practical training is evident in the excellent results achieved by Operation COBRA II, with the month-long operation yielding more than 350 major seizures of wildlife and over 400 arrests (CITES, 2014e; LATF and CITES MA of China, 2014).

ICCWC is also pursuing activities to increase the use of modern forensics in combating wildlife and forest crime. These include the development of best practice guidelines on the use of DNA sampling and laboratory analysis to determine the origin of seized ivory (UNODC, 2014a) and help investigate timber crimes (UNODC, 2014b), collaboration with researchers to conduct DNA analysis of samples from large-scale ivory seizures (INTERPOL, 2013; CITES, 2014d), a regional training workshop in the use of DNA sampling for rhinoceros horn (CITES, 2013d), and the deployment of ICCWC Wildlife Incident Support Teams (WISTs) to Sri Lanka (CITES, 2013e) and the United Arab Emirates to assist national enforcement officers to take DNA samples from seized ivory.

Deploys coordinated and multidisciplinary responses across the enforcement chain

Enforcement responses to wildlife and forest crime transgress the operating boundaries of wildlife regulatory agencies and traditional law

enforcement agencies such as Police and Customs. It has been widely recognised that effective enforcement relies upon these parties working collaboratively, including through regular sharing of information (Horne, 2013a; Pink, 2013; ICCWC, 2014a). The involvement within ICCWC of global partners representing these different disciplines provides the consortium with the ideal foundation upon which to build cooperative enforcement action – a degree of disciplinary overlap recognised by Pink (2013) as being greater than in any other enforcement consortium. Since its establishment ICCWC has convened a number of regional and global events that target individual enforcement disciplines (e.g., a workshop for Customs authorities on combating the smuggling of timber from Madagascar to Asia; CITES, 2014d) or that bring together enforcement authorities on topical issues (e.g., a workshop on tiger crime for Heads of Police and Customs; CITES, 2012a). Most ICCWC training events target a mix of enforcement disciplines to build relationships and capacity across the enforcement chain. ICCWC also recognises the importance of engaging and raising the awareness of the judiciary and prosecutors of wildlife and forest crime (see ICCWC, 2014a). The consortium has delivered specialised training at an Asian Development Bank symposium for the judiciary, prosecutors, and enforcement officers (CITES, 2013f), and is developing targeted capacity-building materials for prosecutors (CITES, 2014d).

Reflecting their technical expertise, ICCWC partners administer an unparalleled range of enforcement support services (e.g., UNODC's Transnational Organised Crime Units), capacity-building materials (e.g., CITES Virtual College; CITES, 2011c), and secure communication- and intelligence-sharing tools (e.g., INTERPOL's I-24/7 global police communications system and databases; INTERPOL, 2011; and the WCO's CENcomm-based ENVIRONET communication platform; WCO, n.d.) that are collectively showcased under the ICCWC banner.[7] The consortium is also actively working to cross-pollinate the capacity-building materials of the individual organisations to accommodate the needs of different enforcement disciplines. For example, the CITES Virtual College – a comprehensive e-learning facility administered by the CITES Secretariat – includes a specific course on CITES awareness, wildlife crime, and identification and processing of CITES specimens designed for Customs officials (CITES, 2012b). Materials developed by ICCWC partners are progressively added to the Virtual College (CITES, 2014d), strengthening its coverage and overall value across all enforcement disciplines.

Deploys coordinated and multilateral responses across illegal supply chains

Transnational organised wildlife crime, by its very nature, requires international collaboration as illicitly-traded products travel from source through transit points to destination markets. All ICCWC partners have a global reach and strong experience in promoting cross-border cooperation. Several have communication channels that allow real-time dissemination of intelligence to facilitate investigations in different countries and help national enforcement bodies conduct risk-assessment, targeting, and profiling activities. Among the cooperative mechanisms delivered by ICCWC to connect range, transit, and destination States are support for Operation COBRA II (CITES, 2013c), the convening of a CITES rhinoceros enforcement task force (CITES, 2013g), and the first global meeting of regional wildlife enforcement networks (CITES, 2013h, 2013i). The consortium continues to build relationships between these enforcement networks by facilitating the participation of network members in the meetings of other networks (CITES, 2014d).

Engages all actors with a role in combating wildlife crime

While the operational strength of ICCWC is on supporting frontline enforcement, the consortium also recognises the need to raise the awareness of wildlife and forest crime more broadly, along with building political support for it. Activities pursued by ICCWC in response include the delivery of awareness-raising side events at meetings of its governing bodies (e.g., the launch of the ICCWC Toolkit at the 62nd meeting of the CITES Standing Committee – CITES, 2012c; an event on serious wildlife crime at the 22nd session of the UN Crime Commission – ICCWC, 2014b), participation in high-profile events on combating wildlife crime, and the convening of a Ministerial roundtable on combating transnational organised wildlife crime within the margins of the 16th CITES Conference of the Parties (CITES, 2013a, 2013j). In addition, the Executive Heads of partner organisations seek to promote the multifaceted challenge of wildlife crime and the coordinated multidisciplinary response being delivered by ICCWC within relevant high-level interventions they are asked to make (e.g., see Scanlon, 2012a, 2014b; Fedotov, 2013).

Lessons learnt and future directions

A number of lessons have resulted from this experience of establishing a consortium.

Firstly, participation in a consortium has provided many benefits to the partners beyond enabling the delivery of integrated responses to wildlife crime. The involvement of the CITES Secretariat, for example, has led to ICCWC directly contributing to the CITES mandate. The consortium has been given an identified role in the implementation of many enforcement-related decisions adopted by the CITES Conference of the Parties.[8] The Secretariat has been instructed to work with its ICCWC partners to, among other things, convene CITES ivory enforcement and rhinoceros enforcement task forces, arrange national seminars in Asian big cat range States to promote a multidisciplinary enforcement approach, convene a workshop on the use of controlled deliveries, develop capacity-building materials on anti-money-laundering and asset recovery for investigators, prosecutors, and judges; and provide investigative assistance to countries that have made large-scale seizures or been affected by significant poaching. The ICCWC collaboration has led to efficiencies through the pooling of resources and helped avoid duplication that might occur if activities were developed in isolation. The open dialogue between partners has provided new perspectives through considering the views of the different organisations – a fresh way of thinking that benefits both the delivery of individual mandates and the combined work programme of ICCWC.

Secondly, the practical need for one partner to take on coordinating responsibility is now acknowledged along with the costs associated with administrating the consortium itself. Efficient and professional coordination has proven pivotal to the operation of the SEG and the ongoing commitment and enthusiasm of partners. The ICCWC Support Officer post located in the CITES Secretariat, only made possible through the support of external donors, is thus a funding priority. Further, as the ICCWC work programme grows, so too does the need for dedicated staff support in other organisations to coordinate the delivery of ICCWC activities (CITES, 2014d).

Thirdly, while noting the need for a coordinating partner, the principle of equality on which ICCWC was established, along with governance and decision-making processes that reflect this ethos, have been paramount to the teamwork exhibited by the consortium. For example, consensus decision-making by the SEG and allowing any partner to take the lead on project proposals or delivery have been effective for ICCWC. Regular, open communication – both ad hoc and through scheduled meetings – has also been critical to maintaining dialogue and camaraderie among the individuals involved in ICCWC.

Finally, while a focus on delivering products with relatively simple governance and administration has worked well, the need for agreed protocols to provide guidance where required is also recognised. While only two such ICCWC protocols have been developed to date, the policy positions and procedures that they have established have helped avoid confusion and potential conflict among partners, and they provide a framework for further protocols. Additional protocols may be required as the consortium evolves to ensure that the administration of the consortium does not detract from the effective delivery of its activities.

After almost four years of operation, ICCWC has considerable momentum and the range of activities delivered by the consortium continues to grow (CITES, 2014d; ICCWC, 2014b). This is providing opportunities for ICCWC to understand the on-ground impact of its activities and adapt its future efforts as required. For example, the consortium is discussing a review of the ICCWC Toolkit based on knowledge gained through in-country implementation. It is also progressing the development of indicators of effective law enforcement to support the Toolkit and provide an additional tool for countries to assess their enforcement systems along with the impact of any policy interventions or operational improvements made (CITES, 2014d; ICCWC, 2014b).

While there is a clear ongoing need for the practical support provided by the consortium, there is also the chance that ICCWC will take on evolving roles as the collaboration matures. For example, the *ICCWC Strategic Mission 2014–2016* notes the opportunity that ICCWC provides for the five organisations to speak collectively – to governments, policy makers, non-government organisations, the donor community and the public – to raise awareness and support for the actions required to combat wildlife crime (ICCWC, 2014a). This could be an area in which the consortium might naturally evolve, particularly if global attention on illicit wildlife trafficking remains high. The strong reputations and technical foundations of the five organisations, and the solid track record of the consortium, would lend support to ICCWC being considered as a 'global authority' on wildlife and forest crime.

Conclusion

ICCWC has delivered many well-targeted and practical activities to support those operating on the front lines to combat wildlife crime. This includes a number of firsts – the first international workshop on using controlled delivery units for forest and wildlife law enforcement, the first global meeting of wildlife enforcement networks, and the

first comprehensive assessment tool to analyse national enforcement responses. Significantly, ICCWC has allowed for the delivery of multi-faceted responses to wildlife and forest crime that leverage the expertise and strengths of the five organisations, which they would not have been able to provide alone. The consortium approach has allowed for the delivery of collaborative activities that are holistic, responsive to trans-national organised crime, multidisciplinary and multilateral, and that engage all actors that have a role in combating wildlife crime.

The governing bodies of partners and the broader global community have recognised the potential for ICCWC to drive global efforts to combat wildlife crime and provide much-needed practical support to enforcement agencies. This is apparent in the funding that ICCWC has obtained from external donors, the ways in which ICCWC and its efforts have been publicly acknowledged,[9] and the interest shown by national governments in using the products and services offered by ICCWC.

The ICCWC experience confirms that with a clearly identified need for collaboration, the commitment of partners, an agreed purpose and strategy to deliver, and a simple – yet effective – governance model, an organisational consortium has proven an effective vehicle to support an enhanced and more coordinated global response to a pressing issue.

Notes

1 See Scanlon (2014a, 2014b) for an overview of how CITES works as an international legal agreement and the international dimension of illicit wildlife trafficking.

2 A range of recent UN body resolutions have acknowledged the various consequences and risks associated with wildlife crime: UN Crime Commission resolution 23/1 (2014); Economic and Social Council resolution E/RES/2013/40; Security Council resolutions S/RES/2121 (2013), S/RES/2134 (2014), and S/RES/2136 (2014); and General Assembly resolutions A/RES/66/288, A/RES/77/189, and A/RES/68/193. In addition, the first session of the UN Environment Assembly adopted a resolution (1/3) on wildlife crime.

3 The Executive Heads of the five organisations being the Secretary-Generals of the CITES Secretariat, INTERPOL and the World Customs Organization, the Executive Director of UNODC, and the President of the World Bank.

4 An example being the ICCWC web portal hosted on the CITES website at http://www.cites.org/eng/prog/ICCWC.php, which includes background information on ICCWC and wildlife crime, updates on ICCWC activities and links to the tools and services of ICCWC and partner organisations.

5 The Government of Sweden and the Government of the United Kingdom of Great Britain and Northern Ireland are thanked for their generous funding support for the ICCWC Support Officer post within the CITES Secretariat.

6 Horne (2013a) proposed four characteristics for an optimal policy response to wildlife crime: proactive and intelligence-based; multifaceted; multilateral; and monitored, evaluated, and adapted as necessary. Horne (2013b) evaluated national policy responses in Asia-Pacific against this framework and concluded that national capacity constraints were limiting the extent to which the four criteria were being fulfilled. The need to broaden existing multifaceted responses was identified by, inter alia, enhancing the priority afforded to wildlife crime among the judiciary, increasing penalties for wildlife crime offenders, and placing a greater focus on demand reduction activities. These conclusions have been used to inform the framework of a multifaceted response to transnational organised wildlife crime applied in this chapter. It is also noted that ICCWC is helping to address the limitations identified by Horne (2013b), both through its broad focus on enhancing national capacity to combat wildlife crime, and its targeted work to strengthen multifaceted responses, as summarised in this chapter.
7 The tools and services administered by ICCWC partners are collectively showcased on the ICCWC web portal, available at http://www.cites.org/eng/prog/iccwc.php/Tools
8 Decisions adopted by the CITES Conference of the Parties provide short-term, time-bound direction on the measures that need to be taken to improve the implementation of the Convention. At the 16th meeting of the CITES Conference of Parties (CoP16) many strong decisions on enforcement were taken, as summarised by Scanlon (2013). CoP16 decisions that specify a role for ICCWC in their implementation include Decision 16.40 on *Enforcement matters* (para. a), Decision 16.70 on *Asian big cats* (*Felidae* spp.), Decision 16.78 on *Monitoring of illegal trade in ivory and other elephant specimens* (*Elephantidae* spp.) (paras a, c, and d), and Decision 16.89 on *Rhinoceroses* (*Rhinocerotidae* spp.) (para. a). The full text of all decisions can be found at http://www.cites.org/eng/dec/index.php
9 The value of the ICCWC collaboration has been recognised by many parties, including the governing bodies of ICCWC partners and other UN bodies (e.g., through the resolutions and decisions referred to in this chapter; also see UNEP, 2014), global experts on wildlife crime (e.g., Horne, 2013a), think tanks (e.g., Lawson & Vines, 2014), and global strategies and calls to action to combat wildlife crime (e.g., London Conference, 2014; Nellemann et al., 2014; UNEA, 2014).

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6

Collaboration at the Front Line: INTERPOL and NGOs in the Same NEST

David Higgins and *Rob White*

At the international level INTERPOL is a central player in global environmental law enforcement. In 2010, at the 79th INTERPOL General Assembly, the Chiefs of Police from, its then, 188 member countries adopted an Environment Enforcement Resolution. This resolution acknowledges that:

> Environmental law enforcement is not always the responsibility of one national agency, but rather, is multi-disciplinary in nature due to the complexity and diversity of the crime type which can encompass disciplines such as wildlife, pollution, fisheries, forestry, natural resources and climate change, with reaching effect into other areas of crime. (INTERPOL and UNEP, 2012: 2)

Reflecting concern over environmental issues, a summit of International Chiefs of Environmental Compliance and Enforcement was held at INTERPOL's General Secretariat in Lyon, France, in March 2012. This forum provided an opportunity for national leaders of environment, biodiversity, and natural resources agencies to meet and discuss action around issues such as investigative assistance and operational support, information management, capacity-building standards, and effective networks, as well as commodity-specific side-meetings covering fisheries, forestry, pollution, and wildlife. A summary of the event pointed out that:

- Particular concern was expressed from many delegates on the scale of environmental crime and the connection with organised transnational crime, including issues of smuggling, corruption, fraud, tax evasion, money laundering, and murder;

- The interconnectivity of environmental crime with other forms of criminal activity requires cooperation and collaboration across all levels of law enforcement in order to combat and prevent the illegal activities;
- The current scale of environmental crime involves very similar approaches, means, and severity as other forms of crime, but is aggravated and exacerbated further by the direct serious implications it has on the development goals of many countries;
- Particular concern is raised on the sheer scale of environmental crime including, but not limited to, illegal logging and deforestation, illegal fisheries and smuggling of toxic waste, and the severe implications of this not only on the environment, but also on human security and economic development (INTERPOL and UNEP, 2012: 2).

It is not only these issues which have been highlighted in such summits, but operational policies and practices as well. This is reflected in efforts to link up agencies and personnel across jurisdictions and across substantive enforcement areas. This is the key focus of the present chapter. In particular, as will be discussed, INTERPOL has had to forge important relationships not only with governmental agencies, but non-governmental organisations (NGOs) as well. How and why this has occurred will be discussed as part of the chapter.

INTERPOL and environmental law enforcement and compliance

INTERPOL is the international policing body that was established to facilitate exchange of intelligence on crime and perpetrators across national borders. Through provision of technical and operational support it assists its 190 member countries to meet the growing challenges associated with fighting a wide variety of crimes.

Since 1992, and especially from 2008 onwards, INTERPOL has played an increasing role in assisting a variety of response agencies to deter, detect, and disrupt environmental crime, with a particular emphasis on pollution and wildlife crime. In this time INTERPOL has acted as a coordinating hub and conduit for building capability and capacity to effectively respond to this crime type, whether domestic or transnational (Pink, in press).

Despite its global reach and extensive mandate INTERPOL does not, however, have any policing powers of its own (Sheptycki, 2004; Garriott, 2013; Wyatt, 2013). Instead, its primary roles lie in coordinating and

supporting, and as part of these it facilitates the secure exchange of information through its I-24/7 global police communications system as well as provides technical expertise across more than 18 crime types and associated areas. Any actual or on-ground policing and enforcement work is performed collaboratively by staff from member countries individually or in cooperation with other member countries (Wyatt, 2013; Pink, in press).

In 1992, INTERPOL established an Environmental Crime Committee (see Wyatt, 2013). In 1993–1994 it established a Pollution Crime Working Group (PCWG) and a Wildlife Crime Working Group (WCWG). These bodies held regular intercessional teleconferences and gathered semi-regularly for meetings, workshops, and conferences to develop a range of project work, policy development, and operational activities. The activities of the two Working Groups were bolstered in 2005 by the secondment of an Officer from the US Environmental Protection Agency (USEPA) and funding provided initially by the *International Fund for Animal Welfare*, and then complemented by funding from Environment Canada and the USEPA. The NGO funding enabled the employment of a wildlife crime officer, who worked in partnership with the pollution crime officer largely funded by the USEPA.

From modest beginnings in 1992, at which time there were only one or two key staff, the INTERPOL Environment section has grown to between 40 and 45 individuals employed by 2015. Many of the projects and officials employed by INTERPOL have been funded by private donor groups as well as official government agencies, including United States Agency for International Development (USAID), the Norwegian Agency for Development Cooperation (NORAD), the PEW Charitable Trust, the UK Department for Environmental, Food and Rural Affairs, Environment Canada, the European Commission, the Wildcat Foundation, and the US State Department. Whereas the bulk of the early funding (in the order of 80%) for its activities were funded by NGOs, the environment crime section is now funded to the order of more than 60 per cent by government funding. The shift in funding over time, however, has been greatly enhanced by the example set by the NGOs, which through their example and engagement with INTERPOL helped to stimulate governments into taking action themselves. Thus, the NGOs then and now can be seen as providing a catalyst and being an incubator and stimulator for wider governmental action around environmental crime.

In 2008, INTERPOL established a dedicated Environmental Crime Programme (the ECP). As it transpired, establishment of the ECP reflected the point in time when INTERPOL started in earnest to build

capacity and capability in supporting member countries, specifically in terms of environmental crime preparedness and response (Pink, in press). INTERPOL is one of a select group of international governmental organisations (IGOs) that are engaged in some form of environmental law enforcement and regulation, and over time several different consortiums have been forged internationally to deal with specific types of environmental crime. For instance, the International Consortium on Combating Wildlife Crime is comprised of five intergovernmental organisations working to bring coordinated support to the national wildlife law enforcement agencies and to the sub-regional and regional networks that act in defence of natural resources: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Secretariat, INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank, and the World Customs Organization (WCO). This group is chaired by the CITES Secretariat (CITES, 2012).

In 2011, at a time when the ECP was significantly increasing the number and scope of its projects, it identified that the majority of the projects were taking shape around a model that included five pillars (see Pink, in press). The pillars, listed below, have since defined the approach INTERPOL has adopted in dividing its activities:

- *Information Management and Analysis* – for example, the Ecomessage and INTERPOL database;
- *Capacity Development and Training* – for example, training sessions on the use of intelligence in environmental investigations;
- *Operations and Investigations* – for example, coordination of regional and global enforcement operations;
- *Communications and Advocacy* – for example, provision of informative and dedicated Internet pages, which are regularly updated on INTERPOL's website;
- *Networks* – for example, formation (in 2014) of the Environmental Compliance and Enforcement Committee (ECEC) which is comprised of upper level and very senior managers.

While activities occur within or around one pillar in most circumstances they tend to operate as phases in a cycle, with the final pillar, networks, providing a vehicle through which these activities can be implemented or operationalised as appropriate (Pink, in press). From the point of view of project development, the starting point is with information management, since operations can never be intelligence-led unless there is a robust national and international information management system. The kinds of questions initially asked in this regard include:

- Where do you put your data?
- Where do you put your criminal intelligence?
- Where do you analyse it?
- Do you have the skills to analyse it?
- What sort of software and hardware do you need to do this?

Coordinated intergovernmental operations have included, among others, Operation Amazonas in 2014, led by Peru with the support of neighbouring countries. This operation was directed at tackling forest crime in South America by involving countries in a collaborative manner across the entire region. Similar groupings are associated with other types of environmental crimes and commodities, such as the 13 tiger range countries which are starting to act in concert to prevent tiger-related criminality.

The key 'streams' at the centre of the ECP are *biodiversity* (which relates, e.g., to illegal trade in wildlife), *natural resources* (which relates, e.g., to crimes such as illegal logging and illegal fishing), and *environmental quality* (which relates, e.g., to illegal transport and trade in hazardous waste). These streams are, in part, an outgrowth of funding opportunities and support as much as being based upon strategic assessment of those environmental areas requiring the closest attention. In particular, NGO funding, especially from those like the International Fund for Animal Welfare, Humane Society International and the Wildcat Foundation which have a dedicated interest in the health and wellbeing of animals, has played a vital role in expanding INTERPOL interest and operations in relation to areas such as the illegal wildlife trade.

In 2014, the Environmental Crime Committee was evolved into the ECEC. The establishment of this committee represented a significant step up in terms of organisational presence and influence. It coincided with the establishment within INTERPOL of an Environmental Security Sub-Directorate. Both developments, one representational (i.e., member country participation) and the other organisational (i.e., internal deployment of people and resources within INTERPOL), reinvigorated the fight against environmental crime to a strategic level, with various working groups retaining the operational and tactical focus of past practice.

The National Environmental Security Taskforce

In recent years INTERPOL has taken the lead in developing new forms of collaboration and active engagement. For example, in 2012 INTERPOL established the National Environmental Security Taskforce (NEST) model (INTERPOL, 2012). The NEST is conceptual framework where various

representatives from a range of agencies come together to contribute and leverage from the groups' collective skill sets in order to more effectively develop, coordinate, and implement response measures.

The NEST is depicted at Figure 6.1. At its most basic level a NEST is a task force of a firmly established team of experts who work together to address specific issues. They are comprised of senior criminal investigators, criminal analysts, training officers, prosecutors, financial specialists, forensic experts, and others, drawn from police, customs, environmental, and other specialised enforcement agencies, and also involving non-government and regional organisations as appropriate.

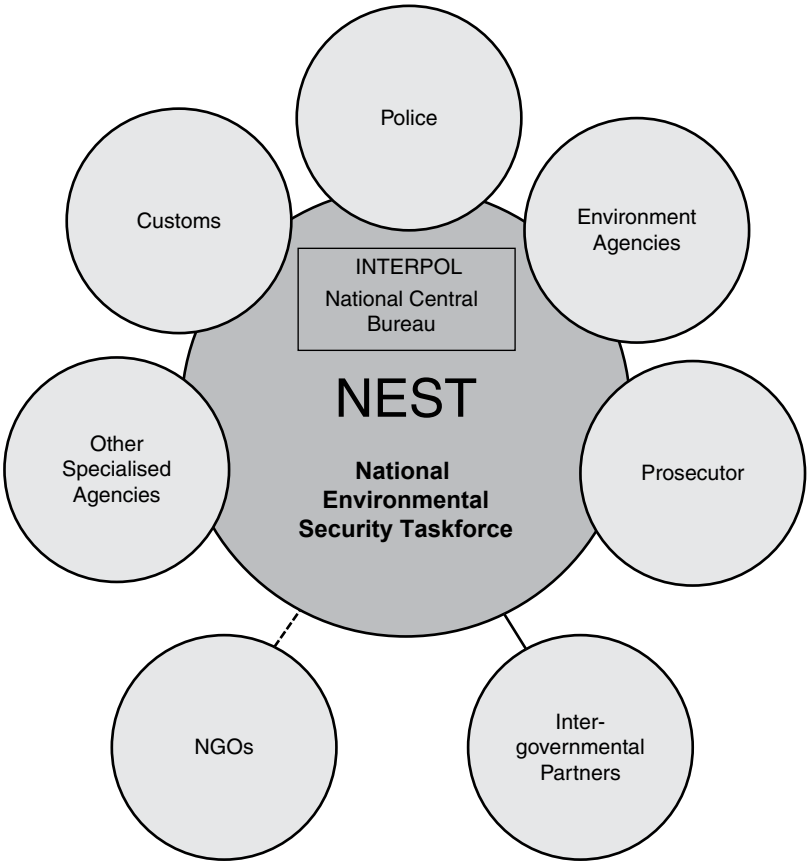

Figure 6.1 Recommended NEST structure
Source: Adapted from INTERPOL, 2012: 22.

The NEST concept is supported by a comprehensive manual that was developed by INTERPOL in partnership with practitioners from national governments, IGOs and NGOs. The manual provides guidance on why NESTs are important for addressing environmental security issues and how they can be formed, supported, and operated. The NEST model is being increasingly used by countries in their day to day business of interacting with one another but more so when that member country comes together as part of a coordinated operation, whether national, regional, or global.

NESTs are presently utilised across various project areas:

> *Project Leaf* (Law Enforcement Assistance for Forests) is an INTERPOL and United Nations Environment Programme (UNEP) climate initiative consortium that is directed against illegal logging and related crimes. The objectives of this project include:

- forming (NESTs) to ensure institutionalised cooperation between national agencies, INTERPOL NCBs [National Central Bureau], and international partners;
- conducting operations to suppress criminality, disrupt trafficking routes, and ensure the enforcement of international and national legislations on sustainable forestry; and
- expanding the project through awareness-raising making a real contribution to global emissions goals, the protection of biodiversity, and preventing environmental destruction.

> *Project Scale* is an INTERPOL initiative to detect, suppress, and combat fisheries crime. The objectives of this project include:

- raising awareness of fisheries crime and its consequences;
- establishing NESTs to ensure institutionalised cooperation between national agencies and international partners;
- assessing the needs of vulnerable countries; and
- conducting operations to suppress criminal activity, disrupt trafficking routes, and ensure the enforcement of national legislation.

> *Project Wisdom* is an INTERPOL initiative to improve wildlife law enforcement in Africa, specifically targeting the illegal trade in elephant ivory and rhinoceros horn. The objectives of the project include:

- reducing wildlife crime in Africa by providing training, assistance and guidance to law enforcement officers;
- supporting law enforcement operations against criminals who exploit wildlife illegally;

- emphasising the benefits of intelligence-led policing; and
- ensuring that assistance delivered contributes to broader civil objectives, including conservation and rule of law.

Project Predator is an INTERPOL initiative to support and enhance the governance and law enforcement capacity for the conservation of Asian big cats. The objectives of the project include:

- encouraging the creation of NESTs and strengthen the South Asia Wildlife Enforcement Network (SAWEN) as an institution;
- information and intelligence management, and enhancement of investigative skills;
- capacity building and international initiation; and
- intelligence-led operations: multiphase Operation Prey.

Project Eden is an INTERPOL initiative to detect and counter the illegal international trade and disposal of waste. The objectives of the project include:

- raising awareness of the illegal transnational movement of waste and its environmental and health consequences;
- establishing NESTs;
- developing sustainable institutional capacity of government agencies responsible for enforcing environmental legislation; and
- promoting an intelligence-led approach and conducting operations to suppress criminal activity and disrupt trafficking.

Different government agencies and NGOs are involved in each project area. For example, the *PEW Charitable Trust* is involved in Project Scale where the focus is on fish and fishing, while environment protection agencies from around the world are involved with Project Eden, reflecting their interest in waste management vulnerabilities. While the philosophy of the environmental crime section of INTERPOL is 'the door is always open to engagement', the recent engagement has tended to favour regionally focussed NGOs over the globally focussed NGOs. This is particularly the case with animal welfare NGOs which, for example, have a specific concern with elephants or rhinoceros, rather than conservation NGOs that tend to be wider in their focus.

One advantage of NGO involvement is their ability to respond quickly as policy circumstances change and situations on the ground shift. As indicated in Box 6.1, however, there are both pros and cons associated with NGO engagement in environmental law enforcement activities and networks.

Box 6.1 NGOs compared with official environmental law enforcement

Issues in common

Expertise: skills related to gathering evidence for the purposes of court, knowledge, and marshalling of forensic and other technical knowledge, investigatory skills

Training: needs to be continuous, with training resources constantly updated and refreshed, in the light of the complexities and changing nature of environmental crime, as well as innovations in crime detection, investigation, networking, and technological development

Morale: what happens in the public sphere and governmental domain affects the morale and work activities of all those engaged in environmental law enforcement activities, and this can influence the confidence of activists in formal system outcomes, including court outcomes

Collaboration: forge links between police and non-police environmental enforcement agencies, and between official and NGO agencies, with appropriate rules of engagement

Areas of divergence

Legality and social constructions of harm: NGOs may be among the biggest critics of existing rules and conventions and this puts NGOs at loggerheads with those whose official environmental law enforcement brief is dictated by international and national laws over which the NGOs may disagree

Illegal actions in support of a cause: Some NGOs justify taking illegal action around environmental and animal rights issues based on the premise that many presently legal activities constitute a crime against nature and this can make collaboration between NGOs and official environmental law enforcement agencies complicated, at the very least, if not impossible

Intervention powers: For NGO investigators, legally mandated powers of investigation will vary (e.g., RSPCA versus Greenpeace), as will their legal standing in relation to questioning witnesses, initiating prosecutions, and collecting evidence

(*continued*)

Box 6.1 (*continued*)

Displacement of roles: in some countries the active engagement of NGOs around environmental matters is accompanied by the displacement of a formal authority role on the part of governments, especially where NGOs end up doing what should be done by formal state agencies, aided and abetted by the same governments that find it cheaper and easier to have NGOs do the work than funding such activities themselves

Accountability: this is partly determined by ideology and ideals (e.g., save whales, save forests) and one's record of activism in relation to these ideas; while acting outside the usual restrictions of law and bureaucratic structures offers a degree of 'real world' flexibility in responding to actual environmental harms, it also will engender difficulties in forming alliances with official environmental law enforcement agencies and their personnel.

Source: White, 2012.

The dearth of adequate controls and regulatory actions within official criminal justice and state offices on matters pertaining to environmental harm is a problem of considerable proportions (White, 2011), although as pointed out above more government than NGO funding is now flowing to INTERPOL in this area. Nonetheless, it is very often transnational environmental activists who have stepped into the breach, exposing instances of ecological and species harm, providing details of poor regulation and enforcement practices, and contributing both formally and informally to crime reduction and prosecution processes. As increasingly important players in the world of environmental protection, conservation, and management, environmental activists frequently have to both confront powerful social, economic, and political interests and at times work with and alongside powerful groups, organisations, and state apparatus.

For example, at the INTERPOL Conference on International Environ mental Crime in Lyon, France, in September 2010 there were representatives from both official environmental law enforcement agencies, and from a wide range of non-government agencies such as Greenpeace Amazon. From the discussions, it was clear that while government agencies may be constitutive of the official networks, they frequently lack adequate resources and staff. Conversely, the NGOs are not only actively

engaged around environmental issues, but they are often well resourced. As a consequence, there are now different types of partnerships emerging, of which the NEST is one manifestation.

Contemporary regulation theory stresses the importance of 'third parties' in the regulatory process. That is, it is important that official government agencies involved in regulatory activities – those pertaining to compliance and enforcement of rules and laws – recruit non-government and community-based agencies to the regulatory project (see Ayres and Braithwaite, 1992; Gunningham and Grabosky, 1998; Braithwaite and Drahos, 2000). This approach acknowledges that there are many different stakeholders who have an interest in regulation. These include, for example, businesses, employees, government officials, communities, shareholders, environmentalists, the media, and financial institutions. It is argued that governments should provide a space for non-government participation and resources in fostering regulatory compliance. Between the regulator (government) and the regulated (industry, citizen) are third parties (community members) who can contribute to improved regulatory performance through monitoring and other forms of activity. The involvement of local residents in neighbourhood watch schemes, for example, provides an illustration of third-party policing.

Such considerations are also vital when it comes to environmental crime. This is because of the complex nature of environmental harms covering many different issues relating to air, land, and water use, biodiversity, the transport and use of hazardous waste, and carbon emissions, and which, in turn, demand expertise across a wide range of areas and extensive networks of surveillance. It is also due to the generally poor level of resources, meagre budgets, and low staff numbers devoted to environmental protection and law enforcement activities by governments, especially given the scope and scale of the problems.

In this context, NGOs can and do play a significant role in investigating and exposing environmental harm and offender wrongdoing. However, the issues and limitations associated with NGO interventions mirror those of government agencies. For example, in each case there is a need for new and sophisticated skills of investigation, and a strong sense of collective mission in regard to dealing with environmental harm. Moreover, effective collaboration has to be a hallmark of any engagement in this area because of the plethora of agencies, stakeholders, and organisations generally involved, and the fact that much environmental crime crosses borders and involves local, national, regional, and international laws, regulations, and conventions (White, 2011). Come what may, it is increasingly clear that government and

non-government agencies and actors need to work together in a wide range of ways for the sake of better environmental governance generally (see, e.g., Environmental Investigation Agency, 2008).

There are many ways in which transnational environmental activist groups can work with official agencies and personnel to achieve similar goals, including sharing of intelligence and joint efforts to gather evidence against wrongdoers. Recent discussions of crime prevention strategies in relation to transnational environmental crime highlight the ways in which states can catalyse third parties, such as environmental NGOs, to contribute their own capacities towards the pursuit of preventive outcomes (Ayling, 2013). Activist environmental NGOs have been identified, for example, as important third parties in relation to the illicit wildlife trade, in regard to their position as guardians of wildlife, handlers of potential offenders, and managers of particular places. Marshalling their cooperation can possibly be achieved using a variety of mechanisms used to facilitate state third-party joint actions (see Ayling, 2013). Increasingly a hybrid approach is being utilised by INTERPOL, in which flexibility in partnership is achieved in part through clear lines being drawn as to who does what, when, and under what circumstances. The five pillars mentioned above provide the broad framework for collaboration and engagement. But the discussion up front is one where conversations go along the lines that 'you have interest A, we have interest C, we can come together at interest B, and we are going to go through this process and you fund it, and these are your interests which is fair enough but INTERPOL is in control of information and intelligence'. In other words, determining the parameters of the collaboration is a vital part of the collaborative process.

As the short history of INTERPOL–NGO relations testifies, there are a variety of ways in which collaboration can be construed and constructed – from simple funding arrangements involving dedicated environmental crime officers, through to more complex project management and involvement in NESTs. Some NGOs insist upon creating and running their own wildlife crime or enforcement teams, while others see their role as trying to stimulate enforcement action through supporting INTERPOL efforts in this domain. Funding arrangements also dictate the immediate focus of projects: a one-year funded project implies a need for immediate results; five-year funding allows for more developmental and strategic use of resources and personnel. Regardless, a key strength of INTERPOL is that it provides a central hub and pool of expertise and accumulated wisdom. While processes may occasionally be considered slow and bureaucratic to the outsider, especially 'gung ho' NGOs, it is

precisely because of the care taken vis-à-vis policy, procedure, and practice that the environmental crime section of INTERPOL can provide bedrock support for others.

Dealing with global environmental harm will demand extraordinary efforts to relate to each other across distance, time, language, and cultural borders; to understand specific issues; to coordinate actions; to enforce international laws and conventions; and to gather and share information and intelligence. Among the many issues pertaining to the proliferation of agencies dealing with environmental crime is that each may be driven by different aims and objectives, different methods of intervention, with different powers, and exhibiting different levels of expertise and collaboration with others. Another issue relates to the need to distinguish between organisational affiliation (which may be formal and policy oriented) and interagency collaboration (which refers to actual operational practices and linkages). In some cases, there is a clear need for capacity building in order for collaboration and, especially, for rapid response, to be successfully institutionalised as part of normal agency practice. There can also be agency differences in defining and interpreting just what the crime is and how it should be responded to – as in the case of breaches versus crime, customs offences versus fisheries offences, and so on.

Fighting transnational crime will frequently and increasingly demand a worldwide response. In the end, to be effective, agencies need to be able to harness the cooperation and expertise of many different contributors and to liaise with relevant partners at the local through to the international levels. A 'joined up' approach also means that links can be made between different forms of crime as well as between different agencies, and different parts of the world. For instance, illegal fishing (an important environmental crime) has been tied to trafficking of persons, smuggling of migrants, and the illicit traffic in drugs. This is due to the influence of transnational organised crime in the fishing industry worldwide (UNODC, 2011). International cooperation is also necessitated by the sophistication and transnational nature of the crimes as well. In response, the *International Monitoring, Control and Surveillance Network* has been formed and is dedicated to prevent and deter illegal, unreported, and unregulated fishing. Although not a formally constituted IGO, it has participation from over 50 countries in an informal manner.

As an international agency, the experience of INTERPOL can be called upon to deal with these kinds of issues and to help build further expertise and networks into the future. INTERPOL provides an active forum in which criminal investigators from around the globe meet to discuss

issues such as determining the role of organised crime in specific types of criminal enterprises (e.g., people smuggling), and developing training and enforcement actions to combat particular sorts of criminal activity (e.g., illegal oil pollution into oceans, seas, and inland waterways). At a practical level, a productive strategy for harmonisation of enforcement efforts is to focus on consistency in delivering regulatory and enforcement tasks. In relation to this, INTERPOL provides invaluable forums for the exchange of information and knowledge transfer about 'best practice' and 'what works' in a variety of situations. Participation in common training programmes and attendance at conferences and workshops provides opportunities to enhance overall law enforcement capabilities as well as contributing to shared understandings and values in regard to specific types of criminal activity. Importantly, the use of regional case studies and reference to local experiences both reaffirms the importance of acknowledging specific jurisdictional differences as well as creating opportunities for the adoption of a more balanced view of what constitutes the most productive law enforcement approaches and strategies.

Specific forms of criminal law enforcement will require collaboration between different nation-states and different environmental law enforcement services. The development of capabilities in the specific area of transnational law enforcement is necessary, and inevitable given world trends. This includes the 'soft skills' of interpersonal communication that enhance cooperation between groups. An important part of this process is the development of a shared consciousness of issues and a sense of what represents justice amongst enforcement personnel. Understanding the complexities of global issues is a vital step in forging a transnational value system protective of collective social interests, ecological wellbeing, and human rights (see INTERPOL and UNEP, 2012). The risks, harms, and threats posed by and accompanying climate change add further impetus to think creatively about the near and over-the-horizon challenges when it comes to environmental law enforcement (see Bergin and Allen, 2008).

Conclusion

The role of INTERPOL in forging an international response to combating environmental crime is varied and impressive. From relatively humble beginnings in 1992, the environmental crime section has grown substantially in regard to levels of expertise and the development of effective models of institutionalised practice and relationships. NGO

involvement has been a vital part of this history and will continue to do so in the future work of INTERPOL. Meanwhile, the NEST model is proving, so far, to be an innovative way in which to foster practical, expert-driven, and inclusive forms of collaboration. A major strength of current developments is that INTERPOL staff members are well-positioned to play the role of mediator in ways that provide impartial, dispassionate responses to what are at times gruesome and grotesque crimes. This is because of the experience and professionalism of the group, occupational facets which stem partly from the stability of this service over time as well as the enthusiasm and forward-thinking of its key strategic planners.

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Part III

The Operational Aspects of Collaboration

7

Collaboration and Consultancy, Tackling Environmental Crime, and Delivering Environment Protection

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Regulators, enforcers, and policy implementers involved in environment protection need help to do their work. That help comes from many places. Very rarely is there sufficient resource in environmental regulatory agencies, in terms of staff, material, toolkits, empowerment, or the capital to do the job they or their critics see as necessary. There are many sources of help. They include but are not limited to other regulators, parallel or partner organisations and individuals, including governments, national and local, 'peak'[1] trade or industry bodies, specialist non-governmental organisations (NGOs), academics, and management consultants.

Consultants[2] are able to bring additional capacity, skill, and experience and this additionality can speed up the time taken to make progress and add quality, breadth, and depth to the regulator's work. Consultants are the focus of this chapter, particularly how they are, might be, and perhaps ought to be used for maximum benefit and impact both administratively and for environment protection. Overall the best consultant will have a smart client.

Trust is often taken as a given between government partners and confidential mechanisms have been designed and operated successfully for the last decade and more in Europe, Australasia and variously even at the global level. This has led to collaborative and mutually supportive work and tools being developed for and by regulators.

Consultant credentials

Regulators appear to have developed some suspicion of consultants. Experience generally has shown that the common risk of the management consultant – that is, that 'they will borrow your watch to tell you

the time' – has been confirmed for Environment Protection Agencies (EPAs) too. Too much time and energy has been soaked up in teaching and training the consultant in order for them to feed back, sometimes rather inexpertly, that which they have been told or have learned. This is of course unfair at least to some, but seems all too common. But like all consultants, society and regulated parties too, the truth (and experience) will lie upon a spectrum whereby some excel and some do not, and there will be many in the middle suffering from insufficient information or experience, with at least, and potentially most important, a tendency to conform to the idiom that 'he who pays the piper, calls the tune'[3] (see Gemmell and Scott, 2013). Professional and balanced objective approaches and track records may be expected fully to combat this risk of inappropriate service relative to need.

It might be argued that the best and most useful consultants are or have themselves once been experts in practice and run planned and implemented regulatory enforcement and crime fighting activities. Consultants can also, it seems, provide internal and external wiring for the organisation that they are engaged to assist. It is frequently astonishing how little information is shared and used internally in an organisation and the good consultant can ease the sharing and development and performance improvement processes that make for an excellent advisor/regulator/enforcer. The external version, sometimes involving the very good connection of one part or perhaps just the operational or leadership parts of an organisation with their peers elsewhere, is increasingly well addressed in the 'networking' literature (Pink, 2015), as illustrated by the conference co-hosted by the International Network for Environmental Compliance and Enforcement (INECE) and the Flemish High Council of Environmental Enforcement (VHRM) in November 2013, *Environmental Enforcement Networks: Concepts, Implementation And Effectiveness*, and the subsequent book with the same name (Faure et al., 2015). Eccles (1991) also highlights the role consultants can play in aiding performance improvement, identifying the independence and 'neutrality' of management consultants as a benefit, allowing (e.g., regulated) firms to enhance their performance in competition or where they seek to protect areas of their business to share and input and learn, while protecting them from exposure. Knowledge Exchange (KE) across the various entities is increasing greatly and appears to be adding value to operational success and organisational learning and thus performance improvement (Gemmell and Circelli, 2015). Corroboration of that assertion is militated against only by the tendency of practitioners and authorities not to write up or publish the evidentiary basis. The increasing value placed

on policy relevance, impact, and KE in the recent REF14[4] process for all UK universities is also a dimension of academic/industry/regulator collaboration and consultancy-style inputs to relevant processes.

Consultants – confidentiality, competence, and context

Clearly, however, there is a deal to be done in achieving a dialogue between the regulated and the regulator, or more often, the legislature and/or its political master. Speaking directly may be impossible, difficult, or just require a number of barriers to be negotiated or navigated. Barriers seem most likely to be around confidentiality, technical competence, relevant detail and contextualisation, fear of immediate legal/sanction intervention on disclosure or sharing (the language itself is revealing), and market and political sensitivities.

Whilst regulators in recent years have worked hard to 'get to know the customer' better, there may also continue to be real issues about speaking directly and transparently.

Interestingly, however, it is often to consultants, especially the high brands of the 'Big 4' (Deloitte, Ernst & Young, KPMG, and Pricewaterhouse Coopers) and their ilk, that government and even some, often global, companies may turn to, apart from turning to a number of more specialised firms, for a rounded, allegedly, more objective (and even, authoritative) view of the issues. Lobbying, bias, partiality, and self-interest are evident fears in the mind of government officers, and fear, as indicated above, as well as a desire for the most favourable presentation, may also be in the mind of the company seeking access to or an interlocutor with the government.

Baroness O'Neill (quoted in Bismark, 2014), talking about regulation generally, although from a medical perspective initially, says:

> The ability to make fair, independent and unbiased decisions is the sixth quality of effective regulators. In the words of Frank Montgomery, trying to regulate in a system that is captured by professional self-interest is like "fighting with a wet paper sword". Strong lay representation and (a reasonable degree of) independence from government are increasingly recognised as essential prerequisites for effective regulation. An unbiased system values the perspectives of both practitioners and the public in shaping the system.

This highlights the value of consultant input if it brings independent authority and adds to the community involved.

Consultancies in their various forms

Consultancy input may take a variety of forms in type and mode of use. The variety of inputs might lie across the stages of operational and licensing processes, from licence application, to monitoring, to help with planning or pollution law, including at the point of enforcement action by the regulator as well as a range of technical advisory inputs on processes and emissions and material management (see Gemmell and Scott, 2013). Consultants might help to provide a variety of content facets, therefore, including a meta-analysis of several cases, but also may provide experience and objectivity, critical or peer assessment, a quality check, reassurance, and an independent opinion or audit scrutiny. They might be able to say what an insider, interested parties, or government official or politician could not or where, were the latter to do so, they would be undervalued or discounted precisely because of either their position or closeness to the case. And fundamentally, as Meuleman and in 't Veld (2009) set out, a culture and range of decision-support instruments have been well-established in Western science based societies seeking in this case to inform policy, see it implemented, and delivering good impact for the long term. Advice and assessments and the research and judgements upon which they are based, stand best when their bona fides are well-established and hard to impeach.

Generally, for the reasons already given, the consultant may gain or be given access where the regulator may be unable to go, or where the perspective given to the regulator may be highly positioned and edited. Simply, the consultant may have experience that other regulators or staff colleagues in the company may lack, being more widely sourced, representing multicompany, sector, disciplinary, jurisdictional, or market experience.

Such technical specialisms appear commonly used. That said, a shared criticism of consultants remains that the experience may be out of date, from a different field, or superficial. Sometimes such a comment is made rather defensively too.

In the authors' experience, as users and suppliers of consultancy inputs and participants in expert consortia, the value provided by such experience and processes to a range of situations is huge. NHEEPA/EPANet, AELERT, IMPEL, and INECE[5] to name a few have provided value-adding inputs to governmental processes at state and federal and multijurisdictional levels. The range has spanned high-level policy and law making, policy and legal review, implementation overviews, and operational and very specific technical issues.

The role and use of consultants changes as one moves down the regulatory hierarchy from policy and legislation to implementation and based on the tools in use, from direct state interventions to responsive and informational approaches (Sparrow, 2008; Freiberg, 2010). The choice of consultant also changes through this hierarchy with a need for more practical 'muddy boots consultancy' often delivered by ex-regulators at the implementation level.

Policy makers' and legislators' use of consultants

The creation of legislation at the EU or Member State level is often supported through the use of consultants. The use of consultants at this level is often to gather data to inform policy, the collection of which may be difficult due to the 'perceived policing' role of the organisation hiring the consultant. Several examples are now considered in turn.

Consultant consortia

The European Commission frequently employs consultants to assist with the development of policy and to assess the levels of implementation across the Member States. The choice of consultant often actually consists of a consortium of multiple consultancies spanning several Member States. The consultancies selected are frequently well-known and respected consultancies at an international level. The 2011 Commission report *Impact Assessment Study into Possible Options for Revising Recommendation 2001/331/EC Providing for Minimum Criteria for Environmental Inspections* from the Directorate General Environment (EU Commission, 2011)[6] was delivered by a multinational consortium of consultancies from the Netherlands, Denmark, and the United Kingdom. Clearly the choice of using a consortium based in multiple countries will help achieve wider coverage, buy-in to the process, and potentially allay the fears of favouritism.

In late 2007 the European Commission adopted a package aimed at improving the EU policy on industrial emissions. This proposal was two years in the making and looked to recast seven existing Directives into a clear and coherent legislative instrument. The two-year review process included numerous technical studies involving various actors including consultancies largely in the form of consortia as described above aimed at gathering information and the meta-analysis of available data. The review led to the creation of the Industrial Emissions Directive (IED). The IED contains the requirement that all appropriate measures are taken to protect against pollution, using Best Available

Techniques (BAT). These BAT are collated and described in a BREF (BAT reference document), which is created by the European Integrated Pollution Prevention and Control Bureau based in Seville, Spain. The process involves the exchange of information organised around the scope of the Directive. The norm is for technical working groups to be created. The Waste Treatment BREF is due for release in 2016 and its production is supported by a provisional technical working group of more than 120 individuals, associations, and consultants. This large grouping avoids direct lobbying of the European Commission and potential narrowing of output due to the self-interest of large trade associations or Member States.

Since implementation of the IED, the use of consultants by the European Commission Directorate General Environment has continued, for example, in the 2010 'Assessment of the implementation of the IPPC Directive' by a consortium of three consultancies from Hungary, Belgium, and the UK. This use of consultants as proxies or gatekeepers allows the European Commission to gather real data and insight into the issues and avoid direct lobbying from Member States.

Conduit consultancies

At a member state level the consultancy usually selected is an organisation based in or with a large operation within the Member State. The choice of consultant is more likely to be a trusted intermediary with independent credibility and recognised status as an organisation with the ability to act as a conduit to ensure that the government is at the game line or ahead of the game wherever possible.

Here it is probably worth mentioning a unique aspect of well-networked regulators or policy specialists in Environmental Regulatory Agencies (ERAs), an EPA, regulatory consortium, or even within the European Environment Agency or Commission. Talented individuals can act in a nodal hub role for consultants and consultancies. This offers the 'smart client' function and can help with two-way signposting to relevant experience and expertise. It can as a result take effort out of managing consultants, save them time and effort, and provide the role and value of being the 'translator', quality control provider, or conduit back to the agency.

Research organisations

The 'Make it Work' project jointly led by the Dutch Ministry of Infrastructure and the Environment and the UK Government department responsible for policy and regulations on environmental, food,

and rural issues (DEFRA)[7] has chosen an organisation (the Institution for European Environmental Policy – IEEP) to facilitate development of the project that clearly is designed to deliver the trusted intermediary role. The IEEP does not meet the traditional consultancy profile being an independent not-for-profit research organisation which helps them fulfil the given role.

Regulators' use of consultants

Collaborative learning and problem-solving approaches have been added to the traditional regulatory toolkit for some time and expert input from academics and consultants has become increasingly common (Sparrow, 2000, 2008; Daniels and Walker, 2001). Regulators may often also use consultants in scientific analytical and interpretative as well as capacity, timing and investigatory roles. And regulators readily now seek out support in consultancy and partnering forms from peer regulators and regulatory associations – INECE, IMPEL, AELERT, and NHEEPA[8] being good examples.

Whilst again potentially an area that rubs both ways, consultants can play a valuable role in mitigating, identifying, and tackling the management of conflicts of interest and (im)partiality, fraud, and corruption, and are used often in the management consultancy/auditor company role whereby they help with ensuring robust risk management and ethical conduct (Farmer, 2007).

Regulators and regulatory associations in Europe and globally, such as IMPEL or INECE are becoming increasingly more judicious in their choice of consultants, basing selection more on the skills and knowledge of individual consultants or the consulting team rather than solely on cost or reputation of a particular consultancy brand.

Constraints of traditional consultancies and value of the insider or 'ex-'

Traditional consultancies or academic consultancies have often struggled to meet the needs of the regulator, especially at the more technical level. One example is where a consultancy was tasked to deliver a simple document for use in the field, but provided a very comprehensive document of more than 50 pages. Although this was technically very thorough, it was far from practical when what was required was something which would fit onto a two-sided laminate for officer field use.

Ex-regulators or, increasingly, the use of third-party government regulatory agencies or government scientific services offering consultancy

services, bring a degree of pragmatism and practical application perhaps lost on those with a purely academic or consultancy background. Shared experiences and a common understanding increase trust and often lead to a better recognition of the project issues. This can lead to better analysis of what is required to proceed and thus to a faster completion of the project. A good example of the use of a third-party agency to provide consultancy can be found in the IMPEL project 'Doing the Right Things' which was led by the Dutch Ministry VROM, a predecessor to the Ministry of Infrastructure and the Environment. The project hired another Dutch Agency, Infomil, as a consultant. Infomil as an agency is a knowledge centre and promotes itself as being the place where information about environmental legislation and policy is documented, analysed, and disseminated. It has developed particular skills in education and communication to enable this but at the core is a team of ex-regulators. This expert understanding of the regulatory regime allowed the consultants proactively to come up with ideas and proposals and to deliver a timely, fit-for-purpose output. This positive experience was very much related to their background in regulation.[9]

Academic consultancies

Academically biased consultancies definitely have a role to play especially for the development of projects that are breaking new ground or cutting edge in style and may have an advantage too when more 'helicopter view' policy implementation overviews are required. This is arguable of course.[10]

A recent series of IMPEL projects led by the Dutch province of Nord Brabant used an Erasmus University (Rotterdam) based researcher and consultant to work on the developing area of Meta-Regulation in a series of projects entitled 'Compliance Assurance through Company Compliance Management Systems.' A growing number of consultancies have consultants with academic backgrounds in the social-behavioural sciences. These are now helping some regulatory agencies understand the motivation and incentives required to improve compliance performance and to introduce ideas such as 'nudge theory' into practice. As an example, the Scotland and Northern Ireland Forum for Environmental Research (SNIFFER) 2013 project on improving compliance and environmental outcomes in new ways with limited resources was delivered by a consortium that included consultants with expertise in social-behavioural sciences.

Matters of cost and choice

Cost will always play a role in the choice of consultancy. A single individual is usually cheaper but will potentially have a limited breadth of experience and a lot may depend on the selective value and knowledge of the individual. A group may be able to provide enhanced benefits to a particular project through a multidisciplinary experience. This benefit can only manifest itself if the experiences are of value to the project or role required. In addition there is a risk that the influence or experience of key individuals is muted through collective working and in general the collaboration may also take longer, which can be an issue.

Most larger consultancies are now able to target their offerings and bids not only financially but also in terms of the experience of personnel to meet the multifaceted needs of regulatory projects. The 2009 SNIFFER project on targeted risk-based approaches to compliance was delivered by a consultancy team that included an ex-regulator and a statistician (SNIFFER, 2009). Both roles were key, and necessary, to achieving a satisfactory completion of the project that delivered large-scale statistical interpretation with the required real-world validity of the output.

However, with more specialist projects the use of single consultants rather than a larger team can be employed to great effect, giving targeted consultancy. The following two examples both contain components where the consultant in question had a regulatory background before they became consultants, giving a multidimensional aspect to the input they were able to provide. The IMPEL project 'Choosing Appropriate Interventions Alongside Inspections to Ensure Compliance and Achieve Environmental Outcomes' (IMPEL, 2012) was led by the Environment Agency of England. The consultant chosen, being an ex-employee of the Environment Agency, was quickly able to gain the trust and develop a good working relationship with the project team. Being an ex-regulator he was quickly able to identify what was needed and deliver effectively.[11] This however again highlights the theoretic advantages being realised by the personality and deployment of the individual.

The second example is that of the renowned academic Professor Malcolm Sparrow from the John F. Kennedy School of Government in Harvard who originally worked for a UK police force. Since becoming an academic he has worked with a wide variety of regulatory agencies including the Scottish EPA (SEPA) where he has delivered training and offered guidance to help develop SEPA's 'Harms Programme' (SEPA, 2011), and the South Australian EPA with their efforts in terms of becoming a harms-based regulator (SA EPA, 2013). The programme

and the prioritisation mechanisms that underpin it help identify priority issues harming the environment and how they might best be tackled. Projects within the programme include a project designed to help tackle organised environmental crime and another aimed at tackling diffuse pollution in agriculture to name but two. As a consultant and former regulatory practitioner, he was able to contextualise the issue both from a regulatory and an academic research perspective to offer advice. Importantly, he has a coherent theoretic and practical argument for why it has worked in previous situations. An integration of the same approach allowed the South Australian EPA to do the same thing, taking global best practice theory and achieving value through careful practitioner analysis and synthesis (SAEPA, 2013; Gemmell, 2015).

Increasing use of regulators and ex-regulators

Consultants and consultancy services come in many different guises; as discussed above, the use of ex-regulators is common and often beneficial the further down the regulatory hierarchy one goes. Although ex-regulators may be able to keep the mindset of what it is to be a regulator and the level of pragmatism to be employed, the world of the regulator is constantly changing and is often a very different place within five years. Arguably the wisdom of an experienced regulator is the best to apply to policy reflections, new law and its implementability, *and* the enhancement of practice and performance.[12] Former regulators may have less edge and thus be less well-suited to up-to-the-minute elaborations of new policy, practices, and technical detail. Some consultants involved are simply internal consultants from their own organisations but with more widely applicable skills as well as, often, the personality traits that favour sharing, networking, group learning, and creative development.

Public administrations and consultancies

The use of public administrations to provide consultancy provides the current view and is the basis of the EU Twinning programme. The Twinning instrument is designed to deliver the longer-term cooperation between public administrations of EU Member States and of beneficiaries from candidate countries and potential candidate countries seeking EU membership as well as countries covered by the European Neighbourhood Policy. The aim is to share good practices and build capacity within the beneficiary public administrations. It is funded by grants from the EU which are sought in competitive forum to gain work as a normal consultancy would.

The Kosovo EPA is the beneficiary of an EU Twinning project in 2015 lasting 22 months with a budget of €1,100,000 with €1,000,000 from an EU grant. The project will be implemented by a team made up of Austrian, Finnish, and Latvian administrators with the primary organisation being the Environment Agency of Austria (Umweltbundesamt – UBA) paid for from the grant.

The Oxford Dictionary (OUP, 2015) defines consultancy as 'a professional practice that gives expert advice within a particular field' and it is often assumed that this advice is always paid for. This is not the case in many bilateral EPA processes and networked/consortia inputs. It may be that travel and subsistence may be supported but it is often a highly discounted service.

The IMPEL peer review programme known as the IMPEL review initiative (IRI) is a process whereby a team of experts from usually six or seven IMPEL member organisations review another regulatory agency. The output is a report of the findings including a list of good practices to be shared within the IMPEL community and beyond and a list of opportunities for development for the host organisation. IMPEL funds the process in terms of hotel and transport to the venue but the participants do not get paid. The benefits include access to the wider perspective from different areas of Europe, different types of regulatory systems, different enforcement practices, and so on. The output is described by regulatory practitioners, managers, and senior executives as 'consultancy money cannot buy'.

Consultants' interventions with regulators and public administrations

Consultants approaching regulators, especially if done cold or badly, can be a nugatory or even damaging experience, not least given resourcing pressures. The Freedom of Information legislation has to a degree exacerbated this despite the common EPA mission to provide public environmental information. Representing clients, lobbying, or seeking information, while usually legitimate, can be productive but can also be challenging and cause confusion over who is speaking. Like the more effective trade bodies, however, sometimes consultancies by themselves can offer real value by operating smartly. One such example was a 'White Paper' process in Australia where a group of regulators (the embryonic Heads of [Australasian] EPAs[13]) was approached by the consultants Fyfe. An event was facilitated to bring the EPA heads together with senior voices from industry, *in camera*, and points of agreement on

need for regulatory reform were hammered out and shared within and between jurisdictions. An effective agenda for reform was created from this 'safe space' collaborative approach. A parallel of processes already established in the EU context, this indicates that well-managed private dialogue can be provided by consultants to achieve administrative and environmental gain.

Consultants and training

Regulators often also require the use of consultants to provide training. Many regulatory agencies employ staff for their technical knowledge but over time these individuals may advance through the organisation to managerial positions. Consultants delivering soft and managerial skills are employed to develop individuals. The value of consultants in the provision of technical training, however, is sometimes questionable as, for instance, they may be able to tell one how a piece of abatement technology works but they will often struggle to identify the tips of the trade in terms of how to regulate the plant. Here ex-regulators with knowledge of both sides can be employed. This also helps mitigate what Jones and Honorato (Chapter 3, this volume) describe as 'prophet syndrome'.[14] Cross-fertilisation from enforcement agencies to those with enforcement powers is useful, an example being the SEPA which historically uses ex-police officers to deliver training on the correct procedures to take statements and other practice-related work.

Technocratic capacity building

As discussed in this chapter, consultancy inputs and collaborative working with diverse but experienced regulatory partners are actively ongoing and very successful. They help with KE, and with sifting, focus, and collation and meta-analyses; establishing standards; policy and practitioner syntheses; benchmarking and assessment; and training and development.

Training

IMPEL and AELERT[15] as well as individual regulatory bodies, for example, the USEPA,[16] Victorian EPA,[17] and SEPA, have undertaken long-term and occasional, even remedial, systematised packages of training for inspectors across the range of officer requirements. Some consultancies, including that of one of the authors, provide in-depth programmes

and specific needs-based events. An example is the training of environmental inspectors in Egypt. This was recently carried out under the United Nations Environment Programme - Mediterranean Action Plan Mediterranean Pollution Programme (UNEP-MAP MEDPOL) and hosted by the Egyptian Environmental Affairs Agency's local branch in Alexandria. Discussions were included on the current and required skills and competences of the inspectors, and the burden of proof and the enforceability of environmental permits, and the programme also included specific tailored elements and case studies on monitoring discharges to the Nile and Mediterranean Sea as well as a working-group exercise on the inspection of a pulping facility. The latter was part of a specific customer focus on the paper industry and the use of new, clean technologies required to be incorporated into the inspectors' activities.

Generally, the practical implementation and enforcement of Multilateral Environmental Agreements (MEAs) is becoming more and more a challenge for governments and their administrations. Having domesticated these MEAs into national legislation does not automatically result in good compliance rates by the regulated community.

To combat the illegal trade in and the transport and management of environmental detrimental goods effectively, responsible law enforcement agencies need not only be set up in an efficient manner but also be well trained and supported. Their officers need to have access to a broad range of skills and practical tools. This has led to a rise in the demand for in-depth and practical training in the areas of inspections and enforcement, but also on matters such as interagency collaboration and performing risk assessments. Better-equipped law enforcement officers will not only improve the quality of enforcement actions at a practical level, but also the effectiveness and efficiency of the organisation as a whole. Consultants with the appropriate skills and experience can clearly help with this.

The Environmental Enforcement Training Institute (EETI),[18] for example, has provided a broad support function, with skilled trainers with hands-on experience, appropriate material that includes legislation, practical information and case studies, and tailor-made pre- and after-care. The hands-on training is developed based on the specific needs and level of the law enforcement officers. EETI also offers support to the management responsible for effective and efficient monitoring and enforcement of environmental legislation by showing how the knowledge gained will improve the output of the agency and increase the level of compliance.

The private sector

Whilst not the focus of this chapter, it is evident that the same offerings are relevant to industry and the consultant, as sometimes an internal supplier in larger companies can and will play the same potentially invaluable role. Ex-regulators can be particularly prized and the reciprocal is also true, not least for the potential 'poacher-turned-gamekeeper' benefits.

The private sector may perceive and capitalise on the benefits of performance improvement most effectively, as time saved or quality outcomes achieved and regulatory process 'hassle' avoided are all real money items. Market advantage and shaping of the regulatory framework in particular are especially valuable.

Tools or knowledge developed in a bespoke context may also be valuable for redeployment elsewhere. As Johnson and Bröms (2008) established, process re-engineering and design simplification learning from the automotive industry led to widespread consultancy application elsewhere in engineering and other sectors, ultimately leading to application in public policy areas too. This is often now the beneficial process area, especially in relation to public, including regulatory, policy where benefits of the external consultancy can regenerate and support development and performance improvement within the organisation – but again, applicable to the regulated and the regulator.

Hence, consultants have the potential of adding value to the detailed, useful, transferable market space and there is and should be a premium in regulatory effectiveness and efficiency in public- and private-sector domains.

Past and future

There is a great deal of informal learning from regulators and consultants as well as from industry and partners, and many examples of beneficial input of good consultancy collaborations. The pioneering and outward-looking approaches to KE shown by current and past staff of the US and Dutch EPAs, as well as examples from the Aid movement and other experts from EPAs, or with such experience, shows what is possible and the difference it can make. Giles (2013) and others have highlighted resource constraints and a desire to minimise litigation as some of the drivers of next-generation approaches to regulation. There may be wisdom in that but it seems that we will still need expert input, especially where transformation in corporate performance, regulatory effectiveness and environmental quality are needed. Transformational

change is happening in several locations now and nowhere with a higher impact perhaps than in China.[19] The scale of the challenge and the openness of some parties to engage mean that multipartner consortia are at work right now bringing environmental performance improvement through combining health and safety, environmental, engineering, and other expertise from public- and private-sector backgrounds. This highlights the early wisdom of the observations of NHEEPA (EPANet, 2005) about how good environmental practice that is well shared leads to environmental and broader socio-economic benefit NHEEPa (EPANet, 2013).

A final word on trust

We mentioned trust in the opening section of this chapter and personal experience of industry reticence to share is reflected rather well in the following quote from Mark Moody-Stuart's 'Responsible Leadership' (Moody-Stuart, 2014):

> [I]t is essential that business and civil society organisations work together for the common good. If this is to happen, businesses need to work to develop the trust of civil society organisations, without which cooperation will be impossible. Trust in business is low. The best way of restoring it is by exceptional transparency and by reporting on exactly what business is doing and where. This transparency should cover both the positive things and the negative things.

The development of the GRI[20] and work by authors such as Carol Adams (e.g., Adams, 2004, Adams and Frost, 2007) has led to an ongoing step change in an effort to bring about not only better compliance but greater trust and better environmental citizenship overall. The insights and challenge value of those with a 'sustainability filter', or a focus on 'does this work and actually deliver the objective sought?' should not be underestimated. Nonetheless there may still be some way yet to go for regulators in terms of trusting the consultant, the outsider, or the critic, however helpful in fact this might be.

Conclusion

Ultimately, as indicated in Gemmell (2015), there is help available to the regulatory body and its accessibility, quality, and robustness in relation to application should perhaps be the main concern and provide the parameters for consideration. Authority and utility go hand in

hand: and in this area practical experience and *nous* are hard to beat. Consultants, if good, well-informed, experienced, and possessing effective communication and engagement qualities, can and will make a difference to engagement, utility, learning, planning, execution, and impact. Generally speaking, crime fighting and regulatory implementation overall are team phenomena and building great teams, including assembling the best expertise known and available, does make the difference.

Notes

1 Australian term for leading or major (NGO, trade or industry) representative body.
2 A number of generic and tailored reports and overviews exist for using consultants, often provided by government, business support agencies, and so on, for example, from the UK National Audit Office (http://www.nao.org.uk/report/central-governments-use-of-consultants/ and http://www.bond.org.uk/working-with-consultants). John Rowley's guide is particularly useful (http://www.bond.org.uk/data/files/A_guide_to_getting_the_best_out_of_a_consultancy.pdf)
3 That is that the consultants, wittingly or subconsciously, can find themselves providing reports and findings which support what the client wants or knew but needed someone else to say.
4 The Research Excellence Framework process succeeded the RAE and assessed, reporting at the end of 2014, the quality of HEI sector research, focusing additionally in this round on impact. See http://www.ref.ac.uk
5 Acronyms: NHEEPA/EPANet (the Network of Heads of European Environment Protection Agencies/Environment Protection Agency Network), AELERT (the Australasian Environmental Law Enforcement and Regulators neTwork), IMPEL (the European Union Network for the Implementation of Environmental Law), and INECE (the International Network for Environmental Compliance and Enforcement).
6 For more information on the Recommended Minimum Criteria for Environmental Inspections (RMCEI), see IMPEL (n.d.); Liebregts and Kramers (2008).
7 DEFRA, the Department for Environment Food & Rural Affairs (UK).
8 See note 5 above.
9 Increasingly in contracts, regulators, even when using a 'big name' firm or consortium, will specify and require a named individual consultant as the lead or specialist input provider.
10 Would the regulatory staff themselves produce equal or better product from having or making the time to innovate or take the helicopter view and thus learn and progress? The counterfactual is missing.
11 See note 8 above.
12 For detailed coverage and analysis of relevant experiences in the USEPA and the cultural and practical process change issues involving current and past staff and consultants, see Emison and Morris (2012).

13 Essentially based on the European NHEEPA/EPANet model, precipitated by the axing of the Standing Council on Environment and Water in Australia it was facilitated by a strong working dialogue between the VicEPA and SA EPA as well as the key players subsequently from the other jurisdictions.
14 This is where, despite significant knowledge and experience, and substantial professional standing, some agency staff find it very difficult to be trained by one of their peers. See Jones and Honorato in chapter 3 of this book.
15 See Pink (2008).
16 See Jones and Honorato in chapter 3 of this book.
17 See EPA VIC, Authorised Officer Program.
18 For more information on EETI see http://environmental-enforcement.com, note this is an example only and does not constitute a formal endorsement by the authors.
19 For example, a large multi-annual programme being delivered, to the Chinese Government by the Norwegian Ministry of Foreign Affairs, advised by specialists from the Norwegian EPA, Miljødirektoret, providing consultancy on regulation, air quality, and so on with World Bank divisions and UNEP increasingly offering vehicles for similar direct and multipartner consultancy input.
20 Global Reporting Initiative. See, for example, http://drcaroladams.net/the-un-global-compact-gri-and-embedding-sustainability-in-universities-presentation/

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8

Collaborative Relationships with the Courts: The Prosecutor's Perspective

Anne Brosnan and *Paul Taylor*[1]

It is perhaps self-evident that protection of the environment requires the prevention of acts which are likely to adversely affect the environment or cause harm to human health, as well as the proper regulation of operations and activities that may be similarly damaging. A system of regulation, established by statute or similar legislative provisions, containing the necessary requirements and prohibitions must, however, be upheld and enforced to be effective. This will necessitate concrete action by a regulating authority. This concept is enshrined within the European Union by the requirement for an independent competent authority to undertake the regulation of activities and management of risk so as to keep people safe from the most potentially harmful activities.

Enforcement of legislation designed to protect the environment is usually undertaken, in most parts of the world, by some form of environmental protection authority or agency working in association with a separate or sometimes embedded enforcement and prosecution agent. Within the United Kingdom there are a number of authorities who have responsibility for environmental protection. There is no requirement for a single competent authority in Member States across the EU to undertake all aspects of environmental protection. To the extent that existing bodies do not have an enforcement and prosecution capability they must liaise and collaborate with relevant law enforcement agencies including the police, prosecutors, and the courts. This chapter considers the experiences of the Environment Agency (EA) for England, as part of the UK and the EU, and the relationships and collaborative arrangements which make environmental protection work in this jurisdiction.

The Environment Agency

The EA is the largest of the UK environmental regulators, with primary responsibility for pollution control in England. The EA has close links with the UK's other environmental regulators, in particular Natural England (which deals with nature protection in England), the Scottish Environmental Protection Agency (SEPA), and Natural Resources Wales (NRW). It works closely with a wide range of partners, including government, business, local authorities, other government enforcement agencies, civil society groups, and communities.

The EA has a wide remit as regulator for all environmental media, mainly through an integrated permit system designed to protect and improve air, land, and water quality by applying environmental standards within which industry can operate. It is committed to working with industry, but also undertakes enforcement across its many and varied functions. These include regulatory activity in relation to waste, water and industrial emissions through the environmental permitting regime, radioactive substances, protection of fisheries, flood defences and reservoirs, navigation, water abstraction, producer responsibility regimes for packaging waste, batteries, and waste electrical and electronic equipment (WEEE). Additionally it has responsibility as the joint competent authority for Control of Major Accident Hazards (COMAH) alongside the Health and Safety Executive (HSE), who take the lead on health issues, with the EA dealing with environmental issues.

The EA is not part of the Civil Service in England. It is a non-departmental public body established by statute. Governance arrangements are headed up by a Chairman and Board. Its rather unique status means that the EA comprises professional engineers, scientists, lawyers, and other specialists, who have wide-ranging experience in areas such as industry and land management and who therefore bring to bear a diverse range of skills in a very focussed way for the benefit of the environment.

An overview of regulatory activities

The EA is proactive as a regulator, and works with operators, trade sector representatives, and professional associations across its areas of activity to promote best practice and good housekeeping. It works in close association with the water industry and industrial operators whilst retaining the ability to take formal enforcement action where this becomes necessary. One of its major current priorities is waste crime, where

there is considerable unlawful activity.[2] The EA takes action to support the legitimate waste and recycling sector in the UK, which generates over GBP 12 billion per year and employs over 128,000 people.[3] Waste crime, however, undermines the legitimate waste industry and public confidence in the regulatory regime which governs it. In championing 'outcome focussed regulation',[4] the EA seeks to apply the enforcement response most appropriate to the illegal activity identified. Prosecution is unlikely to be the first response. First-time offenders may not deserve prosecution; on the other hand, first-time offenders who commit serious crimes incurring substantive damage and harm may well do. This reflects a 'pyramid' approach to regulation (moving up a ladder of escalating sanctions) but this ranking is not inflexible; in most cases a 'tool box' approach may also be used where the sanction chosen depends upon the specific characteristics of each offence/offender. In most cases the EA will stop offenders and bring them back into regulation through the use of statutory notices, warnings, formal cautions, injunctions, use of disruption techniques, and, in less serious cases, by providing advice and guidance.

Each year the EA prosecutes a number of companies and individuals that cause pollution, operate unlawfully without the necessary permits, or breach their permits. Examples include the dumping and inappropriate handling of hazardous and other wastes, illegal exports of waste, pollution of water courses, and major industrial accidents which cause or risk serious damage to the environment or harm to human health. The EA has its own in-house enforcement capability and specialist prosecutors. Its enforcement officers are in the main locally or area based although it has a national enforcement team dealing with major investigations and transnational cases.[5]

Prosecutions

As can be seen, the EA is a specialist regulator with dedicated enforcement resources. Additionally it has an in-house prosecution service, which complements the structure of its enforcement activities. This means that collaboration between enforcement officers and the requisite in-house experts and policy advisors is routine and generally good. These relationships allow for the cumulative development of expertise in areas of science which might be otherwise considered esoteric for public prosecutors. It is extremely important that value is attributed to these collaborative relationships which have underpinned the EA's successful enforcement practices for some two decades. In-house prosecutors are able to challenge evidential gaps and the assertions of witnesses

so as to ensure that cases are properly brought and will withstand scrutiny and challenge by the courts and defence lawyers.

A recent review of prosecution cases, undertaken by the Agency for the period 2011 to 2014, has established that the number of prosecutions which the EA takes has dropped, but that those remaining are the more complex and difficult cases. One explanation for this trend may be that since January 2011 the EA has had the power to apply civil or administrative sanctions as an alternative to criminal prosecution in less serious cases. It thus now considers the use of alternative methods to criminal prosecution in all cases where civil sanctions are available. It retains the ability to prosecute in serious cases, while allowing less serious matters, where the offender is genuinely contrite, to be dealt with outside of the court framework, where the emphasis can be on remediation and reparation rather than penalty per se.[6]

In prosecuting environmental offences the EA is subject to all of the rules and procedures which govern the investigation and prosecution of criminal offences generally, both at enforcement and prosecution stage. Defence challenges may concern the admissibility of evidence and general criminal procedures such as the handling and disclosure of unused material. Agency prosecutions give rise to all manner of challenges, as with any other area of the criminal justice system; only some are based around the science of pollution control. In fact the EA has recently faced greater challenges as to the legitimacy of its investigations focussed on the nature and extent of its statutory powers, use of surveillance material, and powers of entry.[7] Involvement of lawyers by enforcement officers, clarifying the officers' understanding of the courts' ability to review the exercise of their investigative powers, is therefore extremely valuable, allowing legal advice to be given in advance of the exercise of powers rather than retrospectively.

In a recent multiple-defendant prosecution involving the illegal export of waste, *KV v R [2011] ECWA Crim 2432 Court of Appeal Criminal Division*, the EA faced a number of challenges. In particular, contention emerged about the transposition of the Transfrontier Shipment of Waste (TFS) Regulations from the EU Waste Shipment Regulation to the domestic jurisdiction, with a defence argument that the UK regulations were *ultra vires* (in that they were beyond the enabling legislation) and as such were invalid.

This was very much a test case on the practical application of complex legislation and a challenge to the validity of the UK legislation. A number of appeal issues arose and it was important for the UK Government's ability to comply with international obligations that the outcome should

uphold the transposing regulations. In this case the EA was supported by its sponsoring body the Department of Environment, Food and Rural Affairs (DEFRA) in defending the legislation but the case was difficult and time consuming. It is important to recognise the demands of cases where new issues of law arise, where specialist prosecutors, conversant with complex legislation and how it actually works on the ground, come into their own. The case was decided in the Agency's favour and a number of convictions resulted.

The role of the prosecutor: collaboratively assisting the courts

An often misunderstood proposition is that a prosecutor is, at all times, an officer of the court, and therefore has certain overriding duties. As such, the role of the prosecutor is to put the case against the accused fairly, in the interests of justice, so as to ensure that the case is disposed of in a just and timely manner. This requires impartiality and objectivity and an understanding of the 'neutral' role of the prosecutor within the criminal justice system as laid down within the Criminal Procedure Rules. The Attorney General's Guideline on the Acceptance of Pleas and the Prosecutors role in Sentencing[8] states that the appropriate resolution of a criminal case after conviction is as much a part of the criminal justice process as the trial for guilt or innocence. The responsibility of the prosecuting advocate involves not only putting the case fairly against the accused, making full disclosure, and drawing the court's attention to any statement of impact upon a victim, but also assisting the court with relevant authorities and sentencing guidance and taking a role in assisting the court with sentencing issues. However it is incumbent upon the prosecutor to assist the court in many ways at various stages of the proceedings, particularly in an area of law which may be unfamiliar, several of which are now considered briefly.

Assisting the courts: listing

Listing of matters is a judicial responsibility and function. Good listing enables a case to be brought to hearing or trial before the proper tribunal, expeditiously and with the greatest degree of preparedness for all parties concerned. This is invariably based upon the seriousness and complexity of the case and the offences concerned. The prosecutor has a role in listing by advising both the court and the listing office of issues which may affect time estimates and allocation. At the earliest stages of listing it is important to advise the appropriate listing officer of the non-standard nature of a case so that it may come before a tribunal which has the skill and expertise to deal with it.

An example of where such advice may be warranted is included within a new draft on Practice Directions on Listing and Allocation,[9] which is due to arise consequent upon the implementation of the *Legal Aid, Sentencing and Punishment of Offenders Act 2012*. This legislation increases the sentences available for most environmental offences in the Magistrates' Courts to an unlimited fine. In England the Magistrates' Court is the first tier court or court of first instance in criminal proceedings, so this will constitute a significant increase in their sentencing powers.

The draft practice direction suggests that the prosecution should notify and liaise with the Magistrates' Court office to ensure that cases which may potentially attract very large fines are listed before a District Judge (Magistrates' Court) rather than a lay bench. Matters which may attract large penalties include:

a) Cases involving death or significant, life changing injury or a high risk of death or life-changing injury;
b) Cases involving substantial environmental damage or polluting material of a dangerous nature;
c) Cases where major adverse effect on human health or quality of life, animal health or flora has resulted;
d) Cases where major costs through clean up, site restoration or animal rehabilitation have been incurred;
e) Cases where the defendant corporation has a turnover in excess of £10 million;
f) Cases where the court will be expected to analyse complex company accounts;
g) High profile cases or ones of an exceptionally sensitive nature. (CPD XIII Annex 3 para. 6 a–g)

This will require a degree of forethought by the prosecution and assessment of the likely sentencing outcome in relation to any new prosecution case commenced at court. In relation to sentencing venue, the practice direction ensures that proper consideration is given at an early stage to sending matters which may attract large penalties to the Crown Court, in particular:

i. Where a defendant appears before a magistrates court for an either way offence, a guilty plea is entered and on conviction a very large fine is likely to be imposed, the case must be dealt with by a DJ

(MC) who has been authorised to deal with such cases by the Chief Magistrate.

ii. The authorised DJ (MC) must first consider whether such cases should be committed for sentence under *s3 Powers of Courts (Sentence) Act 2000* and must do so when the DJ (MC) considers the offence or combination of offences so serious that the Crown Court should deal with the defendant as if they had they been convicted on indictment.

iii. If an authorised DJ (MC) decides not to commit such a case, the reasons must be recorded in writing to be entered onto the court register. (CPD XIII Listing D para. D.4)

We can therefore anticipate that most serious or larger environmental cases will be committed to the Crown Court or dealt with by a District Judge in the Magistrates' Court.

Assisting the courts: expert evidence

There is a clear need for lawyers and scientists to work together to understand each other's disciplines in order to secure the aim of sustainable environmental protection and to bring the relevant disciplines to bear upon environmental matters. There is a high threshold for scientific evidence in regulatory proceedings, in particular where cases proceed to prosecution. The foremost responsibility of a prosecutor is to ensure that sufficient, relevant, reliable, and admissible evidence is placed before the courts. Environmental cases will almost invariably require specialist evidence; the nature of waste or the effects of a pollutant in the water environment can be complex issues and the court will need to understand something of the biology and ecosystems involved. This is likely to involve reliance upon the evidence of one or more expert witnesses.

Understanding and being able to translate the jargon for the court is important. In putting expert witness evidence before a court, prosecutors should manage the use and instruction of expert witnesses so as to ensure that the stringent court requirements are followed. In England the rules governing the use of expert evidence are clear:

1) An expert must help the court to achieve the overriding objective by giving objective, unbiased opinion on matters within his expertise.
2) This duty overrides any obligation to the person from whom he receives instructions or by whom he is paid.

3) This duty includes an obligation to inform all parties and the court if the expert's opinion changes from that contained in a report served as evidence or given in a statement. (*Sections 1–3 of Rule 33.2 Criminal Procedure Rules*)[10]

Whilst in-house experts are sometimes called to give evidence, the EA will also use external witnesses, such as experienced academics or consultants, all of whom must have the necessary skills and experience to be persuasive to the courts and to be demonstrably objective. The choice of expert witness is a key decision and is often critical to the success or otherwise of a case. The EA liaises with professional associations to ensure the highest level of critical appraisal is brought to bear upon its cases, both prior to commencement in court and then to assist the court in determining the relevant issues.

Assisting the courts: sentencing

It will always be appropriate for a prosecutor to bring to the attention of the court all relevant sentencing guidelines and authorities. In England and Wales the sentencing of environmental offences is undertaken at summary or first tier level by Magistrates' Courts, with Crown Courts dealing with more serious matters on indictment. Generally in environmental cases the prosecutor will assist the court by preparation of a plea and sentence document, a Friskies Schedule, detailing all matters relevant to sentencing in accordance with the case of *R v Friskies Petcare Ltd [2000] 2 Cr App Rep (S) 401*. This case concerned a fatality where a young man was killed in the work place by defective equipment. It was an HSE prosecution where on appeal the Court of Appeal stated that they should know the factual basis of such cases and how the prosecution case was put, including aggravating and mitigating features, in a written document so that they could more readily determine the basis on which the case was sentenced.

Guidance as to the appropriate level of sentencing is generally handed down from higher courts such as the Court of Appeal and the Supreme Court. However the Sentencing Council of England and Wales, a body established by order of parliament to advise government and the courts on sentencing issues, gives specific guidance on particular areas of offending behaviour where a need is identified, which the courts must follow. Recently the Sentencing Council has produced guidance on drugs offences, sex offences, dangerous dogs, knife crime, and lately on the sentencing of environmental offences. This bears some further attention.

The Sentencing Guideline

The Sentencing Guideline for Environmental Offences (the Guideline)[11] sets out clear principles to follow when deciding on sentence and details the appropriate starting points and ranges for the sentence, in order to impose financial penalties which are proportionate to the offence and the means of the offender. It adopts a tariff approach which still allows flexibility for sentencers, enabling them to use their judicial discretion when dealing with the wide range of offender types and taking into account the varying levels of culpability and harm that environmental offending encompasses.

The Guideline is not exhaustive in that it does not cover all environmental offences, but it is appropriate to the most significant offences which the courts are likely to meet most frequently. For instance, it covers the principle offences of breaching an environmental permit or operating/conducting an environmental activity without a permit and the illegal disposal of waste. Offences such as those arising from the *Transfrontier Shipment of Waste Regulations 2007* have also been included in the indicative list of 'Other Environmental Offences' to which the guideline or certain aspects of it may be applied.

The Guideline puts the onus on the offender to provide detailed information as to their means and financial standing. It identifies the principals and approach to be used for a wider range of environmental offences, adjusting the starting points and ranges bearing in mind the statutory maxima for those offences.

Individuals and companies

The Sentencing Guideline is set out in two separate statements which indicate the appropriate considerations when sentencing either an individual (in some jurisdictions described as a natural person) or a company (a legal person). It follows a stepped approach which requires the sentencer to assess environmental harm or risk, the culpability of the offender, and the appropriate starting point for sentencing, based upon the status and means of the offender. There are 12 steps in all; these vary slightly between legal and natural persons but are designed to ensure appropriate, proportionate, and dissuasive sentencing in all cases.

Financial information and means

Whilst sentences of imprisonment and community-based penalties remain possible for individuals in the most serious cases, the bulk of environmental offences are dealt with by way of financial penalty. The courts

are guided to determine the appropriate level of fine in accordance with section 164 of the *Criminal Justice Act 2003* (CJA 2003), which requires that the fine must reflect the seriousness of the offence and requires the court to take into account the financial circumstances of the offender. Guidance is given on the fining of companies which for the first time will be linked to the turnover of the company or business. There are five bands which approximate definitions established by the *Companies Act 2006*. These are:

- very large organisations (not defined, but taken to be those with a turnover or equivalent of over £150 million; the question of what is a VLO is the subject of argument in the Court of Appeal in the ongoing as yet unreported case of *R v Thames Water Utilities Ltd*),
- large organisations (those with a turnover or equivalent of £50 million or more),
- medium organisations (turnover between £10 million and £50 million),
- small organisations (turnover between £2 million and £10 million), and
- micro organisations (those with a turnover or equivalent of not more than £2million).

It is crucial that up to date and accurate information is provided by defendants, in particular companies, not only for the purposes of quantum of fine but also to establish the size of the company and hence the correct starting point and category range under the Guideline. Given the importance of such information, the Guideline requires full disclosure of financial information and in particular, for individuals, directs the court to compel the disclosure of an offender's financial circumstances pursuant to section *162 CJA 2003*.

The stepped approach

There are 12 distinct and identifiable steps to take in the assessment of penalty.[12] As there are some differences between companies and individuals in the Guideline, this short summary considers in detail only the position of companies:

Steps 1 to 4: preliminary considerations and starting point

Step 1 – requires consideration of compensation. The consideration of compensation is in line with government policy in placing the victim at the heart of the criminal justice system and promoting restorative justice.

Step 2 – requires consideration of confiscation (available in the Crown Court only). Only after consideration of these steps is the court concerned

with determining the offence category by considering *culpability* and *harm* factors at Step 3, and the initial setting of the fine at Step 4.

Step 3 – determining the offence category, in terms of seriousness, is more difficult for a company than for an individual. Although both require an assessment of *culpability* and *harm*, for a company the assessment of culpability is not always as straightforward as it is with an individual defendant by reason of corporate structure and responsibilities. The issue of where the controlling mind of the company is to be found is relevant, as is the degree of knowledge held by personnel at the appropriate level within the company.

Culpability factors are identified as follows:

- Deliberate,
- Reckless,
- Negligent, and
- Low or no culpability.

The above requirements will require the investigating authority to be rigorous in its investigations so as to obtain the appropriate level of evidence to properly attribute culpability to the organisation. Whilst 'strict liability' evidence may be sufficient to establish guilt for some environmental offences, establishing merely a causal link between perpetrator and the illegal act, consideration of subjective factors such as intent and neglect become relevant in determining sanction. There are some useful indicators in the guideline such as the reckless failure by the organisation to put in place and to enforce such systems as could reasonably be expected in all the circumstances to avoid commission of the offence.

Harm is then assessed and categorised. Harm is assessed by reference to indicative, narrative levels of harm or damage, separated into four categories based on seriousness, from Category 1 to Category 4, with Category 1 being the most serious. The court needs to assess whether there has been major, significant, or minor harm or merely risk of harm with no actual or substantiated impact. Risk of harm is generally set a category below a similar level of actual harm but not where the likelihood or extent of potential harm is particularly high.

Step 4 – Once an assessment has been made of the culpability and harm to obtain the category of the offence then the court is directed at Step 4 to a starting point and category range for penalty with reference to tables provided. For example, for a large organisation which has committed a deliberate Category 1 offence, the starting point for the fine is £1 million with a category range of between £450,000 and £3 million.

The court is directed to assess a proportionate initial starting point for the fine at Step 4 before going on to consider any adjustments. These will include adjustments to the starting point within the category range by reason of factors increasing seriousness (aggravating features) or factors reducing seriousness (mitigation features). Step 4 also directs that the court should step back and using certain additional factors, review and reconsider the fine for its overall proportionality.

Steps 5, 6, and 7 allow for reconsideration, review, and adjustment of the initial fine for specified reasons, to establish whether the proposed sentence as a whole meets the objectives of punishment, deterrence, and removal of gain derived through the commission of the offence in a fair way. The court may reduce or increase the penalty derived at Step 4 with particular reference to Steps 5, 6, and 7.

The Step 5 procedure: a new development

There is considerable emphasis within the Guideline on the removal of financial gain which is the driving force behind most environmental crime irrespective of environmental impact caused or risked. There is a new provision within the guideline at Step 5 for the court to ensure that the combination of financial orders (compensation, confiscation, and fine) removes any economic benefit derived from the offending. This will include avoided costs, operational savings, and any gain made as a direct result of the offence.

The Guideline states that where the offender is fined, the amount of economic benefit derived from the offence should normally be added to the fine. This therefore requires some analysis of the economic benefit derived from the offending behaviour involved. This provision is not however intended to replace confiscation proceedings pursuant to the *Proceeds of Crime Act 2002*. In a recent prosecution case, in March 2015, the EA obtained its first Step 5 order, against a waste operator pursuant to a basis of plea agreed between prosecution and defence counsel, placed before the sentencing judge as an agreed benefit figure.[13] The company agreed to make a payment of £350,000 as the agreed benefit under Step 5 of the Guideline. It is anticipated that this provision may be of considerable use when prosecution and defence can agree a benefit figure, thereby avoiding detailed scrutiny of the defendant's financial position for the purposes of a confiscation order. It affords the opportunity to provide some finality around the issue of financial gain and overall confiscation.

Step 6: proportionality

Step 6 – here the court is asked to check whether the proposed fine based on turnover is proportionate to the means of the offender. The Guideline (page 12) states:

h) It will be necessary to examine the financial circumstances of the company in the round. If an organisation has a small profit margin relative to its turnover, downward adjustment may be needed. If it has a large profit margin, upward adjustment may be needed.

This allows for sentencing based on realistic assessment of a company's means rather than on a purely theoretical basis.

Step 7: other factors which may warrant adjustment

Step 7 – includes a direction to the court that where a fine falls on public or charitable bodies, the fine should normally be substantially reduced if the offending organisation is able to demonstrate that the proposed fine would have a significant impact on the provision of its services. It is anticipated that the courts will require evidence on this point from defendants and will look closely at the charitable status and activities of the offending organisation. This step allows also for amendment of the penalty, where it might impair the offender's ability to make restitution to victims, improve conditions in the workplace, or adversely affect the local economy.

Steps 8 to 12: general criminal justice considerations

Steps 8 and 9 – deal with reductions in sentence due to assistance from offenders and for the early entry of guilty pleas, respectively.

Step 10 – here ancillary orders are considered and information is provided regarding the courts' powers ancillary to sentence such as forfeiture of vehicles, deprivation of property, and remediation.

Steps 11 and 12 – direct the court to consider the totality principle: whether the sentence is just and proportionate and to give reasons and explain the effect of the sentence.

Recent sentencing authorities

Of great assistance to the court are recent sentencing authorities. Three recent decisions of the Court of Appeal, heard in each case by the Lord Chief Justice, are of particular interest:

R v Sellafield Ltd [2014] EWCA Crim 49

Sellafield Ltd appealed against a penalty of £700,000 for seven offences relating to the improper disposal of waste contaminated with radioactivity. The Lord Chief Justice made important observations about the appropriate level of fine for companies with large profits and turnovers in such cases, reinforcing the need to change the behaviour of companies. The court dismissed the appeal.

R v Southern Water Services Ltd [2014] EWCA Crim 120

Southern Water Services Ltd appealed a fine of £200,000 imposed by Canterbury Crown Court arguing it was manifestly excessive. The case related to a large number of discharges from Margate Wastewater Pumping Station, Kent, into the sea between January and July 2011 in breach of an environmental permit and for not promptly informing the EA about these discharges. The Court of Appeal said that the three things it needed to consider were (1) harm, (2) the seriousness of the offending, and (3) the financial position of the company. The court criticised the company's failure to provide evidence to the Crown Court from a senior officer explaining why the problems were long-term, involving a major company with large financial resources which was largely owned by professional shareholders. The company had the ability to respond to and pre-empt problems of this nature. The court also took account of the company's 160 previous convictions showing a persistent record of criminality. The court rejected the appeal.

R v Day [2014] EWCA Crim 2683

Philip Day appealed a sentence whereby he was fined £450,000 and ordered to pay costs of £457,317.74 for an incident where a number of trees on his estate were cut down without the necessary permission from Natural England. The estate comprises about 500 acres, mainly of woodland, and is a Site of Special Scientific Interest (SSSI). The Court of Appeal noted that there was no apology or meaningful acceptance of responsibility from the appellant. Further, the facts of the case contained many seriously aggravating features. The court refused the appeal and in doing so stated:

i) A fine in seven figures should not therefore be regarded as inappropriate in cases where such a fine was necessary (1) to bring home to a man of enormous wealth the seriousness of his criminality in cases such as this where there was gross negligence in pursuit of commercial gain, (2) to protect the public interest in SSSIs and (3) to deter others.

Costs in court

Good collaboration with the courts generally leads to good cost recovery, if the court can see and understand the full extent of the prosecutions' claim for costs and make appropriate enquiries. It is the policy of the EA, pursuant to the Polluter Pays Principle, to seek to recover, in

criminal proceedings, the actual costs associated with bringing a matter before the courts. The EA is funded by the public purse and by regulated entities who pay licence fees, therefore recovery of costs is important in ensuring that the cost of non-compliance does not fall upon those who pay charges for environmental permits and on tax payers.

There is well established practice and case law on cost recovery governed generally by the Prosecution of Offenders Act 1985. The issue of costs remains ultimately within the discretion of the court and the means of the defendant and ability to pay must be taken into account.

The wording of the Guideline allows the court to make ancillary orders as it thinks fit. The enforcing authority will invariably claim substantial investigation and legal costs and these will be scheduled and notified to the defendant and to the court in advance. Case law suggests that the enforcing authority's reasonable costs should be fully recouped from the offender, subject to means. In *R v Associated Octel Company Ltd [1997] 1 Cr App R (S) 435*, Justice McKinnon sets out the approach to be taken:

i) the prosecution should serve upon the defence, at the earliest time, full details of its costs, so as to give the defence a proper opportunity to consider them and to make representations upon them, if appropriate.
ii) if a defendant, once he has been served with a schedule of the prosecution's costs wishes to dispute the whole or any part of the schedule he should, if possible, give proper notice to the prosecution of the objections proposed to be made or, at least, make it plain to the court precisely what those objections are.

Precedent effect – collaboration with the Sentencing Council

With the advent of a more informed approach to sentencing, pursuant to an established guideline, it is hoped that there will be better understanding by the courts of environmental offending and greater consistency across the criminal arena in terms of sentencing practice. The Sentencing Council has revealed that the Magistrates' Association has welcomed the Guideline and in particular the clear starting points and ranges. The vast majority of cases in the UK are sentenced by magistrates, some 93 per cent in 2012,[14] so this is encouraging. It has been agreed that 12 months from the date of commencement of the Guideline, sentencing outcomes will be reviewed by the Sentencing Council to ascertain whether the courts are applying the Guideline consistently and to see whether fine levels for both individuals and companies have increased, decreased, or remained the same.

Publicising sentencing outcomes – working with the media

As a general rule there is a presumption in favour of publicising outcomes of criminal cases. The primary purpose is to increase public trust and confidence in the work of the criminal justice system and in environmental cases the work of the EA as well. However an important ancillary aim is to discourage potential offenders and reduce re-offending. Good media coverage of sentencing outcomes ensures that there is general deterrence across the area in which the offences have been committed; it also encourages victims to report crimes and witnesses to come forward. The EA is proactive in working with the local and national press to notify them about upcoming cases of interest and in having pre-prepared press releases available in advance of most cases so as to generate interest in cases rather than trust to luck.

Verdicts and sentences are handed down in open court and are a matter of public record. Copies of the court register containing details of criminal cases can be obtained upon request and the EA publishes, on a regular basis, a summary of its enforcement activity, including prosecution results.

Details of successful cases are also made available to victims and third parties for use in civil proceedings.[15] Details of prosecution actions are made available in response to requests under Freedom of Information legislation and the *Environmental Information Regulations 2004*. These methods of obtaining environmental information accord with the UK Government's commitment to access to justice in environmental matters pursuant to the Aarhus convention, which enshrines the right of the public to know about and participate in environment-related matters.[16]

Access to information around convictions is time limited because of the effect of the *Data Protection Act 1998* and the *Rehabilitation of Offenders Act 1974* which dictate that spent convictions should not be available generally for a greater period than is necessary to promote openness, transparency, and accountability of the criminal justice system to the people it serves.

International work

Specialist prosecutors can become involved in various kinds of international legal work, for example, working on cases involving the illegal export of waste, or TFS, which have recently comprised some of the Agency's most complex cases. The EA has collaborated with the United Nations Basel Secretariat[17] in relation to the development of training materials around international waste crime. It has also recently

been working as part of the IMPEL (European Union Network for the Implementation and Enforcement of Environmental Law)[18] TFS prosecutors project in relation to training and the establishing of a database of cases on the illegal export of waste.[19]

The growing international dimension of cases has led to the EA's participation, as a founding member, in the European Network of Prosecutors for the Environment (ENPE),[20] a new network which allows prosecutors to exchange ideas and develop and enhance best practice in investigating and prosecuting environmental crime with partners in other Member States of the EU. Such networks provide an exciting opportunity for future collaboration between prosecuting authorities.

Conclusion

All aspects of working life require interaction with other individuals and bodies. Successful outcomes depend not only upon a willingness to navigate these arrangements but to establish good working relationships. A collaborative approach pays dividends.

It is not necessary to compromise the integrity and independence of partners provided all parties understand the framework within which they operate. The criminal justice system has all the necessary safeguards in place to protect the impartiality of the court. A collaborative, purposive approach designed to assist the courts and all other participants within the criminal justice system, to the extent possible, can only be of long-term benefit to all concerned and aid the EA in seeking to secure enhanced environmental protection through the courts.

Notes

1 Anne Brosnan, Deputy Director of Legal Services (Chief Prosecutor) EA, England, and Paul Taylor Head of Serious Casework EA, England. Any views or opinions expressed are those of the authors and not necessarily those of the EA or any other government body.
2 Environment Agency (2013), *Cracking Down on Waste Crime: The Waste Crime Report 2012–2013*, October, available at http://publications/environment-agency.gov.uk
3 Ibid., p. 7.
4 Environment Agency (2010), *Enforcement and Sanctions Guidance*, October, available at www.gov.uk/government/publications
5 For more information see www.gov.uk/environment or *Cracking Down on Waste Crime*.
6 *Civil Sanctions Order 2010*, An Independent Social Research Review, February 2014, available at www.gov.uk/defra

7 See by way of example *R v Walker & Sons Hauliers Ltd [2014] EWCA Crim*; *John Sweeney v Westminster Magistrates Court & London RART and the Environment Agency [2014] EWHC 2068 (Admin)*; *R (On the application of Allensway Recycling & others) v Environment Agency [2014] EWHC 1638 (Admin)*; *Churngold Recycling Ltd v Environment Agency [2014] EWCA Civ 909*.
8 *Attorney General's Guidance to the Legal Profession*, Office of the Attorney General for England and Wales, 30 November 2012, available at http://www.gov.uk/sentencing
9 New Practice Directions on Listing and Allocation: Criminal Practice Direction (CPD) (XIII).
10 Additional information concerning the contents and requirements of expert reports is contained in sections 3a–j, inclusive of Rule 33 Criminal Procedure Rules.
11 The Guideline in its entirety can be seen at http://sentencingcouncil.judiciary.gov.uk/
12 For a more detailed commentary see Anne Brosnan, 'The New Environmental Offences Sentencing Guideline – A Summary with Comments', *Environmental Law Review*, 16 (2014), 2023–2209.
13 See *R v Powerday plc* (Unreported), Harrow Crown Court, March 2015.
14 See *Sentencing Council Responses to Consultation on the Environmental Offences Guideline*, p. 8, available at http://sentencingcouncil.judiciary.gov.uk/docs/Final_Environmental_Offences_Responses_to_Consultation
15 *Publicising Sentencing Outcomes: Guidance for Public Authorities on Publicising Information about Individual Sentencing Outcomes within the Current Legal Framework*, Neighbourhood Justice and Courts Strategy, Ministry of Justice (UK), June 2011.
16 See http://Archive.defra.gov.uk/environmental/policy/ . . . /compliance summary
17 For more information on the Basel Convention see http://www.basel.int/The_Convention_Overview
18 For more information on the IMPEL-TFS Prosecutors Project see http://impel.eu/projects/impel-tfs-prosecutor-project-2014/
19 For more information on IMPEL see http://impel.eu/
20 For more information on ENPE see http://www.environmentalprosecutors.eu

9
Port-to-Port Collaboration

Henk Ruessink, Deborah Kopsick, Robert Heiss, and *Meredith R. Koparova*[1]

Port-to-port collaboration is essential to enable countries to detect and deter illegal shipments of hazardous and electronic waste. This cooperation is broadly defined in the seaport environmental security context. Enforcement cooperation activities can be any type of formal or informal exchange of information or expertise on environmental compliance and enforcement related matters. Effective enforcement can help create a level playing field for regulated industries domestically and internationally, resolve and prevent transboundary environmental problems, create efficiencies in the development of tools and programmes, and foster the political will needed to strengthen implementation of environmental standards (INECE, 2011).

The opportunities that could result from more effective enforcement cooperation led the International Network for Environmental Compliance and Enforcement (INECE) to develop the Seaport Environmental Security Network (Seaport Network or SESN) in 2008.[2] The launch of the network was driven by requests from national authorities, who felt greater coordination generally, together with coordinated training on targeting and inspecting suspect shipments more specifically, could improve the capacity for controlling hazardous waste shipments at seaports, and for detecting illegal operations.

The experience of the Seaport Network has shown that strong cooperation among authorities at the national, regional, and international level is necessary to prevent, detect, and disrupt the movement of illegal hazardous waste shipments through ports. At the international and regional levels, effective collaboration across borders is critical when ensuring the notification procedure is followed, when undertaking the re-import of a non-compliant shipment, and when investigating actors responsible for an illegal shipment. At the national level, coordination

is essential in the operational stage of detecting illegal shipments along the chain of operations, as well as in pre-operational targeting and priority setting and in enforcement response. In particular, customs agencies and police are the essential partners of environmental ministries that are seeking to stop illegal exports and imports of hazardous waste at ports (Heiss, 2011).

Background

The quantity of illegal movements of hazardous waste is difficult to estimate (UNEP, 2012). Analysis by the European Union Network for Implementation and Enforcement of Environmental Law Transfrontier Shipments (IMPEL TFS) of Waste Programme found approximately 20 per cent of inspected shipments had infractions within Europe (Isarin, 2008). A comprehensive study on global environmental crime estimated the profit from illegal dumping of trash and hazardous waste materials to be 10–12 billion US dollars per year (FAS, 2000). More recently, Europol found that trafficking of illicit waste in Europe is a high-profit activity that has a low risk of detection, and for which significant work on enforcement capacity is necessary (Europol, 2013). On electronic waste alone, nearly 50 million metric tons are disposed worldwide each year (*The Guardian*, 2013). Estimates vary for the quantity of this waste that is shipped without the proper notice and consent documentation to developing countries, but reports from INECE (INECE, 2012), INTERPOL Environmental Crime Programme (INTERPOL, 2013), and others (ILO, 2012; Duan et al., 2013) have found it to be substantial.

In order to track the movement of hazardous and electronic waste, procedures to provide notice and consent by the sending and receiving governments have been developed. These procedures are embodied in multilateral (e.g., the Basel Convention and Organisation for Economic Co-operation and Development) or bilateral agreements.

The Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (the Basel Convention) is an international treaty that was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less-developed countries. The three main goals of the Convention are the reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, the restriction of transboundary movements of hazardous wastes, and a regulatory system applying to cases where transboundary movements are permissible. To implement the basic control features of the Basel

Convention, a notice and consent procedure must be followed and hazardous wastes must be managed in an environmentally sound manner.

Facilitating port-to-port collaboration

The Seaport Network within INECE and other organisations have implemented activities and developed resources to support port-to-port collaboration, whether that collaboration is intra-country or international in scope. Activities of the Seaport Network that foster collaboration include simultaneous inspection events involving multiple countries, inspector training and exchanges, coordinated and consistent communications, and other efforts focused on capacity development and information sharing. Tools and resources that the Seaport Network has developed include Capacity Building Training Modules on Controlling Illegal Transboundary Movements of Hazardous Waste, an Operational Guidance Document to support international inspection month activities, a Guidance Document on International Communication Tools, and an Operational Guidance for the Takeback of Detected Illegal Shipments of Waste.[3]

National port-to-port enforcement cooperation

Although trafficking of hazardous waste is, by definition, an international phenomenon, it cannot be successfully counteracted without effective cooperation of stakeholders at the national level. The chain of activities and actors that manifests itself between the production of the waste and its final disposal or recycling is a long and complex one. Important elements of this chain are domestic in nature, and have to be managed and regulated at that level.

Waste, in any country, is produced by a range of economic and social activities. Industries, households, and services all produce their specific types of waste, including hazardous waste in some cases. For the sake of human health, safety, and the environment, these streams of waste need appropriate management. To that end, the waste has to be collected, transported, stored, and processed in an appropriate and controlled manner. The processing of the waste may include several specific treatments, like sorting, 'bulking',[4] recycling, reclamation, incineration, or landfilling. The appropriate government agencies have to regulate the respective activities, for example, with permits or general binding rules. In many instances, different levels of government have authority over the distinct activities. Depending on the governance system of countries, competences may be at levels anywhere between the national to the municipal level.

Proper regulation of waste management activities also includes effective monitoring, control, and assurance of compliance with the requirements of the applicable rules or permits. The relevant domestic inspection bodies and prosecutorial authorities are responsible for this task. Depending on the nature, gravity, and circumstances surrounding the offenses detected, administrative, civil, or criminal sanctions may be applied.

In order to act effectively, and to show a consistent approach towards the regulatees, involved authorities need to coordinate and to cooperate. The parts of the (domestic) chain of waste-related actors and activities are so clearly and directly interconnected, that any action of a given competent body will readily have consequences somewhere else along the waste chain, where other authorities may be competent. Hence, when multiple authorities are involved, one authority cannot act in a responsible and effective manner without adequate consultation with other authorities. Frequently more than one authority is responsible for regulating the activities of a particular regulated entity. Through collaboration, the authorities responsible can design a robust and balanced policy that takes into account the values of health, safety, environment, and economy. In the case of enforcement, the most effective mix of instruments that ensures deterrence and stimulates future compliance may be jointly defined and put in place.

Collaboration between authorities may take several forms and vary in levels of intensity. In a study conducted among five countries that participated in the INECE Seaport Network, it was determined that each country approached interagency collaboration in a different way, ranging from an informal mechanism based on personal relationships to a formal mechanism mandated by legislation. Between the two ends of this spectrum, cooperation tools that are used include networks, written interagency agreements, and memoranda of understanding. In any event, the most appropriate path to effective collaboration should be selected to meet the specific characteristics of the authorities involved, so it is important to be open to considering various approaches to institutional interaction (Dill and Kopsick, 2014).

In terms of variations, a rather basic collaboration would see parties simply informing each other about their plans concerning a particular case. A further step would be that authorities mutually discuss, develop, and coordinate plans and approaches for a given case, before final decisions are taken. In specific and difficult situations, in order to optimise the outcomes for the case a joint plan of action could be a goal. A more developed collaboration could see the parties having a regular schedule

of meetings, in which relevant cases with a joint interest are reviewed in order to discuss a shared view and a common approach. Instead of collaboration on an individual case-by-case basis, a more structural and strategic foundation for cooperation could be developed. This could, for example, imply a joint policy and/or common goals with regard to the approach of the waste sector and the issues at hand with that sector. A joint programme of policy implementation could be the outcome of such collaboration.

Apart from governmental parties, non-governmental organisations and business representatives can play a certain role in such collaboration, for example, in view of engaging the general public and the regulatees. Initiatives for waste transport inspection projects from international compliance and enforcement networks, like IMPEL, INECE, and AQUAPOL,[5] can be important triggers for domestic collaboration in participating countries.

An important category of national cooperation is that which occurs among police and/or customs, and environmental authorities at an operational level. This type of coordination can be difficult due to practical problems related to information exchange, sovereignty issues, jurisdiction issues, and complex formal communication structures. However, in cases of cross-border environmental crimes, there is much to be gained from coordination and cooperation among law enforcement authorities and this type of coordination must be encouraged and supported (Spapens, 2011).

More specifically, in connection with the control of the transport of waste, a joint operational programme of authorities may include collaboration with regard to transport inspections. Such inspections could refer to road, rail, air, or water transport modalities. Authorities like police, customs, and environmental agencies, and potentially other authorities,[6] could be involved. Depending on the precise setup, other non-environmental aspects of transport-related risks could be taken into account, such as weight and technical safety of trucks, drinking and driving, drivers' licences, insurance, and taxes.

With regard to the import or export of waste, of course, custom authorities in the ports have an important and unique position and role. Customs is in the forefront of controlling shipments coming into or leaving from a country, but generally are not experts on waste issues. On the other hand, relevant expertise is normally available within the competent environmental authorities. They, however, are frequently not operating within ports on a regular basis. In view of this situation, in several countries a specific collaboration regarding the inspection

Box 9.1 Formal agreements on implementing the EU waste shipment regulation in the Netherlands

In the Netherlands, in connection to the European Waste Shipment Regulation (WSR), inspections of waste transports are a responsibility of the Human Environment and Transport Inspectorate (ILENT). In fulfilling this duty, a structured and formalised cooperation and partnership with customs and police authorities has been put in place. Customs is very active with container inspections in the major European ports of Rotterdam and Amsterdam, through which substantial streams of waste pass. With respect to inspections on the road, on railroads, and on inland waterways, the police are an important partner. Sometimes such inspections are part of a more integrated setup, in which also compliance with other transport related regulations is checked. Apart from the inspection of transport operations, checks at specific premises, more upstream in the waste-chain, are also carried out, apart from thematic inspections.

A substantial part of the WSR inspections is actually executed by the mentioned enforcement partners, particularly customs. The Inspectorate takes a supervising and overall strategic planning role and deals with the more complicated, individual cases. Also a helpdesk function to assist the partners with in-depth expertise and advice is maintained and staffed by the Inspectorate on a 24/7 basis.

The Inspectorate and its partners follow a set of strategic priorities in planning their inspections. These are the result of a risk analysis, which may lead to a focus on specific waste streams (e.g., plastic waste, e-waste) and/or on specific destinations/routes with a high-risk profile. In combination with specific information and intelligence, the risk-based approach leads to selection for inspection of those cases/transports with the highest profiled risk of non-compliance with the regulations. In doing so, the available inspection capacity is used in the most effective and efficient way.

of waste shipment in ports has been put in place. This often implies that customs officials are trained by environmental inspectors to execute basic controls on waste shipments. This helps customs to detect the most common type of offences encountered in (international) waste shipment operations. When there are questions with regard to more complex cases, customs may call on the experts of environmental authorities for assistance and/or for referral of such cases.

Sometimes a formal agreement at an appropriate level in the organisations is put in place to support this type of rather intense form of collaboration. Such agreements can be found, for example, in Belgium and the Netherlands, and are producing good results. The setup in the Netherlands is briefly described in Box 9.1. In Germany, although mostly not on a formal agreement basis, a semi-structural interagency collaboration can be found in the major port hubs of Hamburg and Bremen. These are augmented by inspections along the infrastructure (road, rail, and inland waterways) connecting the hinterland to the ports, and authorities collaborate on both the local and national level. In England, the collaboration of the environmental authorities with customs and police on control of waste exports is rather limited. However, England is unique in its good collaboration with the shipping lines, which has been developed over the last number of years. The situation in Scotland is that the environmental protection agency works with regulatory partner authorities, particularly the police, in fighting waste crimes, with specific attention to waste sites and ports to prevent illegal shipments. These operations may be focused on specific waste streams, where interventions may be targeted at appropriate places, based on the analysis of the material flows across the waste chain.

Regional port-to-port enforcement cooperation

As a preliminary matter, it should be noted that the overriding concern regionally is that hazardous waste traffickers will succeed in off-loading their illegal cargoes by 'port hopping'. That practice was evident in the 2006 Cote d'Ivoire dumping case, where other West African countries were tried first as entry points, but upon rejection at these ports success was achieved at the ultimate port of entry, Abidjan (VOA, 2006). This brings to mind a familiar saying: 'a chain is only as strong as its weakest link'. Likewise, regional enforcement defences at the ports collectively are only as strong as the single port that is least prepared and equipped and has the least information to resist predation.[7]

It is for this reason that intelligence-led enforcement (ILE) is expected to become so critical to regional enforcement success. This technology-assisted law enforcement tool, sometimes referred to as a component of 'Next Generation' enforcement, combines data matching that utilises intelligence analysis software to 'connect the dots' with expert human analysis that suggest interconnections that can link players, wastes, and ports *over time and across jurisdictions*. ILE analysis has the potential to identify not only past violations for prosecution but also provide valuable predictive clues to anticipate and interdict where

future illegal activity is most likely to occur – both at a sending port and at a receiving port.

Of course, for maximum benefit to law enforcement, this process must be fed by accurate information from all the ports across a whole region, and the results of this sophisticated analysis need to be shared with those ports in a timely manner, but preferably on a real-time basis. Good cooperation is a prerequisite for ILE, but in some regions the lines of communications to execute two-way information sharing are not well-established between ports. Progress can be expected to be incremental at best for now. Still, data-informed targeting and risk assessment, combined with regional cooperation, are approaches that the Seaport Network has promoted for more immediate results. As another tool, the Seaport Network has prepared takeback guidance material which is provided to law enforcement organisations to assist ports in coping with the burden of seized illegal hazardous wastes that need to be repatriated. To succeed in minimising the expense and environmental risk associated with the return of the illegally shipped waste, each port in the transaction chain needs to cooperate and communicate effectively with every other port. Financial responsibility, documentation, and other formalities are among the matters to be resolved.

INECE's Seaport Network has placed emphasis on two major approaches: the promotion of intelligence-led enforcement as an effective tool to detect and thwart hazardous waste trafficking, and the provision of guidance on the mechanics of successfully arranging the takeback of hazardous wastes that have been illegally shipped, from the receiving port to the sending port. The Seaport Network has focused its activities in the countries receiving unwanted hazardous waste shipments and since 2009 has made these tools key elements of the trainings it has conducted regionally at workshops held in South Asia (Cambodia, Thailand, and Indonesia) and West Africa (Ghana). During its capacity building programmes, the Seaport Network has also emphasised the hands-on training of inspectors by a visiting expert hazardous waste inspector, using the port facilities and actual containers for instructional purposes, in order to strengthen capacity within the regional framework of ports. We will discuss each of these multinational approaches, and relate them to the activities of the regional enforcement networks operating in North America and Europe.

Along with the port inspection materials that the Seaport Network has prepared and presented, the Seaport Network features in its trainings, whenever feasible, a presentation by an expert port inspector. This facilitator provides hands-on instruction on methods of detection of concealed illegal hazardous wastes and on the subject of the proper safety

measures to be followed at container inspections. The dissemination of the lessons learned from the sharing of this practical knowledge to all the ports in a region helps build the law enforcement capacity needed to detect and deter port hopping and other trafficking methods.

Examples of cooperation

We turn now to the work of two regional enforcement networks, the Enforcement Working Group (EWG) of the North American Commission on Environmental Cooperation (CEC), and the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL), as both are incorporating intelligence-led enforcement into their work. The geopolitical differences of the two continents affect how these and other tools are used. While these two regional networks are explored in this chapter, it is important to note that other regional networks that focus on the issue of controlling transboundary waste movements include the West African Environmental Compliance and Enforcement Network, and the Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Wastes. Similarly, the Regional Enforcement Network for Chemicals and Waste is a project implemented by the United Nations Environment Programme (UNEP) in 25 countries in Northeast Asia, South Asia, and Southeast Asia.

For port inspection purposes, North America and Europe are quite different in some fundamental ways: the number of countries on each continent and number of political jurisdictions, contiguity of countries, length of land borders and volume of waste traffic across them, and number of major ports (both land and sea). Most of the transboundary movement of hazardous waste within North America occurs at land ports, whereas much of the European movement is outbound at seaports like Rotterdam and Antwerp, and in Europe the waste often crosses one or more national borders *en route* to seaports. These factors affect the amount of time for prior warning to be given about illegal cargoes before arrival at port for detection purposes, effective inspection techniques (for shipping containers versus packaging used over land), and the availability of opportunities for face-to-face cooperation between inspection officers in the sending and receiving countries. Despite these differences, however, there are many approaches and challenges in common, and a core of general knowledge can be drawn from the two experiences.

North America

ILE is most useful in the North American hazardous waste market in analysing illegal shipments between any two countries. Since the three countries (Canada, Mexico, and the United States) are not mutually

contiguous, the commerce is bilateral only, and thus tracking a shipment typically does not concern all three. This is different from traffic to or from a port that may transit a number of countries within a region and require greater interjurisdictional coordination. Success in using ILE within North America to stop or apprehend violators involved in a specific transboundary shipment would therefore generally involve cooperation between two countries at their corresponding ports. The EWG recognises that some of the same illegal operators are active in all three countries, common problems do exist, and a concerted North American approach is beneficial.

An example of hazardous waste of mutual concern in North America is the transboundary movement of spent lead acid batteries (SLABs). The CEC conducted a comprehensive study of transboundary SLAB movements and in 2013 issued its report *Hazardous Trade? An Examination of US-generated Spent Lead-acid Battery Exports and Secondary Lead Recycling in Canada, Mexico, and the US* (CEC, 2013). The report recommended, *inter alia*, that the three countries should cooperate 'to allow the regulated community to submit export requests electronically', and that they should cooperate, through the CEC or otherwise, to ensure 'enhanced cooperation and encouragement of cross-border support and intelligence-sharing on any illegal or unsanctioned traffic in SLABs across North American borders'.

In response, the EWG has made enforcement cooperation on SLABs one of its enforcement priorities. Individual countries have also cooperated, using ILE and other means, to interdict illegal SLAB shipments at ports.

Europe

IMPEL, and more particularly the Transfrontier Shipment of Waste cluster within IMPEL (IMPEL-TFS), has long sought to encourage port-to-port enforcement cooperation in the EU. Examples of approaches taken include coordinated inspections of waste shipments to reveal problematic routes, streams, and destinations, exchanges of front-line inspectors during inspection periods in order to strengthen capacity at ports, and the re-drafting of the existing IMPEL-TFS Manual addressing 'the return of illegal shipments of waste'. The increased knowledge gained by the inspectors from the receiving ports during these inspector exchanges is difficult to credit directly to a particular interdiction at a particular port, or to a particular instance of port-to-port cooperation, but it pays lasting dividends that demonstrably improve law enforcement operations.

An example showing that regional cooperation delivers results is presented in a case in which three containers with commingled waste

were illegally sent from a port in Wales, United Kingdom, to a recycling company in the Netherlands. Upon detection of the shipment, which was not in agreement with the European Waste Shipment Regulation, the authorities in the two countries exchanged information and collaborated to have the waste sent back to where it came from. The exporter was ultimately prosecuted, found guilty, and fined £6,000. The same exporter was also found guilty for an illegal shipment of 11 containers of commingled waste to Indonesia and was fined £5,000 for that offence.[8]

International port-to-port enforcement cooperation

At the international level, collaboration between and among ports of export and import is a critical and, at times, undervalued step in controlling illegal transboundary shipments of waste. The Seaport Network has observed numerous benefits of international cooperation including: (1) strengthened trust among peers, (2) enabled exchange of (general) information about shipments, and (3) communication and transference of best practices.

An initial activity of the Seaport Network, during its inception phase in 2008, involved conducting a needs assessment among participants that identified four areas needing improvement in relation to environmental security at seaports: communication, collaboration, capacity building, and port inspections. Next, the Seaport Network surveyed port officials in two regions which have historically been the recipients of unwanted hazardous waste shipments – West Africa and South Asia – to identify the specific needs of these areas. Respondents from both of these regions overwhelmingly agreed that intra- and international communications needed to be established to facilitate the exchange of data and to achieve more effective collaboration (Kopsick, 2011).

Based on the input from its members, the Seaport Network has made international collaboration the foundation for much of its work, including the Seaport Network's simultaneous inspection projects, inspector exchange programmes, and international capacity-building workshops. Facilitating introductions among peer-enforcement officials internationally creates opportunities to build trust and open lines of communication between authorities at importing and exporting ports. A pre-established relationship can help peer officials feel comfortable undertaking informal communications about topics including potential illegal shipments, waste takeback, observed trends in illegal shipments, *modus operandi* of illegal actors, and other relevant information.

International cooperation can also help support the communication and transference of best practices. Examples of practices promoted by the Seaport Network include intelligence-led (or risk-based) enforcement, with an emphasis on coordination between customs, environmental agencies, police, and others with relevant responsibilities at the port, increasing focus on and capacity for controlling shipments of hazardous waste at ports and good safety practices. In implementing its work programme, the Seaport Network partners with other organisations with similar interests, including the Secretariat of the Basel Convention, IMPEL, the Environmental Network for Optimizing Regulatory Compliance on Illegal Traffic (ENFORCE), the UNEP, INTERPOL's Environmental Crime Programme, the United Nations Office of Drugs and Crime, and the World Customs Organization (WCO).

The two global operations that focused on hazardous waste shipments through seaports are examples of the type of international cooperation facilitated by the Seaport Network. These activities, usually referred to as 'inspection projects', were international exercises designed to strengthen capacity for performing inspections of transboundary movements of hazardous and electronic waste. The primary goal of these projects was to facilitate collaboration between enforcement officers within countries and between enforcement officers of the exporting and importing countries. The operations also sought to promote international best practices for environmental inspections at seaports, to promote the use of intelligence-led enforcement, to identify obstacles to effective enforcement and the capacity-building needs of enforcement officers from both customs and environmental agencies, and to raise awareness across the regulated community.

The first INECE Seaport Network International Hazardous Waste Inspection Project at Seaports took place from May through July 2010. During the simultaneous inspections period, environmental, customs, and other authorities from Africa, the Americas, Asia, and Europe undertook coordinated environmental inspections at seaports. This first inspection project provided a means for competent authorities to better evaluate their own capacity for detecting and deterring illegal transboundary movements of hazardous wastes through seaports with the support of tools developed by INECE and international experts. The project was beneficial to participants in identifying gaps in inspection and enforcement programmes. The outcomes provide insight into the type of waste, *modus operandi*, and routes that are being used and confirm that cooperation among authorities at the international, regional, and domestic levels is essential to an effective enforcement strategy.

A key recommendation from the first inspection project was that the Seaport Network continues to facilitate future inspection projects and the second project was organised in response to this recommendation.

The Seaport Network facilitated the Second International Hazardous Waste Inspection Project at Seaports from December 2011 through April 2012. The primary goal of the Second Inspection Project was to build enhanced capacity at seaports for more effective inspections of waste shipments through improved multidisciplinary cooperation among officials from environment and customs ministries, police, and port authorities. Specifically, the objectives of the project were to promote international good practice for environmental inspections at seaports, facilitate enforcement collaboration among responsible officials within countries (e.g., between environmental and customs officers), facilitate enforcement collaboration between exporting country enforcement officers and importing country enforcement officers, and identify the obstacles to effective enforcement and the capacity-building needs of enforcement officers. The Second Inspection Project resulted in an improved understanding of needs and constraints of responsible officials as well as a more informed picture of how illegal waste shipments occur. Most participating countries also reported that the project enhanced cooperation between environmental and customs officials, with national-level cooperation reported in 95 per cent of inspections.

Inspector exchanges can also help transfer good practices and facilitate information sharing internationally. During an inspector exchange, an inspection expert from a more experienced country joins in and advises on actual inspections in a less experienced country and/or vice-versa. In addition to providing guidance to less experienced countries, such programmes also offer an opportunity to learn about the scope and limits of inspection practices and to share common challenges and responses. The Seaport Network has facilitated exchanges including Dutch and Belgian environmental authorities providing expertise to Ghanian and Nigerian inspectors visiting the Netherlands, Belgium, and Germany to observe inspections methods.

Conclusion

While port-to-port collaboration continues to be a challenge, improved cooperation at the national, regional, and international levels offers substantial rewards in terms of more effective control of illegal shipments of hazardous and electronic waste. The work of INECE and other

organisations has demonstrated a continuing need for facilitation of 'the three Cs' – capacity, communication, and cooperation.

Over the past decade, there have been numerous inspection events coordinated by various organisations, each focusing on specific aspects of the inspection process. In Europe, for example, IMPEL has looked at the verification of waste destinations, end-of-life vehicles, enforcement actions, and transboundary shipment of hazardous waste. Two of the eight IMPEL events reviewed relate specifically to operations at seaports. The WCO, during three separate events, encouraged customs officials to evaluate shipments containing ozone-depleting substances and specific types of hazardous wastes. INTERPOL organised Operation Enigma to target illegal trade in electronic waste.

In reviewing the results of the main seaport inspection events, common issues were identified including: (1) lack of capacity and/or knowledge and experience, (2) lack of information exchange and coordination on the national and international level, and (3) lack of structural or formal cooperation with customs and the need for increased coordination between agencies involved (INECE, 2012).

These issues correspond closely to those identified during the Second INECE Seaport Inspection event, and confirm a continued need to address these concerns. The observed similarity in the challenges identified by these projects underscores the relevance of taking practical actions to build capacity to respond to these three key issues, in collaboration with national authorities and international organisations.

Meeting the challenges of port-to-port cooperation will require coordinated interdisciplinary expertise, tools, training, and resources. The activities include promoting cooperation among customs, environmental ministries, and other law enforcement agencies to make environmental enforcement at ports more effective; acknowledging the importance of inspection projects preceded by adequate training, in order to build capacity; and use of certain key tools, such as the advanced targeting model of intelligence-led enforcement and guidance on practical topics such as takeback of waste.

Notes

1 The views expressed herein are those of the authors and do not represent the views of the Netherlands Human Environment and Transport Inspectorate (ILENT), United States Environment Protection Agency, or International Network for Environmental Compliance and Enforcement (INECE).

2 For more information on the Seaport Network, see http://inece.org/topics/seaports/

3 INECE developed a compendium of tools and publications on seaport environmental security, which is available online at http://inece.org/resource/capacity-building-resources-for-controlling-hazardous-waste-shipments/ (accessed 25 January 2015).
4 This term refers to when small quantities of similar waste are put together in order to create a bigger stream ('bulk'), which can be managed more economically.
5 AQUAPOL is a European network for cross-border cooperation in the area of law-enforcement in the waterborne transport domain. It is a joint venture of fluvial, inland waterway, port, and maritime police agencies and institutions.
6 Other authorities might include police, port authorities, coast guard, and departments of health.
7 See also Akella and Cannon (2004).
8 For more information on these matters, see LetsRecycle.com, *Site Serv Ltd Fined over Illegal 'Commingled' Waste Export* (12 November 2014), available at http://www.letsrecycle.com/news/latest-news/site-serv-ltd-fined-illegal-commingled-waste-export/

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Part IV

The Role of Research in Collaboration

10

Coordinating Research Efforts on Environmental Crime

Vittoria Luda di Cortemiglia, Juha Hintsa, Elise Vermeersch, and *Sangeeta Mohanty*

In a period of extreme urbanisation, overconsumption, and extensive production of waste and pollution, the environment is under greater pressure than ever before. The adverse effects of this go well beyond strictly environmental impacts, by seriously undermining economies and livelihoods, good governance, and the rule of law. Having reached significant global proportions, environmental crimes have increasingly attracted the attention of the international community.

Environmental crimes, understood as illegal acts directly harming the environment, are often cross-border crimes, entailing illegal activities that may be transnational in nature. These crimes transcend the normal boundaries of jurisdiction, geography, and social norms. An environmental crime is an evolving, dynamic phenomenon, not only harming the environment and human health, but also impacting the economy and the quality of life. This crime type can take many different forms, such as wildlife crime that consists of the illegal exploitation of the world's wild flora and fauna; natural resource crime that consists of the illicit extraction and trade of natural resources such as timber, fish, and minerals; and pollution crime that consists of the trading and disposal of wastes in general, as well as of resources, in contravention of national and international laws (INTERPOL, n.d.).[1] These crimes can have negative impacts at the local, national, and regional levels. Over the past decades, new threats have emerged, such as the illegal trade of toxic and hazardous waste and of ozone-depleting substances (ODS). The relevance of environmental crimes are often underestimated, both at the legal and societal level, commonly failing to prompt the required response from governments and the enforcement community. This is because they are frequently perceived as 'victimless' crimes and are thus low on the priority list. As a consequence, low levels of awareness and

knowledge of these phenomena, and poor data collection and analysis of these acts, are persistent in many countries and around the world.

By their nature, environmental crimes and their impacts are difficult to detect, quantify, and counteract. Studying environmental crime therefore requires that a full appreciation of the complexities of these phenomena is reflected in the overall research approach. Such an approach has been used in other similar fields in relation to projects carried out by the United Nations Interregional Crime and Justice Research Institute (UNICRI)[2] and the Cross-Border Research Association (CBRA).[3] For example, in order to effectively study these complex transnational issues a multidisciplinary perspective is required, as in the case of the ePoolice[4] and FOCUS[5] projects. This necessarily involves a variety of stakeholders and sources (e.g., police, customs, environmental inspection agencies, environmental associations, private sector) working in different sectors and at different levels (local, national, regional, international). Effective coordination between the multiple stakeholders has been a critical element for the success of such collaborations.

This chapter focuses on the importance of coordinating research efforts in the field of environmental crime by demonstrating the benefits and challenges of a coordinated approach through concrete examples. The European-funded research project, Countering WEEE Illegal Trade (CWIT), on the illegal trade of waste electrical and electronic equipment (or WEEE)[6] provides the basis for the case study. After providing a brief overview of some theoretical concepts pertaining to collaboration and coordination, illustrative examples of the intense planning and coordinating efforts in the CWIT project will be discussed in greater detail.

Background

Coordination and research: frameworks, theories, definitions

Based upon Winer and Ray's analysis, 'collaboration' can be summarised as a 'durable and pervasive relationship where participants bring separate organizations into a new structure with full commitment to a common mission. These require comprehensive planning and well-defined communication channels at all levels' (Winer and Ray, 1994: 1). Others succinctly describe it as 'a joint effort of multiple individuals or work groups to accomplish a task or project' (Techtarget, n.d.).[7] In academic work, collaboration has long since been an integral part of research but its nature appears to be evolving from cooperation within departments, disciplines, and institutions to partnerships embracing a wide gamut of actors across departments, disciplines, and institutions extending to

other academic, government, and private industrial sectors (Northern Illinois University, n.d.).[8]

A closely analogous yet slightly different concept – 'coordination' – has been defined as 'the synchronization and integration of activities, responsibilities, and command and control structures to ensure that the resources of an organization are used most efficiently in pursuit of the specified objectives' (Business Dictionary, n.d.). Coordination Theory, as developed from a multidisciplinary perspective by Malone and Crowston, encapsulates 'a body of principles about how activities can be coordinated, that is, about how actors can work together harmoniously' (Malone and Crowston, 1990: 2). A similar notion is captured by a definition of coordination that suggests it as 'bringing the different elements of a complex activity into a harmonious or efficient relationship or in negotiating with others in order to work together effectively' (Oxford Dictionary, 2014).

Thus, coordination can be viewed as a process of effectively organising the activities of different actors to work in close alignment. It is a means to an end, a precondition of collaboration for research and other activities. An essential ingredient to nurture a perfectly symbiotic relationship and leverage natural synergies, coordination becomes the bedrock of all collaborative efforts.

In order to foster harmonious interaction amongst actors one needs to carefully consider how overall objectives might be sub-divided into actions. Specifically, one needs to consider how these actions might be assigned to the participating actors, how resources can be optimally allocated among different actors, and how the mutual exchange of information can be promoted to help achieve the common goals (Malone and Crowston, 1990: 2).[9] To address these challenges, coordination necessitates a three-step approach:

Step 1. Adjustment and standardisation

Implementation of the work basis organisation. As collective work involves different actors, various mindsets, workflows, and so on, the very first step of coordination consists of managing all these interactions in order to create an organised collective action and to define the conditions of cooperation between these actors.

Step 2. Partition of tasks

Formalising the relationship between actors. This is achieved by dividing the tasks and organising their temporal ordering and sequencing and through synchronisation.

Step 3. Implementation

Coordinating the work. Implementation requires that each actor maintains some independence and that the working relationships between actors are realised through the development of a network. This working network is the final form of coordination and allows for general communication, the exchange of information, negotiations, the development of reciprocities and thus, collaboration.

The CWIT project operates along these lines as a multifaceted coordination framework in collaborative research. The specific coordination patterns in this research project are outlined in the sections that follow.

WEEE crime within environmental crime and within waste crime: highlighting complexities

Among environmental crimes, trafficking and the illegal dumping of waste have become a significant source of concern. Waste crime creates health risks for the public and can have a serious impact on the environment; the motive is largely economic because it offers high rewards and relatively low risk of substantial penalty. The fact that only around three million tons of the estimated total of eight million tons of WEEE were officially collected, treated, and reported to authorities across Europe in 2010 is of major concern among the various WEEE stakeholders (WEEE Forum, 2013).

Compared to traditional waste, the illicit trade, logistics, and treatment of electrical and electronic waste is a particularly complex issue. For example, this type of waste has some distinctive features that add another level of complication across the entire management chain. These characteristics include a high heterogeneity of EEE (electrical and electronic waste) /WEEE in terms of size and weight, features, and material composition and a constant evolution and production of new types of EEE/WEEE. WEEE is also the fastest growing waste stream in the EU and is expected to reach 12 million tons a year by 2020 (European Commission, 2010).

The WEEE identified in illicit cross-border movements most likely covers the entire spectrum of such waste and is not limited to those items having the highest potential resale or reuse value. Moreover, some constituent elements are highly dangerous (since they contain mercury and other heavy metals), which without a proper recycling and treatment process, can cause irreparable damage to the natural environment and human health. On the other hand, some WEEE contains metals such as gold, copper, platinum, and indium that are of interest to black market actors and criminal organisations. It is also the case that WEEE is illegally

exported outside of the EU because it can be dismantled and treated overseas where environmental standards are lower, making the process cheaper but far more damaging to human health and the environment than would be the case by legitimate treatment. It is also important to note that some cases reveal that criminal groups trafficking WEEE are involved in other crimes such as trafficking in persons, drugs, and firearms, as well as theft, fraud, and money laundering (ESAET, 2014).

The difficulties associated with properly managing waste production are intensified by the regulatory framework within the EU. The framework does not provide a uniform definition and leaves the limits and thresholds between the legal and the illegal blurred. This situation can provide additional opportunities for illegal practices to enter the market.

Additionally, the WEEE management sector involves a number of public and private entities at different levels having potentially conflicting interests, roles, and responsibilities. Given the possible risks and impacts resulting from the illegal trade of waste, both on environmental and human health, the proper management of the entire WEEE chain cannot be relegated as an industry problem alone, but requires a broader engagement across sectors (Hintsa and Wieting, 2014), entailing cooperation between law enforcement, environmental agencies, regulatory bodies, and compliance schemes, as well as the private sector. Also, the cooperation should not be limited to a domestic territory since environmental crimes in general, and illegal trade of waste in particular, are transnational by nature.

For the above reasons, the illegal handling and cross-border movement of WEEE is proving to be one of the most complex crime types facing law enforcement and regulatory bodies (Hintsa and Wieting, 2014). Responses therefore must involve a wide range of collaborations across many different actors and domains in order to counter this threat.

As the social, economic, and political dynamics in which this crime occurs are constantly developing, we need to engage with more advanced and more flexible methodological approaches to improve our understanding of environmental crime. Research on this topic calls for design and implementation of a well-coordinated, multiparty research effort, in order to gain an in-depth understanding of the dynamics of the phenomenon.

Coordinating research in the CWIT project: a case study

The CWIT project is a practical, positive example of coordination in research efforts with respect to the WEEE illegal trade. The project scope, objectives, and research partners are considered in turn.

CWIT is a two-year project, funded by the European Community's 7th Framework Programme (FP7/2007–2013).[10] The project which commenced in September 2013 and is scheduled to conclude in August 2015 is focused on identifying and tackling the challenges posed by the illicit trade of WEEE.

The overall aim of the project is to provide a set of recommendations to support the European Commission, law enforcement authorities, and industry practitioners in countering the illegal trade of WEEE in and from Europe. In practical terms, the project has been established to identify the policy, regulatory, procedural, and technical gaps as observed in today's business environment and to suggest tangible improvements for the present situation.

The CWIT project is carried out by a consortium of seven partners. It is led by INTERPOL and with its partners brings together a group of experts having extensive knowledge and technical capabilities in the fields of WEEE, crime analysis, and the management of databases of regulatory information. The partners have been selected on the basis of their complementary skills and experiences and to create a balance necessary to fulfil the objectives of the project. Table 10.1 provides an overview of the partners by name and the category or sector they represent.

The objectives of the project are quite ambitious. One of the first aims of the project has been to map out and provide an overview of the European WEEE industries and the relevant actors and parties in these industries, with a particular focus on the end users involved in the fight against the illegal trade of WEEE. In addition to the mapping of all the

Table 10.1 CWIT research partners – Internal documentation

Law enforcement/ police authorities	**Crime and justice research**	**Product compliance platforms**
International Criminal Police Organisation (INTERPOL)	*United Nations Interregional Crime and Justice Research Institute (UNICRI)*	*Compliance and Risks (C&R)*
	Research and consulting	
WEEE collection and legal compliance	*United Nations University (UNU)*	**Security and intelligence research and advisory**
Waste of Electrical and Electronic Equipment Forum (WEEE Forum)	**Supply chain security and trade facilitation research**	*Zanasi & Partners (Z&P)*
	Cross-Border Research Association (CBRA)	

relevant stakeholders, partners will also produce an analysis of the distribution of WEEE. In parallel, the CWIT project also aims at producing a global overview of the current legislation and policies in place at the international, European, and national levels in the 28 EU countries.

In addition, the CWIT project, through intensive data collection, information gathering, and an intelligence-based approach, is conducting a comprehensive study of the involvement of organised crime groups in the global distribution of waste. The intention is to identify the specific criminal activities associated with illegal WEEE shipments, by also providing an estimation of the volume of WEEE that is generated and illegally traded.

Finally, CWIT aims to build an up-to-date and accurate picture of the market, including the operators and the industry that is built around the trade of WEEE, to estimate the volume of WEEE generated, and to produce a conceptual model of the WEEE stream.

Coordinating research efforts in different areas of study (work packages)

As the objectives of the project are quite ambitious, aiming at collecting and analysing a wide range of information from a variety of different sources/stakeholders in different sectors and countries over a short period of time, quite an intensive coordination effort has taken place. The work breakdown structure of CWIT is divided into work packages, with each one being split into key deliverables. Hereunder, we will provide an overview of the coordination of research efforts in the different fields covered by the study.

Mapping WEEE actors, literature, and amounts (WP2)

It was essential to identify the relevant stakeholders for the project in order to find qualified sources of information and to rely on a network providing feedback and information to achieve the project objectives, while making sure that the results and knowledge gained do not remain unused. That is why one of the first steps of the CWIT project has been the mapping of relevant stakeholders and end users involved in the collection, transport, storage, treatment, and trading of WEEE and in the response to the illicit trade of waste. In order to achieve this aim, the partner in charge of coordinating this task called all other partners of the consortium to take advantage of their networks and contact all interested actors and entities requesting their participation in the project. For this purpose, a registration form presented as a short questionnaire was prepared and made available on the project website,[11] in different

languages (English, Hungarian, Czech, French, Spanish, and Italian), to enhance participation. The mapping results are included in an online database including WEEE manufacturing and waste management industry, policy makers, and regulatory bodies (in particular, environmental ministries and environmental protection agencies), enforcement agencies (police agencies, customs administrations, and environmental inspections bodies), and standardisation bodies, as well as representatives of academia, non-governmental organisations (NGOs), and the media. To date more than 350 actors have registered in the project website. Such a large number of stakeholders working in various fields could not have been reached without a multidisciplinary consortium. As an example, in order to identify some of the logistics companies involved in the transport of WEEE, 'compliance schemes' – members of the WEEE Forum – have been requested to circulate the registration form to their suppliers among whom are included logistic companies.

In parallel, to produce a comprehensive overview of the illicit trade in WEEE, an inventory of WEEE-related research has been developed, including the existing initiatives relating to organised crime. To ensure proper and efficient coordination, partners met to discuss and agree on the modalities of the research. The research activity itself required an intensive and coordinated desk top research effort. Besides the project and studies in which partners had been involved over the past five years, the partners have used open source databases and their own networks' databases, in particular the Solving the E-waste Problem (StEP initiative) of the United Nations University (UNU).[12] In order to synchronise the work and limit overlapping of references, the identified documents were organised in an online database by a CWIT partner. It allows the project to research documents by geographical region, title, and type of document (i.e., projects, initiatives, and other publications) and by organisation or body responsible for the document. In addition, each resource contains a summary, providing users with a brief overview of its relevance to their particular interest. During the first 12 months of the project, the partners managed to collect and catalogue nearly 300 studies, projects, initiatives, and other publications relevant to the project.

Mapping legal frameworks and policies (WP3)

The formulation of grounded recommendations to support the adoption of more robust policies requires a careful assessment of the existing legal framework to identify possible gaps and inconsistencies. In this view, the CWIT project partners coordinated their research efforts and undertook an in-depth review and analysis of those policies and

legislation in place at the European and international levels having an impact on the fight against the illegal trade in WEEE. To perform this task, partners developed and distributed two legal and policy questionnaires, one intended for the EU and one for the selected countries at the international level. The development of the questionnaires proved to be a complex exercise requiring the extensive involvement of the partners, with numerous discussions and effective coordination to achieve a comprehensive approach for the selection of the optimal questions, structure, and format; the stakeholder types; and the list of target countries outside Europe. Partners having an expertise in the development of questionnaires prepared a first draft and then circulated this to the consortium for their input. Question formulation and presentation were standardised in order to facilitate the filling-in and the future analyse of responses.

The questionnaires were divided into a number of sections addressing specific issues. The questions were intended to gain information on the general legal framework on EEE and e-waste (section A), specific legal frameworks impacting the illegal trade of E-waste (section B), the potential court decisions on illegal trade of e-waste (section C), the modalities used in the illegal trade of e-waste (section D), and the best practices followed by stakeholders combating the illegal trade in WEEE (section E). A final section provided an opportunity for stakeholders to comment on any further aspects were not covered by the previous questions (section F).

The research partners agreed that different sets of questions would be posed to different categories of respondents, based upon the typology of stakeholders to be involved, to avoid duplication of effort, while allowing the collection of accurate information and improving the response

Table 10.2 Target stakeholders for the CWIT questionnaire – Internal documentation

	Questionnaire section					
Stakeholder	**A**	**B**	**C**	**D**	**E**	**F**
Ministry of Environment	✓				✓	✓
Regional authority	✓				✓	✓
Ministry of Justice		✓	✓		✓	✓
Enforcement agencies (police, environment, financial, Customs)				✓	✓	✓
Prosecution authorities		✓	✓	✓	✓	✓
Other	✓				✓	✓

rate. As an example, the following table contains the assignment of sections to the stakeholder groups.

Partners agreed to limit the distribution of the international questionnaire to selected countries outside Europe. Countries were selected based on the dynamics of the WEEE industry in terms of geographical significance, maturity of the WEEE industry within the country, legislative and policy developments, known severity of the phenomenon of illicit trade, and logistics and treatment of EEE.

Before distributing to stakeholders, partners decided to test the questionnaires with a pilot group composed of experts belonging to the CWIT consortium members' network and members of the High-Level Advisory Board (HLAB). Their feedback was a unique opportunity to refine the questionnaire in terms of comprehensiveness, relevance, formulation, and structure of the questions.

Finally, the legal and policy questionnaires were distributed by project partners to stakeholders across the world and by the HLAB members through their networks.

Market assessment (WP4)

The creation of an up-to-date and accurate picture of the existing market started with a mapping of actors involved in the WEEE value chain. The intrinsic complexity of WEEE management poses unique challenges, compared to traditional waste streams. Therefore, implementing a coordinated and collaborative approach among partners with different and complementary expertise[13] proved to be a necessity to effectively carry out this task. The partners identified the main drivers behind the movement of goods and waste fractions along the recycling chain and mapping of the main attributes relevant to the description of those flows.

The exercise resulted in a comprehensive mapping of actors involved in the WEEE recycling chain, including their roles and responsibilities. It also involved development of a typology of the export flows with a classification of product according to their physical (products, components, and fractions) and legal (waste and non-waste) status. It was also an occasion to identify the main actors tracked by official bodies and to highlight the main challenges and bottlenecks hindering a comprehensive availability of data for stakeholders.

The mapping created a common framework for the analysis of market dynamics, crime elements, and future recommendations. The resulting market assessment described the resulting gap analysis on missing quantities which was the starting point for the crime analysis.

Crime analysis (WP5)

An intensive collaborative research effort has also been undertaken by the crime analysis component of the CWIT project. As mentioned earlier, one of the main objectives of the project is to study the involvement of organised crime groups in the global distribution of WEEE, to identify the specific criminal activities associated with illegal WEEE shipments, and to provide an estimation of the volume of WEEE that is generated and illegally traded. Given the limited available information and the logistical difficulties in studying such a 'grey zone', this crime analysis was a particularly complex task that the consortium has completed, thanks to a highly collaborative work environment and a great coordinating approach.

An information collection plan was agreed on by the partners in order to define the scope of the study and to identify the best approach and methodology to perform this assignment. The following elements have been considered essential to analyse the criminal activity occurring in the context of WEEE:

- Who are the actors involved in the illegal WEEE trade?
- What are the modi operandi of the illegal WEEE trade?
- What activities are considered violations?
- What is the organisational structure and nature of the activities undertaken in this context?
- Is organised crime involved to any extent?

To maximise information gathering, partners agreed to collect data through different sources: academic research, ad hoc questionnaires, expert interviews, and exploitation of existing law enforcement data held by the INTERPOL General Secretariat.

Academic publications previously identified for their heightened visibility, quality, and credibility were used as a basis to get a first picture of the illicit phenomenon. In parallel, open source research was also conducted to identify relevant case studies involving the illegal trade of WEEE that had been reported by the media. A research protocol and a case study analysis protocol have been established by INTERPOL and the research team of CBRA in order to harmonise collection and analysis of detailed data on illicit WEEE cases across the globe.[14]

In addition, based on the standardised legal and policy questionnaires, two different questionnaires have been developed by INTERPOL, in cooperation with UNICRI, and reviewed by the consortium to capture

information on criminality linked to the illegal trade in WEEE. The questionnaires were tested with representatives of law enforcement agencies and were distributed among 91 countries through INTERPOL's network of national central bureaus (NCBs). NCBs distributed them to the relevant national agencies, including police, Customs, environmental inspectorates, and ministries of environment in its jurisdictions. The World Customs Organization was also engaged in the project and encouraged its member states to supply information to our collection efforts.

The first questionnaire was designed to capture information on specific case studies of criminality related to WEEE and requested law enforcement data related to the actors, modus operandi, commodities, violations, enforcement response, and dual criminality of previous cases or detections of illegal WEEE trade. The questionnaire was restricted to the law enforcement sector, one reason being that nominal data was requested on identified offenders of each case. The second questionnaire was designed to seek information on court decisions on illegal trade in waste and WEEE in countries beyond individual case studies, penalties applied to these court decisions, modes of transport used for waste movements, criteria for distinguishing between EEE and WEEE, total volumes of legally and illegally imported and exported waste, common modi operandi for how WEEE enter or exit their country, the category of actor (non-nominal) involved in the illegal WEEE trade, and best practice in terms of detection and enforcement in their countries.

In order to complete the information obtained through the academic publications, questionnaires, and the case studies, experts in the field of enforcement or industry were identified and interviewed by the project partners according to their expertise. The experts were individuals who dealt with the suppression, detection, or investigation of illegal trade in WEEE within their respective national agencies. Specifically, they were asked to describe general trends in WEEE trade and prosecution that they had observed, as well as to elaborate on specific cases they were directly involved in.

The overall information collected would be collectively analysed by the partners involved in the crime analysis, based on the research protocol and the case study analysis protocol previously established.

Coordinating research efforts across different study areas (work packages)

An integral part of the CWIT project has been the coordination between the different areas of study divided in work packages. The overall success

of the project hinges on proper structuring of work packages and the linkages between them, where output from one provides input to the other. The coordination activity between the subsets of the project is reflected in this close alignment between the seven work packages and their respective research outputs (deliverables). The CWIT project is replete with examples of interconnectedness, some of which have been illustrated below. The samples provided cover a few deliverables within work packages 2, 3, 4, 5, and 7, including those that have been completed, are still in progress, or have not yet officially commenced.

Work package 2 (Mapping Actors, Literature, and Amounts) is directly related to all the other work packages. As mentioned, the key objective is the mapping of the European WEEE industries and other relevant actors and parties. In addition, it provides an analysis of the distribution of WEEE at the European level and identifies existing initiatives, projects, and studies within the context of WEEE. This work package lays the groundwork, where the key facts, figures, and other information gathered, serve as inputs for other work packages. The following lines elicit a few illustrative examples. For instance, the mapping of WEEE actors provided the contact details for work package 3 and work package 5 questionnaires. The intent of these questionnaires was to determine the most relevant stakeholders who could provide key information for the project. The WEEE Database and Classification Listing describing the process of data collection on EEE and WEEE provided input for the qualitative assessment performed in work package 4 (Market Assessment). The Inventory of WEEERelated Research concerning the identification of existing initiatives, studies, and projects acts as a knowledge resource to be consulted for all the other work packages. It is a live document that will be continuously updated throughout the entire duration of the project. The creation of this repository is crucial for understanding the evolution of existing initiatives and in identifying which countries, regions, and actors are actively engaged in interregional efforts to combat the illicit activities concerning WEEE. The deliverable lays the basis for studying how actors in the WEEE chain are affected by international and EU policies that provide vital inputs for work packages 3, 4, 5, and 6. To facilitate consultation by partners researching the different study areas, each individual resource in the inventory was ranked in terms of relevance for each work package. The recommendations to be developed in work package 6 and the dissemination materials to be produced in work package 7 will be communicated to the various WEEE actors. The work package 2 database will provide the necessary contact details for this communication activity.

The Mapping of Legal Frameworks and Policies (work package 3) links with work packages 2, 4, 5, and 6. It aims to provide an overview of the current regulatory and policy frameworks impacting the fight against the illegal trade in WEEE at the EU and international levels. To achieve this end, two legal and policy questionnaires were composed, one for the EU member states and the other for a select group of countries outside Europe. The Legal and Policy Questionnaire was constructed in conjunction with those compiled for work packages 2, 4, and 5, each one targeting a specific group of stakeholders. The partners involved in these work packages worked in close coordination to ensure that stakeholders receive only the most relevant questionnaire targeting their area of expertise and to avoid cross-contacting the same persons or institutions multiple times. The synthesis of responses for both the EU and international questionnaires came under the deliverable Synthesis of Questionnaire Responses. The mapping of WEEE actors provided a useful network of stakeholders for obtaining critical information. The information gathered from earlier deliverables will feed into work package 5, which is responsible for content on crime analysis. Work package 3 is also a valuable resource for developing the policy recommendations to be delivered in work package 6.1 (Recommendations for EU Legal Framework).

The Market Assessment (work package 4) feeds directly into work package 5 and 6. It aims to provide a description of the qualitative and the quantitative functioning of the WEEE market, with specific focus on export flows. The main objective is to develop an actual and accurate picture of the WEEE operators as well as to present key facts and figures on the WEEE flows. All relevant information gathered in work package 2 provided the basis for producing the typology of export flows and of the actors involved, presented in the deliverable Typology of Companies Involved in the Export Market. The data provided in this deliverable will support the deliverable WEEE Generated Estimations and will lead to the creation of a conceptual model of the WEEE stream involving all WEEE operators. The description of trade mechanisms in work package 4.1 has been investigated in more detail in work package 5. A further deliverable will also enable the project partners to produce meaningful policy recommendations in work package 6.

And finally, the crime analysis (work package 5) integrates with work packages 3, 4, and 6. A crime typology was outlined in the deliverable Definitions of Organised Crime Applied to WEEE that provides clear definitions and a classification of the different actors and activities. It has received input from other deliverables associated with the development and synthesis of the legal and policy questionnaires. Work package

5 is also heavily reliant on the future outcomes of later deliverables, which will produce estimates of total WEEE generated in the EU and will develop a conceptual model. The output from work package 5 will provide valuable information for the development of recommendations for the EU legal framework, the law enforcement agencies, and the waste management industry – the key outcomes of work package 6.

Conclusion

Effectively putting into practice a well-structured coordination of research efforts in the field of a complex issue such as environmental crime presents a number of challenges. However, what appears as a challenge in the first place can become a unique opportunity to strengthen partnerships, thereby improving data collection and analysis and the dissemination of research results.

The major challenge stemming from collaborative work in research is the necessity to combine diverse backgrounds and methodologies and different expectations.

Coordination of research taking place at different levels and also in different countries is possible, but requires a clear leadership by the coordinator acting as a moderator of the different and sometimes competing interests and expectations. The coordinator needs to build a consensus among involved stakeholders and mitigate possible areas of conflict between participants, as a fundamental condition for a harmonious and productive collaboration between the parties involved. This requires a participatory approach, where everybody is actively engaged and takes part in the implementation of the research.

Challenges posed by coordination efforts can be addressed through a clear and shared division of research tasks according to each one's expertise and capacities. Such clear division, fundamental to achieve the objectives, needs to be established from the beginning. The coordinator, together with the research team, should identify and agree upon concrete steps for data collection, data validation, and analysis. A participatory approach allows a deeper understanding of the advantages and the impact on each specific sector. The first step towards a coordinated research effort is to strengthen the partnership by building trust among the partners.

Building a partnership comprising various backgrounds and expertise can complicate the coordination in the first place but it is necessary to carry out strong initial research, taking into consideration all aspects and factors that influence the sector or phenomenon analysed. Indeed, creating a multidisciplinary partnership allows the combination of the

theoretical and practical parts of the research, which means collecting the practitioners' experience along with the theoretical analysis by academics and researchers, validating research questions and hypothesis. A strong research partnership must represent the 'on the ground reality'. The multidisciplinary partnership also makes it possible to balance the research results, thanks to the reviewing by each partner, according to their own knowledge and specializations.

Such a diversified partnership also improves the chances to mobilise 'on the ground' actors to participate in a research study. Because of a lack of time, human resources, willingness, or understanding of the benefits, some stakeholders might be reluctant, for example, to provide information regarding their working practices and approaches, subscribe to a newsletter, answer questionnaires, or give interviews. The collaborative research approach can partially solve this problem by building trust among participants in the study or target group of the research.

The participation of multidisciplinary partners representing a larger network of diversified audiences from various countries also offers the unique possibility of reaching a wider public. As previously mentioned, such a partnership is able to discuss with and get involved with a large number of stakeholders, including police and law enforcement, the private sector, academics, and NGOs and also the media and civil societies at large. In particular, under the CWIT project, three partners – UNICRI, INTERPOL, and UNU – have a global influence covering all the United Nations member states, while the WEEE Forum gathered together many affiliates in the European countries. In addition, CBRA is well connected to Customs administrations in almost 180 member countries of the World Customs Organization.

Communication of the research results with the end users and the wider public at large is essential to the research's impact. Dissemination activities require a great involvement and commitment by the partners all along the life of the research and are improved and facilitated by the use of maximum communication of relevant materials. The CWIT project has developed a strong and well-established communication strategy involving all the partners, depending on their own competencies and expertise. New technologies allow the reaching of a large number of persons in a fast and easy way. A website has been created in order to present the project's goals and will be updated with the results of the research. Social networks, press releases, and e-newsletters are also used to give wider visibility. Some of the partners are also taking part in international conferences presenting the first results of the project and are collaborating on books and articles referring to the CWIT project.

Finally, coordinating research effort can also serve as a tool to improve the exchange of information and establish cooperation between the various actors involved. In particular, to counter the illegal trade of WEEE, it is essential to increase trust and cooperation between the governmental and the business actors with 'WEEE chain–vested interests'. For instance, establishing the collaboration and exchange of information between law enforcement officials, administrative controllers, industry businesses, and NGOs is characterised by a large number of formal complexities and practical difficulties. Collaborative research facilitates the learning process of each other's field of action, including their objectives, strengths, and constraints. By knowing each other better, further collaboration and mutual assistance becomes acceptable and possible. Thus, through information sharing and identification of favourable and unfavourable practices thanks to collaborative research efforts, the development of efficient and cost-effective policies and regulations in the field of environmental crime can become more frequent and relevant.

Notes

1 See the website of INTERPOL on environmental crime available at http://www.interpol.int/Crime-areas/Environmental-crime/Environmental-crime.
2 For more information on the United Nations Interregional Crime and Justice Research Institute (UNICRI), please see http://www.unicri.it/.
3 For more information on Cross-border Research Association (CBRA), please see http://www.cross-border.org/.
4 On the ePoolice Project (Early Pursuit against Organized Crime Using Environmental Scanning, the Law and Intelligence System) funded by the European Commission under the 7th Framework Programme for Research and Technological Development (FP7), UNICRI was one of the partners among law enforcement officials and academic experts specialised in matters of organised crime and criminal networks. The overall aim of the project is to create an international environmental scanning system dedicated to countering criminal networks.
5 FOCUS Project (Foresight Security Scenarios: Mapping Research to a Comprehensive Approach to Exogenous EU Roles) co-funded by the European Commission under the 7th Framework Programme, which was on the theme of 'security'. The main contribution was to develop an effective long-term foresight and assessment tool at the EU level. The list of partners in the project alongside CBRA includes other research institutes and universities, as well as technology companies.
6 For more information, see the CWIT project (Countering WEEE Illegal Trade) website: www.cwitproject.eu.
7 Available online at http://whatis.techtarget.com/definition/collaboration.
8 See http://www.niu.edu/rcrportal/collabresearch/need/need.html.
9 Malone and Crowston (1990: 2).

10 The CWIT project has received funding from the European Community's 7th Framework Programme (FP7/2007–2013) under grant agreement n° [312605]. For more information please see http://www.cwitproject.eu/.
11 See the 'Participate' section on the CWIT project website: http://www.cwit-project.eu/participate/stakeholders/.
12 Solving the E-waste Problem (StEP initiative), *E-waste WorldMap*. Available online at http://step-initiative.org/index.php/WorldMap.html.
13 The UNU is the academic arm of the UN system implementing research and educational programmes in the area of sustainable development. The WEEE Forum is a not-for-profit association of 39 producer compliance schemes in Europe. The WEEE Forum provides a platform to take on the challenge of electrical and electronic waste in Europe by fostering ideas and sharing best practices whilst optimising environmental performance through a proper management of WEEE. The WEEE Forum is the largest organisation of its kind in the world (http://www.weee-forum.org/).
14 For a detailed description see Hintsa and Wieting (2014).

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11

Collaborative Research as a Tool for Building Environmental Regulatory Capability

Matthew Marshall and *Grant Pink*[1]

Contemporary governments produce a number of text types. Some are to be read as though spoken by the impersonal voice of state authority. There are also texts with hybridised voices that demonstrate positional hierarchies foregrounding the individual while retaining the discourse of the state. Certain public service office holders generate texts as part of academic research, either as part of or separate to their employment. As a general rule these public servants, both former and current, have senior managerial and/or subject-matter expertise and experience.[2] For the most part, their texts are histories of their respective agencies, with a particular focus on the formation of a specific programme run by, or a change management process applied within, that agency. Apart from senior managers, some public service officers also have standing in academic and professional forums as practitioner-academics or, as per the neologism of the last 30 years, pracademics.[3]

To a certain extent, practitioner-academics write and speak as individuals, but gain their status from their professional experience and expertise, both in terms of specific academic qualifications and through practice within the governmental structure. That structure predominantly forms their subject matter, which is only possible because of their employment (Basham, 2014). Generally speaking, they are not executive managers or politicians in the government-of-the-day. They remain, in terms of their speaking position, more distinguishable from the apparatus of which they are a component. They do not serve a promotional function. If they did, it would undermine immediately their value to the academic and professional forums to which they contribute.

Practitioner-academics

Practitioner-academics are best categorised as subject-matter experts. It is notable that their expertise is gained from their professional experience, in some cases supported by previous and current academic pursuits, but such expertise may lead them to different findings and conclusions than that of the power structures of which they are a part, and importantly to which they remain bound. Specifically they are bound by contract, legislation, and code of conduct arrangements, as is the case in all Australian public services, and presumably other public or civil services around the world. These subject-matter experts may find they disagree with the dominant discourse that a government presents, but remain limited in their opportunity to express that in public forums. At the same time, there is a tacit encouragement for them to diverge at points from the dominant governmental discourse.

The positioning between public service practitioner-academics and the government they serve is problematic. It demonstrates that a government is not necessarily a homogeneous culture. This is a factor requiring consideration when thinking about the question of organisational and cultural reform.

Organisational and cultural reform

Reform is a key topic across internal governmental discourses and in related academic and professional forums (McMahon, 2006; Kelman, 2007; Sparrow, 2008). The histories of agencies are presented with a view to identifying causes of problems and thus areas requiring improvement, to demonstrate where improvement has occurred, and to give indicators as to future improvements. These can be applied to areas including levels of resources, staffing and staff expertise, measures of performance and efficiency, and broad agency mission(s). This emphasis on reform allows for some resolution to the tensions existing between public service practitioner-academics and the governments that employ them. A practitioner-academic may critique a government with a view to institutional reform (as opposed to in terms of ideological difference which stands outside the contours of government rule and the role of the public service) and do so within the bounds of appropriate conduct. Simultaneously, it satisfies the urge of subject-matter experts to put their expertise to some use.

It is in this context that this chapter considers the contribution of the Australian Government's Department of the Environment (DoE) to the

Transnational Environmental Crime (TEC) Project. The authors, both DoE employees, were involved in the TEC Project: contributing to the establishment of the interorganisational agreement from the governmental position; developing academic research papers as DoE Visiting Fellows (VFs); providing presentations on the outcomes of the research; and incorporating research findings into DoE policy and documentation. It is an experience that provides lessons in addition to and sometimes in support of (or indeed contrary to) the findings of the research undertakings themselves.

The Transnational Environmental Crime project

Environmental legislation is notable for its complexity and implementation challenges (Situ and Emmons, 2000; Bates, 2006). Furthermore, transnational environmental crime, a particularly complicated area of concern, is gaining increased notice as a growing crime type (Elliott, 2009; INTERPOL, 2009; UNODC, 2010; White, 2011). As such, it is also of interest to national governments and their environmental compliance and enforcement divisions.

Given its complexities and increasing international relevance, the TEC Project was an instance of a government agency and two universities coming together in formal partnership to undertake a range of activities pertaining to this type of crime. These activities included the development of a series of working papers to collate information and data on responses to TEC at global, regional, and national levels.

On 11 May 2011, DoE formally became the Industry Partner organisation of the TEC Project, in conjunction with the Australian National University and the University of Wollongong. DoE's contribution entailed a financial payment to the TEC Project, over three years, and in-kind support from DoE VFs, chosen on agreement between the two organisations.[4] Each VF was to develop a substantial academic working paper of approximately 10,000 words and there were to be five DoE VFs. It was anticipated that the five working papers would amount to approximately 50,000 words. In return, the expectation was that DoE personnel would enhance their knowledge of TEC (with the possibility of going further and informing environmental crime regulation more generally) and that this would feed back into the policy and practice expertise at agency level (Marshall, 2014).

DoE's contribution to the Project included six working papers written by three authors (see Horne, 2013a, 2013b; Pink, 2013a, 2013b; Marshall, 2014; Marshall and Pink, 2014).[5] The papers were published

in the three-year period of collaboration between DoE, the Department of International Relations, College of Asia and the Pacific, Australian National University (ANU), and the Centre for Transnational Crime Prevention, University of Wollongong, operating under the auspices of an Australian Research Council (ARC) Linkage Grant.[6]

The starting point for the TEC Project was the lack of knowledge as to the scale of TEC and of the effectiveness of measures taken to reduce it. The lack of knowledge stems in part from problems of data gathering, collation, and analysis (Bricknell, 2010; White, 2011; Ayling, 2012; Wyatt, 2013; Horne, 2013a, 2013b). The DoE VF contributions suggested the predominant cause may be cultural. Agencies involved in transnational environmental regulatory activity have differing organisational cultures (Pink, 2013a) which can create coordination and resource maximisation problems. Also, these agencies comprise subcultural groupings. Such formations may contain self-propagating and self-justifying elements that maintain the balkanisation of policy development (Horne, 2013a) and, in particular respect of environmental regulatory agencies, the division of operational activities into commodity-specific line areas, potentially leading to repetition and over-redundancy while stifling innovation or reform.

The research undertaken by the VFs identifies a number of approaches that tend towards effectiveness in overcoming such cultural obstructions. Chief of these is networked communications across and within agencies. This is supported by arguments in other bodies of research that suggest that networked efforts are not only an improvement measure but a necessity for any kind of effectiveness at all (Raustiala, 2002; Slaughter, 2004; Farmer, 2007; Pink, 2011; Marshall and Pink, 2011; White, 2011). Networks allow regulatory efforts to exceed commodity divisions and allow for increased coordination where functions accord (Farmer, 2007; INECE, 2012; Gemmell and Circelli, 2015). Networks have the potential to overcome cultural distinctions and miscommunications, while still giving a speaking position to vernacular knowledge (Bartel, 2013). Overall, networks are an ongoing process of communication, in which participants can continue to develop responses to organisational entropy (Gemmell and Circelli, 2015) and to the adaptations transnational environmental criminals undergo to continue their illegal activities (Ayling, 2012).

A review of various pieces of correspondence, internal and external to DoE, revealed that the intent of the project was for the VFs to take sabbaticals from their regular workload and conduct their courses of research at the university for a continuous period of three months each. Operational

commodity specialists were to comprise the majority of VFs – thus, experts in wildlife crime, pollution crime, and illegal logging. Commodity specialists (or media specialists) in the field of environmental regulation are those specialists whose knowledge and practice centres on the particular part of the environment being protected or the particular kind of harm done.[7] A policy generalist was to act as the last VF. The specialists were to conduct research on the topics of hazardous waste, ozone depleting substances, timber trafficking, and wildlife smuggling. The policy generalist was to collate all the research, then review and analyse it so as to find general benefits for DoE while commenting on the effectiveness of the visiting fellowship.

Issues

Administrative barriers to participation

Impediments to the development of the VFs' papers arose at a number of points. DoE's standard funding arrangements and systems proved incompatible with the type of partnership proposed. The DoE funding mechanism was best suited to hiring outside experts to conduct research and provide reports. The situation where DoE officers were embedded in the research was unusual and novel.

The scope of research did not entirely accord with DoE responsibilities. At the federal level in Australia, timber trafficking is regulated by the Department of Agriculture. At the time of the agreement, the *Illegal Logging Prohibition Act* 2012 had not been passed into law, so there was no direct head of legislation covering the matter.

After the interorganisational agreement was finalised, there were difficulties internal to DoE in finding suitable VFs. The result was that there were four rather than five VFs who participated in the project. Despite the project's commodity focus, informed by DoE's participation in the development workshops and ultimate scope of the research proposal, only one VF was a commodity specialist, in the field of ozone depleting gases. For a variety of reasons this commodity specialist was unable to complete the fellowship. As there was no redundancy and no further capacity from line areas with existing commodity specialisations within DoE, the contribution to the TEC Project, despite the intent, was provided by non-commodity specialists.

Generalist or specialist participants

Commodity specialists are organised into line areas defined by their specialisation. The commodity specialist line areas expressed their

preferences in the scoping of the departmental contribution to the TEC Project, which is one of the reasons why the VFs' topics were established along commodity lines. However, while the expectation had been that a commodity focus would encourage commodity specific line area participation in the project, this was not the case. There are a variety of ways to draw the specialist–generalist divide, some based upon the notion of commodity (e.g., fisheries, forests, pollution, and wildlife),[8] others based upon particular spheres of agency expertise (e.g., education and outreach rather than monitoring and audit, assessing compliance rather than responding to non-compliance [investigation], enforcement [litigation] rather than intelligence analysis and policy development).[9] A distinction based on the subject matter regulated may not have best reflected the levels of knowledge, engagement, and contribution.

In public administration literature and parlance, a certain result of particular organisational structures is referred to as a silo or stovepipe (McMahon, 2006).[10] In the context of environmental agencies, the stovepipe or silo is considered the potential result of establishing line areas that have a subject matter or commodity focus, rather than a functional focus.[11] This means that line areas are tasked with administering all matters relating to, for example, mining, logging, wildlife trade, greenhouse gases, fuel quality, hazardous waste, e-waste product stewardship, coal seam gas, or water. Administering such matters includes engaging in policy and programmatic work as well as, potentially, the full range of regulatory activity.

Cultural and structural barriers to participation

The silo or stovepipe describes the situation where the members of such line areas are encouraged through these structural formations and attached cultural pressures to develop a collective sense of disinterest with anything outside their particular commodity. Line-area practices can become entrenched and intractable. Improvements are often not sought, as change is frequently discouraged and sometimes actively resisted (Hood, 1996; Management Advisory Committee, 2004). This is confirmed by a particular form of bias wherein the commodity in which the line area specialises constitutes an exceptional circumstance. In a very broad sense this can be seen where physical environmental investigations do not pursue the proceeds of crime and make little if any use of proceeds of crime intelligence (Rose, 2014). The nature of the commodity is such that any standardisation or cooperation across line areas simply does not accord with the unique requirements of the commodity in question. Furthermore, the theory suggests that the silo

mindset allows no time in the schedule to do any work beyond what is already being done.

The silo or stovepipe has a conservative function, which contains unconscious, self-perpetuating elements. Members reinforce the distinctiveness of the line area to protect power because the culture and structure of the line area encourages them to believe everything external is a threat to that power (McMahon, 2006; Kelly, 2012).

In hindsight it is perhaps unfortunate that the TEC Project in its initial conception propagated the divide of commodity specialisations. And, although there is no evidence to suggest that in this case theory accords with reality, it is notable that only one commodity specialist was made available by DoE, the reason being the majority of targeted commodity specialist line areas felt unable and disinclined to participate in the project.

The academic author

The TEC Project describes an overarching categorisation of papers developed in isolation from each other's process of production. The authors of each working paper had very little to do with each other in the course of conducting their research. This circumstance is by no means unique to the TEC Project. There is a recognisable type of academic publication that includes a collection of articles by unconnected authors on aspects of a common topic. What brings such a publication together is usually the opening and closing chapters plus the editorial decisions of a small team of organisers and facilitators. The TEC Project more or less replicated this production process (as does to some extent the present book). While the partnering organisations collaborated, the individual participants involved did not. Such joint effort would have been difficult because of the differences in normative values across institutions. Unlike academics, public servants are not in the habit of writing as individuals. The work of public servants goes through levels of approval and moderation very different to the much more at arm's length blind peer-review process.

It was not the goal of the TEC Project to facilitate interdisciplinary collaboration. However, the individualism inherent in the TEC Project system may have constituted a type of silo practice in its own right, perhaps limiting progress and improvements in research methods. Taking that into account, there is an opportunity to imagine a more involved and productive research study between government and academia. A more thorough collaboration may establish multiple views, more sophisticated discourses, and a wider variety of solutions to problems present in such fields as environmental regulation.

Collaboration

Collaboration is a term that can have a variety of meanings when applied in common and corporate parlance, such as when discussed within a governmental agency. It can become so associated with jargon that it loses virtually all meaning (O'Flynn, 2008). Refining a definition occurs through matters of degree. Collaboration can be distinguished by the degree of closeness of relationship between participant members. The extent of collaboration can form a scale alongside others measuring levels of formality, and ideological accord in terms of unity of purpose, trust, and contribution (Polner, 2011).

There is a linear aspect to this, a continuum of activity, which codifies perhaps too strictly the boundaries between types, and sometimes elides features of collaboration that may interact and combine in more complex arrangements than is measurable in a simple descriptive typology. Where high levels of collaboration exist, the important distinction comes down to characteristics that reflect the wide variety of collaborative formations and the complexity of the relationship between those formations and the stages of outcome development (O'Leary and Bingham, 2003; Huxham and Vangen, 2005; Thomson et al., 2008). Furthermore, the division of cooperative activity into a linear hierarchy can potentially encourage a view of the features that make up each stage of collaboration as fixed states, when they are perhaps more usefully viewed as interacting functions and operations.

Government collaboration

Departmental discourses frequently favour collaboration (APSC, 2007a; Government of Victoria, 2007; UNODC, 2008), this being one of the circumstances which subjects collaboration to a high degree of jargon (O'Flynn, 2008). However, collaboration is not a panacea for perceived ineffectiveness or inefficiencies within Departments (Huxham and Vangen, 2004; NSW PSC, 2014). There is a strong argument that collaboration should not be seen as a replacement for building and developing internal organisational capacity within a government agency (Honadle, 1981). What constitutes a necessary level and type of government capacity varies according to a range of factors, chief of which probably being the government-of-the-day's ideological approach. A big government philosophy will see a broad capacity as necessary for government departments, while a small government philosophy will not. However measured, internal governmental capacity in the regulatory field has a functional minimum due to the non-derogable responsibility

to implement and uphold the law. In other words, there is a 'bottom line', in which agencies have to enforce the law, but the manner in which they do will be contingent upon the resources available (which in turn is a political/policy decision).

Questions relating to essential and supplementary capacity are well worth considering when approaching future collaborations. Collaboration provides access to critical information, knowledge, and other resources. The consideration of capacity can help address concerns relating to the allocation of resources, status, and mandate resulting from significant organisational change (Doyle, 2011).

There is a growing argument in favour of collaborative practices within the particular field of regulation (Basham, 2014), including environmental regulation (White, 2008, 2011). Limited resources prove to be a defining argument in favour of collaboration, the combination of elements leading to an effectiveness multiplier (Van de Ven et al., 1975). Principles of administrative fairness and operability tend to favour consolidated, streamlined procedures and practices for regulated individuals and entities. This is an approach particularly promoted in the course of small government and certain other libertarian and laissez-faire agendas. Sponsoring and partner entities expect collaborative efforts to be demonstrably in accord with good governance and management principles (Polner, 2011). Finally, there is the question of jurisdiction and specialisation. Governments are multi-operational institutions. Division within a government is therefore necessary but so is coordination under certain circumstances, and the application of collaborative methods achieves that. Collaboration works to build capacity in a holistic manner (Robins, 2008).

Collaboration to advance environmental regulation

One of the main arguments in the field of environmental regulation is that collaboration can lead to better environmental protection. There are some things governments cannot do that research institutions, policy development centres, and interest groups can. The emphasis of governmental regulatory activity tends to be operational. Through collaborative relationships, operational activities and supporting policy can be informed by theoretical developments, data collection, and trend analysis, as well as incident reporting from interest groups with a specific focus on a type of crime or threatened species or ecosystem. It is even possible that an academic subject focus in combination with a function and outcome-focused government group without a commodity specialisation could avoid the kind of stovepipe or silo that stymies progressive

understanding and approaches. Each instance of conscious self-direction, as a manifestation of informed self-interest (de Tocqueville, 2006), could work potentially to provide benefits to both partners and even mitigate against organisational shortcomings (Thomson et al., 2008).

Assessing the collaboration

On a cursory examination, as measured against a number of systems (New Zealand Government, 2008; O'Flynn, 2008; Polner, 2011; NSW PSC, 2014), the TEC Project achieved a high level of collaboration leading not only to the development of the working papers, but to a number of other direct outcomes.

The findings of the DoE VFs were incorporated into DoE's future planning and operational and policy responses through a five-year major project to improve department-wide regulatory capability. The research and analyses, particularly the cross-country analyses, were incorporated into background briefing material, delegation packs, and presentations at various formal governmental meetings associated with multilateral environmental agreements. The research findings also formed the basis of keynote presentations at formal intergovernmental meetings.

Experience suggests the quality of collaboration improved over time as the relationships grew more familiar. The shift in the nature of the interactions, from rather formal and stilted to those with a decreased attendant formality, in turn enabled the creation of additional relationships within an expanding network of interactions.

The process of collaborative production, however, should probably be more consciously measured against a set of criteria beyond the simply instinctive. Equally, it is important to maintain a focus on the collaborative function in such an assessment rather than look solely to the products of the collaboration. It is the qualitative conditions that allow for the production of cultural outputs of discursive value. An emphasis on the results of the production process can only provide limited insight into that process, as is being recognised within governmental terminology where the focus of governance shifts from an output orientation (such as that seen in traditional regulatory reporting components of annual reports of activity) to a risk-based outcome orientation (as described in Regulatory Performance Framework reporting requirements, which bind all Australian national federal government agencies) (ANAO, 2006; APSC, 2007b; CoA, 2014).

The New South Wales Public Service Commission's report (NSW PSC, 2014) is evidence of this as seen in its discussions of effective

collaboration. Additionally it contains a set of collaboration characteristics which can be assessed as functional and discursive operations. The authors acknowledge that choosing these demonstrates more than a degree of bias for governmental publications over the academic, but the authors too must retain their outcome orientation (de Tocqueville, 2006; Thomson et al., 2008) and their commitment to finding ways to improve departmental operations and practices.

The New South Wales Public Service Commission's report provides the following indicators of effective collaboration:

- Commonality of mission or purpose;
- Compatible authority and control mechanisms;
- Formality of the relationship;
- Trust between collaborators;
- Investment in the collaboration;
- Risk, benefit, and resource sharing. (NSW PSC, 2014: 20)

Commonality

The TEC Project had a high level of commonality in terms of stated outputs and an unspoken but sympathetic understanding in favour of parallel benefit. These benefits related to DoE, the academics, and the professional development and academic standing of the individuals involved.

Control mechanisms

The control mechanisms between the partner organisations were, as stated, highly incompatible. This was countered by a high level of formality to allow for the explicit and managed establishment of the relationship. Whether this facilitated or stymied the progress of the collaboration, given the experiential data on one hand and the body of theory on the other, is a question that must remain open.

Formality

The issue of formality has a strong nexus with the issue of trust or trust operations. It is worth noting that the early stage of the project was marked by high levels of formal interaction, further inhibited by the operational bureaucratic control mechanisms, and comparatively low levels of trust, in comparison with the later stages of the project in which trust was formed on a personal level in line with increasing familiarity, exchange, and interaction between the participants. As the trust increased between participants over the course of the TEC Project,

the formality diminished and there was an increasing number of benefits realised, including an expansion in the trust operations beyond the initial group of key contributors and organisers that engaged project supporters, sponsors, and higher-level managers as well as external institutions, stakeholders, and the virtual TEC Project team.[12]

Trust

Trust remains perhaps the most complicated set of interactions within the TEC Project and possibly the most crucial. However, the building and maintenance of trust entails a high number of intangible factors. There were points where trust was tested, especially in relation to the bureaucratic obstacles present earlier in the process, in the sense that the interpersonal operations had to adapt to the bureaucratic imposts, delays, and challenges. The testing of trust operations was perhaps compounded by, and may have strongly contributed to, operations of differentiation across both sides of the departmental and academic divide. The sense of difference did not lead to the development of a silo-like situation, or the foregrounding of the silo's academic doppelganger. In fact, by the conclusion of the project there was strong evidence of effective trust operations that will transcend the TEC Project. However, there are evident distinctions between the two very different cultures – the academic and the public service. This, in combination with the sense of building and expanding relationships across participants and the experiential value of informal interpersonal collaboration, indicates that a future collaborative model might involve more than similarity of topics, for example, co-authors – one academic and one departmental – undertaking a co-research sub-project together.

To further avoid the possibility of silo-like situations, it seems worthwhile to approach the object of study, in this instance environmental regulation, according to functional rather than commodity distinctions. This chapter has endeavoured to view the field under review in terms of collections of operations rather than as a grouping of concrete objects. The authors suggest that the benefits of such an approach would enable the development of findings that more readily inform operational activities and translate into tangible and evidence-based policy. There are supporting arguments that collaboration generates momentum leading to concrete, actionable results (Robins, 2008).

Investment

Partner investment in the TEC Project manifested in a number of ways including financial, in-kind, and more intangible levels of support,

which are probably best viewed in light of the discussion relating to the products of trust operations. The ANU provided office space, access to library resources, and other facilities, with formal recognition of VF status in accordance with its policies. The largest financial investment was by the ARC in the form of a Linkage Grant and the next largest by DoE. There is a question here in terms of return on investment, especially as government agencies are bound by high levels of financial probity when it comes to dispersing the public purse (APSC, 2011).[13] The ARC has a clear set of expectations regarding its return for offering Linkage Grants, which differs from DoE's, as would be expected in such a large and diffuse organisation as a national government. It is not the point of this chapter to determine whether the ARC criteria were met. The focus is rather on DoE's expectation and, from the departmental perspective, all things taken together, there was quite a high return for its contribution to the TEC Project.

There is also a question about the trade-off between investment and mandate regarding the emphasis of the research. Explicit development of expectation on the part of investors and agreement with a research institution feeds into the questions above of commonality and trust. One of the issues, among others, that presents in such a consideration is the division of topic areas or points of particular focus. Again, in hindsight, the project was not assisted by a division of topics along commodity lines. Although this division was supported by both the academic and departmental sides over the 12 months' negotiation prior to commencement of the project, the commodity split was predominantly DoE's preferred model, as it was held that this would prove the most effective model for delivery of the departmental contribution. This is a situation where the effectiveness of such a division could only be assessed at the end of participation in a collaborative arrangement like the TEC Project. There was, simply put, no way of knowing that this issue would arise. What is worth noting is that the project participants discovered as much, if not more, from what did not work as from what did.

The final consideration is the current likelihood of developing another long-term, overarching, complex, major project. From the governmental perspective, a staged series of sub-projects with a staggered emphasis on phases of the regulatory spectrum would be more easily envisioned. However, at the same time, the ARC Linkage Grant that allowed the collaborative aspects of the TEC Project to take place in the form it did was best suited to multidisciplinary, multiyear, multi-agency projects. This was one of those circumstances where conflicting mechanisms needed

to be consciously and deliberately considered and reconciled to achieve future benefits for all parties and measurable contributions to the field of study and practice.

Risk, benefit, and resource sharing

The discussion thus far has highlighted the risks and benefits in the project, and considered the fiscal and other contributions made by parties involved. A general assessment would indicate risks and benefits were comparable across agencies, noting that in the instance of the academy the benefits were more immediately realised. This is because the forms that the cultural products took, namely working papers, journal articles, book chapters, and conference presentations, accorded more with the tropes of academic text types. For DoE to enjoy its respective benefits, the products of the project first had to be subjected to processes of adaptation and customisation so they could then serve as mechanisms for developing and contributing to departmental policy and operational effort. This is consistent with the proposition that 'value' has its own spectrum, spanning immediate value, potential value, applied value, realised value, and reframing value (Wenger et al., 2011).

The above considerations lead to a potential model for future collaboration that can build upon and exceed the benefits gained by the academy and the government, especially DoE. In such a model, a range of factors that can serve as obstacles to the effective running of the research are deliberately and explicitly considered. These factors include the compatibility and suitability of governance and administrative mechanisms, the text type of product, and the divisions of subject area within a body of research, with government agencies holding a presumption in favour of functional rather than subject-matter distinctions. The exchange value of financial investment and the expected mandate investment provided may well prove to be points worthy of consideration. Equally, there is a question of access and environment. A departmental sabbatical scheme to an academic institution is but one way of realising a collaborative arrangement. Consideration could be given to the possibility of academic researchers being given access to departmental sites, although again there are going to be mechanistic and procedural difficulties.

Conclusion

One of the key issues within a collaborative process seems to be that of trust and how it operates to facilitate and further the research process while helping ensure the creation of research products. The inverse of trust is evident in operations of pronounced differentiation such as

the silo or equivalent (Clifford and Edwards, 2012). Mechanisms for the confirmation of static, limited, and parochial cultural formations can, presumably, be overcome. However, given their detrimental effect, they are worth avoiding altogether where possible. To this end, the above collaborative considerations might be best undertaken with the goal of crossing and maybe even erasing cultural boundaries to create a properly multifaceted collaboration involving researchers across differing organisational structures.

The authors of this chapter are confident of future collaborations occurring in the field of environmental regulatory research, an aspect supported by a recent United Nations Office of Drugs and Crime report that focused on wildlife and forest crime (UNODC, 2013: 182). In the area of regulatory responses to environmental crime and TEC it will be important for the public service to continue to partner with academic and research institutions but more importantly to build, maintain, and expand its own expertise and capability in relation to evidence-based policy development and research. In this context, collaborations will rightly become associated with efforts to build capacity for public servants and academics.

Notes

1 Any views or opinions expressed in this chapter are those of the author and not those of the Australian Government's Department of Environment, or the University of New England. A longer version of this chapter was first published as 'Law Enforcement Responses to Transnational Environmental Crime: Choices, Challenges, and Culture', *Transnational Environmental Crime Project Working Paper 4/2013* (Canberra: Department of International Relations, Australian National University, 2013). It was part of an Australian Research Council funded project on Transnational Environmental Crime at the Australian National University.

2 For example, see Early (2008) and Gemmell and Circelli (2015).

3 These are hereafter referred to as practitioner-academics. In some institutions they are known as practitioner-scholars.

4 These contributions were in accordance with the requirements and expectations of the ARC Linkage scheme.

5 More information on working papers developed for the TEC Project by the Chief Investigators and Academic VFs, as well as refereed journal articles, book chapters, and conference presentations, is available at the TEC Project website at ips.cap.anu.edu.au/ir/tec/

6 ARC Linkage Grants provide funding to support collaborative research projects between higher-education researchers and other eligible organisations (including government departments), which are undertaken to acquire new knowledge. Research under this particular ARC scheme must include at least one Partner Organisation, with the Partner Organisation making a contribution in cash and/or in kind to the project which at least matches the total funding provided by the ARC. For more information, see www.arc.gov.au/ncgp/lp/lp_default.htm

7 Historically, the four original media were defined around the time the US Environment Protection Agency (EPA) was established. They were air, water, waste (chemical/toxics), and land (pollution/quality), see McMahon (2006). The organisational structure of the US EPA reflected the media categories and, though the categories have changed, much of the US EPA remains separated by media, see http://www2.epa.gov/aboutepa/epa-organization-chart, accessed 23 January 2015.
8 For example, INTERPOL's Environmental Security Sub-Directorate shapes its project and operational activities around fisheries, forests, pollution, and wildlife. See http://www.interpol.int/Crime-areas/Environmental-crime/Projects
9 Such a divide can be reflected in and across a regulatory spectrum. See for example Pink (2013a: 10).
10 American literature uses the term stovepipe; Australians are more familiar with the silo.
11 As mentioned above, in the US environmental context, commodities are called media.
12 Members of this virtual team included Dr Tanya Wyatt of the University of Northumbria and Dr Bill Schaedla, formerly head of TRAFFIC Southeast Asia (TRAFFIC is a non-governmental organization, it operates globally as a wildlife trade monitoring network concerned with the trade in wild animals and plants from a biodiversity conservation and sustainable development perspective. For more information see http://www.traffic.org/overview/). An example of the parallel running of events includes the Economic and Social Research Council Green Criminology Research Seminar Series conducted across the UK.
13 There are comprehensive guidelines and procedures in relation to government expenditure which are designed to meet obligations contained within the *Public Governance, Performance and Accountability Act 2013*.

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12

Researchers and Practitioners: Building Collaboration for Evidence-Based Policy-Making

Robyn Bartel and Samantha Bricknell

Environmental crimes are complex and many environmental policy problems are classed as 'wicked' (Rittel and Webber, 1973; Head, 2010). Success stories in environmental crime are few. This is partly due to the area being a relatively new field (Wiernik, 2006; White, 2007, 2008) but also to a lack of rigorous evaluation of the genuine effect of individual policies – achievements are noted but not necessarily in a systematic way. One of the potential chief benefits of increasing collaboration between researchers (within academia and government) and practitioners (here defined as government policy-makers and implementers) is in evaluation and evidence-based reform and policy-making (see, e.g., Sutherland et al., 2004; Watson, 2005; Pullin et al., 2009).

There is renewed commitment to the use of evidence to inform, lead, and evaluate policy development within Australia, the UK, and elsewhere (Blair and Cunningham, 1999; Davies et al., 2000; Clarence, 2002; Sanderson 2002b; Young et al., 2002; Head, 2008, 2010; Advisory Group on Reform of Australian Government, 2010; Banks, 2010; Frey and Ledermann, 2010; Jensen, 2013). Policy based on evidence has the advantage that, since it is based on what occurs in the real world, it may actually work in the real world. Efficiency may also be optimised as a consequence of improved effectiveness (Cherney and Head, 2010). This is attractive for governments seeking to restrict expenditure but also the associated opportunity costs as well as political costs of policy failure (Head, 2010: 18).

These are of course all very pragmatic matters. There has been frequent criticism that an over-emphasis on instrumental rationality and 'what works' in evidence-based policy-making may leave idle the task of answering other important questions such as 'who benefits, and in which circumstances?' and 'to what ends?' (Davoudi, 2002;

Solesbury, 2002; Parsons, 2004; Kay, 2011). The question of 'what works for whom and in what circumstance' also needs to be asked (and answered) (Rogers, 2010: 198; see also Parsons, 2002), as well as questions of justice and how policy may 'do the right thing' (Bromell, 2012: 4; see also Sanderson, 2006: 129).

Of course, this entails entering 'the normative jungle' (Bromell, 2012: 4). Public policy has a moral imperative (Popp et al., 2013: 7) and morality is often viewed as a critical underpinning to the criminal law especially (Hardaker et al., 2009; Freiberg and Carson, 2010; Bartel and Barclay, 2011). However, morality has often been considered as beyond the purview of evidence (Bromell, 2012). The abolition of slavery is sometimes used as an example of a policy direction for which evidence may have been inappropriate, silent, or superfluous (Pincus, 2010: 287). However, evidence is not only not value-free but can be drawn upon to investigate and interrogate morality and values. Evidence may be used to identify social and spatial variation, including in policy impact, and furthermore to assist in determining appropriate policy ends, as well as identify problems that need solving. This is perhaps particularly the case in the environmental arena, as evidence is central to establishing how our natural environment is changing and which human behaviours and impacts need to be addressed (Brookfield, 1989; Castree, 2005). Evidence may also be used to undertake risk assessments and prioritise aims.

There are also process as well as content imperatives. Evidence may be used to inform and design decision-making processes and thereby transform the policy-making landscape more fundamentally (Davoudi, 2002; Parsons, 2004). Collaborative evidence-based policy-making is still in its infancy. However, there is evidence that suggests increasing the range of voices and views incorporated in policy can improve policy outcomes and feasibility (through improving the policy content), and also raise policy legitimacy, due to participatory processes leading to greater acceptance and voluntary compliance (Wahlquist, 2010; Young et al., 2011; Bartel, 2014; see also Evans and Pratchett, 2013 who refer to 'deep local democratization'). Policy-making and policy-implementation processes that are inclusive also means that policy is less likely to reflect the views of just a few, and therefore greater equity can be achieved through evidence-based policy that has been generated collaboratively.

Background: collaborative research

Collaboration between researchers and practitioners in developing and implementing evidence-based policy can achieve greater efficacy,

efficiency, and equity in policy. However, the nexus between research and policy, and between researchers and practitioners, has long been problematised as a gap, including by Peter Shergold, a former Secretary of the Department of the Prime Minister and Cabinet within the Australian Government and also a former academic (and at the time of writing Chancellor of the University of Western Sydney). Shergold (2011) has observed that academic work is too often 'lost in translation' and that there exists a:

> chasm between the policy intellectual and the policy practitioner. The potential of academics to act as knowledge brokers in the development of public policy is largely unfilled.

Edwards and Evans (2011: 3) note that there has been an 'inability to utilise existing capacity, learn from the front-line and share evidence of better practice'. It appears that in the UK too, the experience of evidence-based policy-making has been mixed (Parsons, 2002; Campbell et al., 2007; Boaz et al., 2008). This is a concern, as there is increasing urgency for researchers and practitioners to work together to ensure that the environment is adequately protected and that our intertwined human-nature futures can be secured (Bartel et al., 2014). This is especially critical at a time when current regulatory protections are undergoing a period of regression and weakening (which has led to the formulation of non-regression resolutions by the EU and International Union for Conservation of Nature [IUCN] [Resolution of European Parliament, adopted 29 September 2011, para. 97]; see the IUCN World Conservation Congress Resolution on the 'Need for Non-regression in Environmental Law and Policy' [WCC-2012-RES-128-EN]; and see discussion in Prieur, 2012; and also Lindenmayer, 2013).

Attention therefore needs to be paid to the barriers and constraints that may be forestalling collaboration. In the discussion that follows we identify some key issues in advancing collaborative evidence-based policy-making, including reducing the weaknesses in the area of selective use of evidence and therefore the missed opportunity of learning from a broader range of evidence, knowledge, and knowledge-holders. In the trends section we discuss in greater depth some of the emerging approaches being adopted to address these deficiencies, including processes of learning which are more likely to lead to the incorporation of wider views and broader knowledge types. Finally we discuss some of the key debates between practitioners and researchers, which we suggest are due to misunderstandings and some misplaced expectations.

We conclude with an identification of future directions in collaborative practice.

Issues: selective use of evidence and knowledge types

The systematic 'scientific/rigorous knowledge' of the researcher differs from the practice-based 'professional–managerial knowledge' of the policy-making practitioner, which is distinct again from 'political judgement' (Head, 2010: 18–19 and Table 12.1; see also Sanderson, 2002b; Head, 2008; and see also description of episteme and techne in Parsons, 2002: 46). These different ontologies or 'lenses' adopted by different perspectives are an evident strength in collaboration – the academic is perceived to bring independence and rigour while the practitioner ensures its relevance and the necessary (and often also political) reality checks.

There are also some strong cultural resonances between researcher and practitioner knowledges and worldviews that may, perversely, support collaboration while also excluding other knowledge-holders and knowledge types. These similarities include a basic commitment to positivism, universalism, essentialism, rationality, and therefore the favouring and privileging of positivist, universal, and rational knowledge systems, including their assumptions of certainty, stability, fact-value dichotomy, objectivity, quantificationism, reductionism, and mechanistic and managerialist solutions (Parsons, 2004; Sanderson, 2006; Cartwright and Hardie, 2012). As Clarence (2002: 6) has succinctly observed, evidence-based policy-making 'sits comfortably with positivist approaches'. This preference, of course, has consequences for the types of evidence commissioned, accepted, and adopted, which lends a bias to the evidence used and the way applied research is conducted for input into evidence-based policy-making (Clarence, 2002; Innes, 2002; Parsons, 2004). As Parsons (2004: 46) has described it: '[w]hat counts as evidence is that which can be aggregated and disseminated: added up, joined up and wired up.' Such preferential treatment of knowledge produces a pattern to the answers to practitioner questions of: 'whose evidence, what evidence and evidence for what purpose?' (Griew, 2010: 250). There may be a favouring of evidence obtained from scientific over community and other sources, and within these, a preference for those employing quantitative rather than qualitative approaches (Head, 2010). For example, randomised control trials (RCTs) are considered the gold standard but these risk excluding other evidence. Furthermore, the common limitations of RCTs and other dominant approaches including economic

modelling and cost benefit analysis are often overlooked (Rogers, 2010; Cartwright and Hardie, 2012).

Alternatively, mixed methods are being increasingly incorporated as a 'best of both worlds' approach (Head, 2010: 17), particularly to capture the vital contextual factors that may be otherwise overlooked (Davies et al., 2000). Where evidence is absent, or policy fails, it may be concluded that more (and more) evidence is required, but when this is (often inevitably) unavailable or unfeasible, then alternative paths must be taken (see, e.g., Parsons, 2004 and also Tyler, 2013). While practitioners may be more familiar with quantitative evidence and methods from the sciences, there is untapped potential from alternative epistemological positions, including post-positivist, constructivist, and/or relational epistemological approaches. In the main what is sometimes known as 'the post-positivist turn' (which is not mutually exclusive with quantitative approaches, see Sheppard, 2014) has been misunderstood where not invisible in policy-making circles (Smith, 1979; Fischer, 1998). Generally speaking the relevance of the social sciences, arts, and humanities to the policy world has been under-acknowledged (Parsons, 2002; Cartwright and Hardie, 2012). However it is perhaps these disciplines whose input might be better utilised, especially considering the behavioural and ethical questions as well as justice issues that are central to environmental transgressions (Walsh and Shepheard, 2011).

Although evidence-based policy may seek greater objectivity than, for example, a purely ideological well-spring, both are imbricated and predicated on 'normativity' (i.e., certain values and norms), and this, alongside greater appreciation of the contingency and uncertainty of evidence, may be better acknowledged rather than maligned or ignored (Douglas, 2009; Pincus, 2010: 288; and see also Clarence, 2002; Sarewitz, 2004; Hardaker et al., 2009; Bromell, 2012). All evidence is uneven in its availability and reliability. Data is often inconclusive and findings unequivocal and conditional. There are frequently competing interpretations of the same data and researchers often disagree. A commitment to evidence-based policy often also includes a commitment to best available science (Ryder et al., 2010), which at least acknowledges that science is always changing, and, as the natural and social environments are always changing, observations and hypotheses will also need to change to reflect current conditions more accurately. Principles and processes of policy-development within the state of unknowns (and perhaps also unknowability) include the precautionary principle as well as other sources of information and knowledge. As Parsons (2002: 47) has

advised, we need to acknowledge the 'central role of uncertainty, flux, unpredictability and change in human affairs, and the impossibility of knowing very much'.

Policy-making in situations of complexity has been described as a 'swampy lowland where solutions are confusing messes incapable of technical solutions' (Schön, 1983: 42). It is interesting to note how technical solutions were similarly dismissed by Garrett Hardin in his seminal 'Tragedy of the Commons' (Hardin, 1968). Instead, therefore of seeking more instrumental rationality (Parsons, 2004) and of offering still more simplistic (uniform, universal) solutions via even more simplistic processes, evidence used in policy-making needs to *get messy with it.* Environments are complex, composed of both biophysical and social elements (increasingly described as socio-ecological systems, or SES, in ecological sciences and also socionatures in humanities; see Berkes et al., 2001; Folke et al., 2005, 2010; White, 2006; Davison, 2008; Selman, 2010). Such systems are complex, diverse, heterogenous, and vary from place to place as well as over time. There are no 'one-size-fits-all' solutions (Briggs, L., 2006: 125; New Zealand Productivity Commission, 2012).

However environmental policy appears largely to be disconnected from natural dynamism and wedded to linear, standardised, and universal approaches and interventions. These are unlikely to be effective. As Parsons (2002: 47) has observed: 'although problems constantly change and mutate, institutions tend to remain rather fixed and immutable'. As Rogers (2010) has also recommended, one cannot evaluate policy or adjudge method independent of context and in environmental crime this most obviously includes geography (see also Williams, 2013). This disconnect has been recognised as a deficiency by Nagle (2010: 5), who has gone so far as to conclude that '[e]nvironmental law has lost its sense of direction because it too often neglects the places that it is intended to govern'. Institutions and systems of policy-making are currently not only sealed off from the biophysical environment, but local peoples as well. Griew (2010: 250) emphasises that this includes the communities in which the policy is expected to work:

> [A] good evidence base alone does not guarantee good policy. A convincing evidence base will not redeem policies that are poorly integrated with the contexts of the communities they are developed to serve.

The incorporation of local knowledge termed 'vernacular' knowledge by Bartel (2014) and 'client and stakeholder knowledge' by Head (2010) appears to be especially critical. Several workers have recommended

greater utilisation as well as respect for other ways of knowing, including in local but also tacit and practitioner knowledges (Scott, 1998; Parsons, 2002, 2004; Adams, 2004; Vanclay, 2004; Sanderson, 2006: 126, 128; Douglas, 2009; Hardaker et al., 2009; Chapin et al., 2010; Fazey et al., 2010). As Parsons (2002: 48; see also Parsons, 2004) describes it:

> [c]entral government should lay less stress on its dubious and doubtful claim to know what is best for a particular organization, in a particular place at a particular time, and more emphasis should be placed on organisations making the best use of local knowledge and their learning experiences.

For the effective resolution of environmental crime it may be best to utilise a wider range on knowledges, including both scientific and local knowledge (Irwin, 1995; Fischer, 2000; Mathevet and Mauchamp, 2005; Stewart et al., 2005; Fazey et al., 2010; Nursey-Bray et al., 2014).

Consumer attitudes and behaviour are also important. One recent initiative that may be producing a positive impact, although yet to be formally evaluated, is the use of public procurement policies in the acquisition of sustainable and legally sourced timber (Brack, 2014). These policies, which exist in different forms, have been adopted in approximately 26 countries and apply, depending on the nation in question, to the procurement of specified categories of timber and wood products. For some EU countries the policies additionally reference Forest Law Enforcement, Governance and Trade licence arrangements, with established provider countries adding additional protections to the supply and purchase of legal timber. While the effect of these policies is still to be formally assessed, there is the suggestion that the adoption of these policies, in the EU at least, has influenced to some extent consumer awareness and buying behaviour (Brack, 2014).

Trends: collaborative policy learning institutions and systems

As individuals and institutions in Australia have acknowledged the emerging importance of environmental crime, relevant entities not historically linked in any formal sense have sought ways to better interact and coordinate with each other, and to share knowledge and expertise. In so doing, approaches have been put in place to widen the lens of perspective that is essential to better analyse and respond to these crimes. This expansion of knowledge exchange increases the formation of relationships

between researchers and practitioners. In Australia, this engagement has involved researchers both from academia and government, largely encompassing but not confined to the disciplines of law, criminology, environmental science, and international relations. These engagements are necessarily predicated on the capacity of the researcher, by virtue of their place of employment, to both connect with partner practitioners and address the focus of the engagement in a manner that creates an output or outcome (be it short-term or long-term) that is mutually beneficial and constructive. The history of engagement between researchers and practitioners in Australia, while brief, suggests these parameters are largely fulfilled, although necessarily responsive to potential and actual hurdles in the acquisition and interpretation of information.[1]

For the most part, research on environmental crime matters undertaken by Government but outside regulatory bodies has been the function of discrete, research-based statutory authorities such as the Australian Institute of Criminology (AIC) and similar entities. The research agenda of these agencies are based on Government directive and independent evaluation of strategic focus, including the identification of areas in need of immediate or more exploratory examination. Much of the environmental crime research by the AIC in the last 20 years (and it is assumed by similar government agencies) arose from the latter authority, that is, the agency's decision that specific environmental crime issues warranted further attention. In that time, the AIC published research on the illegal abalone trade (Tailby and Gant, 2002), trafficking in Australian fauna and flora (Halstead, 1992), illegal fishing (Putt and Anderson, 2007), crime in marine environments (Smith and Anderson, 2004), environment performance (Grabosky and Gant, 2000), and a broader discussion of the nature and extent of environmental crime in Australia (Bricknell, 2010).

Much of this research took place in isolation of practitioner involvement, outside the provision of data and stakeholder feedback. Some formalisation of engagement between government research and practitioners, at least for the AIC, did not emerge until recently, and was prompted by a gathering of academic researchers and practitioners in 2009 informing a research project on understanding environmental crime in Australia (Bricknell, 2010). This forum, followed by research presentations to practitioner events, opened a dialogue between the two streams as to how formal partnerships could be formed in the future and the extent to which the functions and objectives of the two could be complemented. While these discussions are yet to eventuate into formal collaboration (at least involving the AIC) they have provided the foundation for partnership and a recognition of where expertise can mesh.

Formal collaborations between agencies are evident in Australia with the Australasian Environmental Law Enforcement and Regulators neTwork (AELERT) and internationally with the International Network of Environmental Compliance and Enforcement (INECE). These networks are essentially about professionalising environmental regulation and enforcement. Each multi-agency member network also includes academic members and several universities (see further Pink and Bartel, 2015). Their focus is to facilitate the kinds of collaborative and creative policy learning and research we recommend as crucial.

There are two trends here identified as moving away from linear and exclusive policy-making institutions and systems towards more collaborative and inclusive approaches. The first trend is from knowledge-transfer to knowledge co-generation, and the second from single-loop cycles of policy development and learning to more advanced models of learning (Graham et al., 2006; Roux et al., 2006). One-way linear systems of knowledge transfer frame the relationship between knowledge-holder (e.g., the researcher) and knowledge-recipient (e.g., the practitioner) as one between a deficient and a proficient partner (see also the knowledge-driven model described by Young et al., 2002). This model of proficiency/deficiency, which has obvious parallels in top-down and command-and-control systems of governance, is undergoing heavy critique in many environmental areas (Holling and Meffe, 1996; Bäckstrand, 2003).

Models developed to promote more effective knowledge generation and application, including the 'interactive model' of Young and others (2002), emphasise the proficiency of all parties (including the community and wider stakeholders) and the value of processes of co-identification of research questions and problems and co-generation of knowledge and utilisation of a wider range of knowledge types, rather than the current privileging of certain types of knowledge (Young et al., 2002; Rogers, 2006; Roux et al., 2006; Edwards and Evans, 2011). These collaborative models reposition practitioners (and the community) as knowledge-generators, particularly of knowledge acquired via learning-through-doing as well as tacit knowledge that is increasingly recognised as important in application and in the complex context of environmental problems comprised of multiple factors, including legacy issues and emergent capacities and constraints.

Edwards and Evans (2011: 8) have called for increasing utilisation of evidence from what they term the 'front-line' of policy practice, that is, policy implementation on-the-ground. They recommend that '[c]apturing evidence and sharing better practice from the front-line must therefore be a crucial component of any reform attempt to get evidence into policy'

(Edwards and Evans, 2011: 8) and 'interactive and ongoing relationship between policy-makers and researchers covering both the production and take-up of knowledge' (Edwards and Evans, 2011: 10). In addition they identify:

- the value of collective or team approaches in use of research and decision-making as distinct from the tradition of focusing on the output of individual researchers;
- the value of intermediation where many voices and agencies are brought into policy processes; and
- the value of a broader definition of research to encompass a range of types of knowledge generation and dissemination. (Edwards and Evans, 2011: 10)

Griew (2010: 253) has highlighted the advantages of including: 'close collaboration and partnership with experienced, domain-specific experts' and feeding back: 'evidence gathered in a way which itself prompts practice improvement' (Griew, 2010: 255). Edwards and Evans (2011) have described the value also of cross-agency and multi- and interdisciplinary work as well as interaction between researcher–practitioner partnerships. Bromell (2012: 2) goes further and encourages the view that

> elected and appointed officials alike need to engage in co-production with citizens; co-production that factors into policy making explicit critical reflection and public deliberation on purpose, values and emotions.

Here, the regulated community are 'seen as partners in policy improvement rather than just as objects of administration' (Head, 2013: 398). This is moving practitioners onwards from the era of 'new public management' and its more simplistic treatment of efficacy and efficiency (Bhatta, 2002; Tiernan, 2011), to what is known as 'new public governance' (Vigoda, 2002; Parsons, 2004; Osborne, 2006), and also 'adaptive governance', 'new environmental governance', and 'collaborative governance' (Folke et al., 2005; Nelson et al., 2008; Lockwood and Davidson, 2010; Holley et al., 2011). The burgeoning number of terms serves to highlight the growing recognition that previous modes have been insufficient.

Moving centralised government away from a 'rowing' to a 'steering' role (Sanderson 2002b; Parsons, 2004) has been advanced by neoliberals as much as by deliberative democracy advocates, with obvious ideological tensions between the two camps (see Bartel, 2014). From the

deliberative democratic perspective this shift is aligned with moving evidence-based policy from instrumental rationality towards (Clarence, 2002) self-transforming and organising approaches which are interpretive, reflexive, relational, communicative, deliberative, critical, collaborative, and poly-centric (de-centred) (Forester, 1982; Parsons, 2002; Marshall et al., 2013). According to one proponent: '[a] co-production model of public policy making requires different skills and capabilities from those of the bureaucratic and "new public management" eras' (Ryan 2011 cited in Bromell, 2012).

Bromell (2012) also reviews the work of Kenneth Winston and in particular Winston's (2009) six generic attributes of moral competence in public life, which all appear necessary for successful multiparty collaboration. The competencies include more generic capacities such as prudence and fidelity to the public good, but more specifically 'respect for citizens as responsible agents', 'proficiency in democratic architecture', including enabling 'citizens to engage with others in self-rule' (Winston, 2009: 4), and facilitating effective public participation and 'double reflection', that is, accepting the contestability of worldviews and a civility which is defined as acting 'only on the basis of beliefs and principles that citizens in general are committed to, or could be after deliberation and reflection, rather than on the basis of personal beliefs and moral convictions' (Winston, 2009; Bromell, 2012; and see also Varghese's 2006 'relationship frame').

A co-production model of policy also needs to be beyond the simple single-loop cycle of plan-do-check-act, which also underpins adaptive management (Holling, 1978). As Schön (1983) has emphasised, learning cannot rely solely on scientific evidence but also needs to adopt practices of critical self-reflection. Double-loop and triple-loop or transformative or epistemic (also social and societal) learning cycles add additional questioning of fundamental structural, systemic and philosophical issues and assumptions (Waddell, 2002; Pahl-Wostl, 2009; Sterling, 2011; Tàbara and Chabay, 2013), as well as the incorporation of wider views through participatory and collaborative processes (Davidson-Hunt, 2006). This is designed to facilitate more sustainable, holistic, and effective solutions (Pahl-Wostl, 2009; Sterling, 2011; Mitchell, 2013).

Debates: use and misuse of evidence, misplaced expectations, and misunderstandings

One potential obstacle to strengthening researcher–practitioner collaboration is the variance between what a research agency can achieve within its mandated focus, skill set, and finite budget and how these

align with the needs of practitioners. One of the challenges that can be experienced is trying to force-fit the purposes of the undertaking into the procedures normally followed by either one of the partnering agencies. Some of this falls under what Alpert and others (2013: xiv) describe as institutional demands or the 'broader set of rules and regulations that can pose barriers to partnerships'. Nonetheless, there are a number of successful government research collaborations involving practitioners but these have needed to cater carefully to the objectives of both partnering agencies and allow for some flexibility in approach.

The advantage of government partnering with government is that the etiquette and conventions of 'doing business' and the appreciation of what can be achieved and documented are well understood. Government research agencies are well acquainted with these provisions and can benefit from the inherent trust that exists and helps foster collaboration between government entities. This trust is particularly advantageous when securing data and qualitative interaction with practitioner stakeholders. Statutory authorities are in a particularly good position, as they sit within the comfortable confines of government but exercise some level of independence in the focus and interpretation of their work.

By contrast, universities and other more independent research entities may not be so well aligned, in spite of the shared positivist-bias discussed above. There may be structural and cultural barriers and also lack of appreciation and respect for roles (Gibbons et al., 2008; Head, 2008, 2010). In 2013 a tit-for-tat argument appeared in the esteemed science journal *Nature* (Sutherland et al., 2013) and in the *Guardian* in the UK (Tyler, 2013), concerning the misunderstanding of science by policy-makers and scientists' misunderstanding of policy-making respectively. It is notable that, in addition to each side adopting a very narrow interpretation of science, most of the observations made by Sutherland and others (2013) were contested by Tyler (2013). Tyler (2013) argued that policy-makers did understand science but were not interested in science *per se*, and emphasised that for policy-makers, other sources of information and knowledge were important, noting in particular that 'there is more to policy than scientific evidence'. The disparity between the two sides is perhaps made most evident by each sides' attempts to assure the other that they were human (Table 12.1).

Such mismatched expectations may act as impediments to forging closer researcher–policy practitioner linkages (Briggs, S. V., 2006; Gibbons et al., 2008; Pullin et al., 2009; Cherney et al., 2013a, 2013b). There are other constraints as well. While there may be increasing calls for applied work from within universities these are immediately contradicted by

Table 12.1 What scientists and policy-makers think that the other needs to know

Twenty Tips for Policy-makers (Sutherland et al., 2013)	**Twenty things scientists need to know (Tyler, 2013)**
1. Differences and chance cause variation.	1. Making policy is really difficult.
2. No measurement is exact.	2. No policy will ever be perfect.
3. Bias is rife.	3. Policy makers can be expert too.
4. Bigger is usually better for sample size.	4. Policy makers are not a homogenous group.
5. Correlation does not imply causation.	5. Policy makers are people too.
6. Regression to the mean can mislead.	6. Policy decisions are subject to extensive scrutiny.
7. Extrapolating beyond the data is risky.	7. Starting policies from scratch is very rarely an option.
8. Beware the base-rate fallacy.	8. There is more to policy than scientific evidence.
9. Controls are important.	9. Economics and law are top dogs in policy advice.
10. Randomisation avoids bias.	10. Public opinion matters.
11. Seek replication, not pseudoreplication.	11. Policy makers do understand uncertainty.
12. Scientists are human.	12. Parliament and government are different.
13. Significance is significant.	13. Policy and politics are not the same thing.
14. Separate no effect from non-significance.	14. The UK has a brilliant science advisory system.
15. Effect size matters.	15. Policy and science operate on different timescales.
16. Study relevance limits generalisations.	16. There is no such thing as a policy cycle.
17. Feelings influence risk perception.	17. The art of making policy is a developing science.
18. Dependencies change the risks.	18. ‘Science policy’ isn’t a thing.
19. Data can be dredged or cherry picked.	19. Policy makers aren’t interested in science per se.
20. Extreme measurements may mislead.	20. ‘We need more research’ is the wrong answer.

Source: Sutherland et al., 2013; Tyler, 2013.

concurrent pressures to undertake pure and curiosity-driven research that is undertaken at different timeframes and for different purposes than applied research. There are also pressures to produce publications for academic audiences in exclusive outlets rather than in accessible means and formats for practitioner audiences (Cloke, 2002; Ham, 2014).

It has been said that there need to be more honest and realistic understandings on both sides – from practitioners of what the academy actually does and therefore what evidence may be available (and in what timeframes) and from academic researchers of the limitations as well as opportunities in applied-policy fields (Gibbons et al., 2008; Edwards and Evans, 2011). As Young et al. (2002: 218) observe, there is often a mismatch 'between notions of how the policy process should work and its actual messy, uncertain, unstable and essentially political realities'. The dynamic and unpredictable political environment may be viewed as an external threat to both practitioners and researchers in developing evidence-based policy (see, e.g., Edwards and Evans, 2011). While the influence of lobbyists and rent-seeking must be critiqued (including the misleadingly named 'think tanks', see Helm, 2010; McKay, 2012; Dunlap and Jacques, 2013; Pezzey, 2014) other perspectives should come into play, not just those of (a narrow band of) 'experts', as this would, after all, lead to a technocracy rather than a democracy (Clarence, 2002). Power and public choice means those with interests will affect decisions, as well as evidence, in addition to affecting the decisions about which evidence is collected, and by whom (Pincus, 2010: 285; see also Davoudi, 2002; Solesbury, 2002; Stewart, 2004). Head (2013) refers to the alternative term evidence-*informed* rather than evidence-based, observing that the evidence itself is multivalent and that political feasibility is an inevitable factor, as well as a constraint (see also Young et al., 2002: 223; Head, 2008).

Applied-policy research may also be avoided by researchers fearful that working too closely with government may see their independence eroded, their work 'captured', and/or themselves viewed by the academy as 'paid pipers' playing the tune called for, with applied-policy work becoming driven by ideology as much as by the evidence (Edwards and Evans, 2011: 8). Researchers may also be rightly anxious that research that is critical or delivers bad news will be met by deaf ears, or worse, discredited with political ends in mind. These fears have been dramatised in the well-known *Yes Minister* episode of 'The Greasy Pole' (BBC, 1981). And concern extends beyond satire or fiction. Researchers' fears of misinterpretation and misapplication of findings and/or discrediting of research are well-placed (Clarence, 2002; Sanderson, 2002a; Edwards and Evans, 2011;

Dicks, 2013). This has occurred most recently and obviously in the case of climate change. As Head (2010: 20) observes: '[o]n matters of deep controversy research findings are more likely to be mobilised as arrows in the battle of ideas, and sometimes in ways that the original authors may find distasteful.' Academics may well avoid collaboration for these reasons (Coppock, 1974: 9; Peck, 1999; Martin, 2001: 190; Dorling and Shaw, 2002; 632; Edwards and Evans, 2011; Woods and Gardner, 2011; McGuirk and O'Neill, 2012). However being engaged critically in the policy process has also been seen as consistent with a more activist and critical role for the researcher (Jackson and Crabtree, 2014). Mastering the rhetoric and being influential are essential for evidence-based policy-making (Likens, 2010; Edwards and Evans, 2011; Dicks, 2013).

Conclusion: future directions

Edwards and Evans (2011: 6) have identified '[t]he absence of strong productive working relationships between government and knowledge institutions'. They recommended greater interaction, ranging from roundtables to the deployment of knowledge broker intermediaries, secondments of personnel, (re-)alignment of incentive structures and adopting reflexive practices within the public service, including action-based research (Edwards and Evans, 2011). There needs to be imagination and willingness to learn, about each other and about process as well as content. The process of collaboration is full of iteration, argument, conflict, resolution, and compromise. It is also, ideally, full of surprise, creativity, and generation of ideas which will be intellectually exciting as well as useful. In this it is probably best for hubris and arrogance to be cast aside. Both 'sides' (an admittedly self-defeating characterisation) need to respect each others' experience and expertise without considering that the respect each is accorded entitles superior or hierarchical behaviour. Engagement as equals with respect for the different talents that each bring to the table is a useful recipe.

There are examples of this recipe being followed for successful collaboration in many areas, including in AELERT and INECE. Government itself is hardly a uniform and homogeneous entity and agencies and jurisdictions who have a history in either brown (environmental protection), green (natural resource management and conservation), or blue (marine) environmental law, extension or enforcement backgrounds, from nations who may not always be aligned on the issues, may find it difficult to collaborate at first. For any network of practitioners to be successful lingering stereotypes and distrust must be worked through and overcome.

The same would apply to building relationships between enforcement and regulatory agencies and researchers, and the regulated community. Each may initially distrust the other but the reduction of social distance and creation of moral agreement carries great and potentially significant benefits.

Note

1 See Chapter 11 by Marshall and Pink.

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