THE WINSTON CHURCHILL MEMORIAL TRUST OF AUSTRALIA

Report by – Ian Parks – 2007 Churchill Fellow

To study methods for combating the unlawful exploitation of fisheries resources

I understand that the Churchill Trust may publish this report either in hard copy or on the internet, or both, and consent to such publication.

I indemnify the Churchill Trust against any loss, costs or damages it may suffer arising out of any claim or proceedings made against the Trust in respect of or arising out of the publication of any Report submitted to the Trust and which the Trust places on a website for access over the internet.

I also warrant that my Final Report is original and does not infringe the copyright of any person, or contain anything which is, or the incorporation of which into the Final Report is, actionable for defamation, a breach of any privacy law or obligation, breach of confidence, contempt of court, passing-off or contravention of any other private right or of any law.

Signed                              Dated
INDEX

INTRODUCTION .................................................................................................................................. 3
Terminology ....................................................................................................................................... 3
Restricted Areas ................................................................................................................................. 3
EXECUTIVE SUMMARY .................................................................................................................... 4
PROGRAMME ...................................................................................................................................... 5
British Columbia Conservation Officer Service .................................................................................. 6
US Fish and Wildlife Service – National Forensics Laboratory ...................................................... 7
California Department of Fish and Game .......................................................................................... 8
US National Marine Fisheries Service .............................................................................................. 8
Massachusetts Environmental Police ................................................................................................. 9
FINDINGS ........................................................................................................................................... 10
Background ......................................................................................................................................... 10
Organisational Context of North American Agencies ........................................................................ 11
Powers ............................................................................................................................................... 13
Recruitment, Selection and Training .................................................................................................. 14
Recruitment and Selection Process ................................................................................................... 14
Training .............................................................................................................................................. 14
Policing Methods .............................................................................................................................. 17
Intelligence systems ......................................................................................................................... 17
Technology ...................................................................................................................................... 18
Equipment ...................................................................................................................................... 19
Forensic Science ............................................................................................................................... 20
Legal Sanctions ................................................................................................................................ 21
Criminal Proceedings ....................................................................................................................... 21
Civil and Administrative Proceedings .............................................................................................. 23
CONCLUSIONS .................................................................................................................................. 24
RECOMMENDATIONS ..................................................................................................................... 26
BIBLIOGRAPHY ................................................................................................................................. 28
INTRODUCTION

This fellowship involved study of methods for combating the unlawful exploitation of fisheries resources. State, provincial and federal fish and wildlife enforcement agencies in North America were visited with a view to studying ‘best practice’ methods for combating fisheries crime.

I wish to thank the Churchill Trust for the opportunity to undertake this Fellowship. I also acknowledge the very considerable assistance and support from my family, work colleagues and referees. I would also like to thank my employer for supporting me in this project and also those who performed some of my duties while I was away.

Importantly, I also thank the many professional members of the agencies I visited for their assistance and support. I was overwhelmed by the support provided and interest in this project. In particular, many agencies provided transportation assistance, to enable me to visit locations remote from my initial fellowship proposal and gain a better understanding of their functions and operations.

Terminology
In this report I have chosen to use the traditional term ‘policing’ to describe the functions relating to preventing and detecting crime and maintaining order (Mawby 2003). This is distinct from ‘the police’ as an organisation (Reiner 1997).

Restricted Areas
This public report does not cover the use of some methodologies and technologies that are of a sensitive nature: particularly the use of controlled operations. Information about these methodologies will be provided to relevant agencies on request.
EXECUTIVE SUMMARY

Ian Parks
Manager Prosecution Services - Fisheries Division
Victoria Department of Primary Industries
1 Spring Street, Melbourne VIC 3000
(03) 5258 0247

The objective of this project was to examine methods for combating the unlawful exploitation of fisheries resources. Once thought of as a limitless resource, the sustainability of fish as a food source is under threat from a number of sources including over fishing, habitat loss and pollution. This study included examination of the recruitment and training of enforcement officers, officer powers, policing methods and prosecution systems.

The project involved visiting a number of conservation law enforcement agencies in Canada and the United States to evaluate methods that could be adapted and applied to Australia to improve fisheries compliance. While unlawful fishing was the initial focus of this project, it was quickly identified that agencies in North America were conducting fisheries policing activities on an ecosystem management basis. This meant that agencies had a broad focus and were not just targeting unlawful fishing activities, but also habitat destruction, pollution and wildlife offences. This is in clear contrast to Australia, where fisheries management falls within the respective primary industries agency, rather than the environment agency. North American agencies had very high standards for recruitment and training of officers and provided significant resources in the areas of technology, forensics and field operations. A number of lessons were learned that have provided ideas and possibilities for the future direction of fisheries policing.

This report will be disseminated to the Department of Primary Industries and to other interested agencies in Australia.

The views expressed in this report are my own and not necessarily those of the Government of Victoria (including the Department of Primary Industries).
PROGRAMME

The agencies I visited included:

1. The British Columbia Conservation Officer Service
2. The Canadian Department of Fisheries and Oceans
   - Pacific region – Vancouver, British Columbia
   - Maritimes Region – Dartmouth, Nova Scotia
   - Head Office – Ottawa, Ontario
3. The United States Fish and Wildlife Service, National Forensics Laboratory, Oregon
4. The California Department of Fish and Game
5. The United States National Marine Fisheries Service
6. The Massachusetts Environmental Police.

_Fisheries and Oceans Canada – Conservation & Protection_

The Canadian Department of Fisheries and Oceans (‘DFO’) is the federal agency responsible for delivering safe and accessible waterways, healthy and productive aquatic ecosystems, and sustainable fisheries and aquaculture. The policing functions are delivered on a regional basis by the Conservation and Protection program.

To understand the organisation, one first needs to consider the jurisdictional environment for fisheries in Canada. Unlike Australia and the United States, the federal government of Canada has exclusive jurisdiction over fisheries in marine and inland waters. For non-anadromous freshwater species, the management function has been delegated to the provinces. DFO retains management responsibilities for anadromous species, such as salmon. The result of this environment is that DFO is a very large organisation responsible for all marine fisheries within the Canadian exclusive economic zone.
To manage service delivery, DFO is split into six regions: Pacific, Central and Arctic; Quebec; Maritimes; Gulf; and Newfoundland and Labrador. Each region appears to operate independently and has a Director of Conservation and Protection who reports to the regional Director General of DFO. There is a Director General of Conservation and Protection based in Ottawa, however this position provides technical and policy leadership rather than direct line command. As a result of the regional structure, the geographic socio-economics and the vast size of the country, the regions have different approaches to fisheries policing. For example, Pacific and Newfoundland & Labrador Regions have a Special Investigations Unit tasked with conducting complex investigations, whereas other regions do not.

Fishery officers are armed and are considered ‘peace officers’ under the Criminal Code of Canada, vesting them with full police powers while performing functions or duties relevant to fisheries law enforcement. The organisation is large in size, with approximately 170 fishery officers in the Pacific Region alone.

British Columbia Conservation Officer Service

The Conservation Officer Service (‘COS’) of British Columbia is the law enforcement service of the provincial Ministry of Environment. Comprising around 130 conservation officers, it provides specialised policing services to all programs of the Ministry, including fisheries, wildlife and environment protection (including pollution). The service also enforces federal fish, wildlife and environmental laws under memorandums of understanding (‘MOU’) with the federal government.

The COS is independent of the Ministry regional structure with the Chief Conservation Officer/Director of Enforcement having direct line and technical leadership responsibility for all conservation officers. The COS is further split into three geographic regions which in turn are divided up into districts. The Provincial Operations group comprises a number of units providing support to
the regions including the Commercial Environmental Investigations Unit ('CEIU') and the Special Investigations Unit ('SIU'). The CEIU is responsible for investigating complex commercial environmental matters arising from activities (either legal or illegal) that are designed to generate a profit. The major focus of the CEIU is on pollution and industrial matters, rather than fish and wildlife. The SIU principally conducts undercover operations into fish and wildlife offences where traditional methods are or would be ineffective.

The COS is established under the *Environmental Management Act 2003* of British Columbia ('EMA') and has authority to enforce that Act and a number of Acts that are prescribed under the regulations, including fisheries, wildlife and off-road vehicle use. The EMA confers the powers and duties of a peace officer on conservation officers when enforcing prescribed enactments. Conservation officers are armed and also appointed as special constables for the province, however policy dictates that this power is only exercised for non-environmental offences where public safety is an issue (such as impaired driving or boat operation) or in emergency situations. Officers must then hand the matter over to the responsible agency as soon as possible.

**US Fish and Wildlife Service – National Forensics Laboratory**

The US Fish and Wildlife Service National Forensics Laboratory ('the lab') in Ashland, Oregon is the only full-service crime lab in the world devoted to fish and wildlife law enforcement. Opening for business in 1989 its main purpose is to provide forensic support to investigators of the US Fish and Wildlife Service, although it does assist other national and international agencies when workloads allow. The lab is also the official crime lab of the wildlife working group of Interpol and CITES (Convention on International Trade in Endangered Species).

While the major focus of the lab is on species and source identification of wildlife parts and products, it does perform the full range of forensic services normally found in a police crime lab. These include chemistry, pathology,
genetics, computer forensics, audio and video analysis, fingerprints, firearms, ballistics and tool mark examinations.

**California Department of Fish and Game**

The Law Enforcement Division of the California Department of Fish and Game (‘Cal F&G LE’) has the responsibility for protecting California’s natural resources and providing public safety through effective and responsive law enforcement. Cal F&G LE is comprised of 370 sworn law enforcement officers and is responsible for the enforcement of all environmental laws throughout the State, including fish, wildlife and pollution offences. The division is led by a Chief of Enforcement and has Assistant Chief’s responsible for each of four geographical districts; training & administration; oil spill prevention and response; and marine activities. The division has its own direct line command structure with the Chief reporting to the Chief Deputy Director of the Department. For investigative services Cal F&G LE has a Special Operations Unit (‘SOU’), that conducts investigations, surveillance and undercover operations targeted at unlawful commercial exploitation of fish and wildlife. There is also a marine unit with large off-shore patrol vessels, a canine unit with both detector and dual purpose dogs (detection and handler protection), and a forensics laboratory with two full-time forensic scientists.

Fish and game officers (‘wardens’) are armed and have full police powers throughout the state. Policy dictates that they only use these powers for non-environmental law enforcement: when incidental to their primary duties, to protect public health and safety, or when failure to take appropriate action would discredit the department.

**US National Marine Fisheries Service**

The National Marine Fisheries Service, Office for Law Enforcement (‘NMFS-OLE’) is part of the National Oceanic and Atmospheric Administration
(‘NOAA’) and is responsible for enforcing laws governing living marine resources and their habitats. The NMFS-OLE is principally staffed by ‘special agents’ who are armed federal investigators with full police powers to enforce federal laws relating to: fisheries, endangered species, marine mammals, marine protected areas and habitat protection. The NMFS-OLE contracts with state agencies to provide a uniformed presence, patrol and inspection capability throughout the country. These Co-operative Law Enforcement Agreements (‘CLEA’) aim to increase federal marine resource conservation, endangered species protection and critical habitat enforcement while also strengthening State and territorial enforcement resources. In other words, the program provides for both federal marine law enforcement and assistance to State marine environmental enforcement through to provision of federal funds.

The NMFS-OLE is supported by the NOAA Office of General Counsel for Enforcement and Litigation (‘GCEL’) for legal advice and administrative proceedings. For the majority of breaches of licence conditions NMFS utilises administrative penalties as its main enforcement tool, rather than criminal prosecution.

**Massachusetts Environmental Police**

The Massachusetts Environmental Police (‘MEP’) is the ‘trading name’ of the Executive Office of Environmental Affairs – Office of Law Enforcement. It is responsible for enforcing fisheries, wildlife, boating, off-road vehicle and environmental laws. It is also the registration authority for boats, off-road vehicles and snowmobiles and provides law enforcement services to State parks and forests. The MEP is independent of the departments of Conservation & Recreation, Environmental Protection, and Fish & Game but provides policing services to these agencies.

The MEP is led by a Director and divided into six bureaus namely – coastal enforcement, inland enforcement, hazardous waste, marine theft, boating & recreational safety, and boat and RV registration. Environmental Police
Officers are armed and have full police powers throughout the State. There are approximately 100 officers in the MEP.

**FINDINGS**

*Background*

Australian seafood is a highly sought after commodity both locally and internationally. Once thought of as a limitless resource, the sustainability of fish as a food source is under threat from a number of sources including overfishing, habitat loss and pollution. The local demand for seafood rises in proportion with population growth: yet fish stocks are either fully utilised or in decline. This supply and demand equation generates an incentive for the unlawful exploitation of these valuable resources.

Fisheries policing (and policing in general) has become increasingly complex due to the changing scope of crime. A number of Australian criminological studies have identified increase in organised criminal activity relating to fisheries resources and the natural environment in general (Tailby & Gant 2002; Palmer 2004; Anderson & McCusker 2005; Putt & Anderson 2007). Organised crime groups in Australia have diversified from traditional areas of operation, such as drug trafficking, into the trafficking of fish and wildlife, where skill sets and networks are easily applied (Australian Crime Commission 2007; Mackenzie 2002). This changing operational environment requires a change in focus by fisheries agencies, as traditional fisheries policing mindsets and methodologies will be inadequate to prevent, disrupt and reduce crime.
Organisational Context of North American Agencies

One major finding of this study was that the agencies responsible for fisheries policing had a broader scope of duties than those in Australia. The State and Provincial agencies visited had responsibility for enforcing laws relating to fisheries, wildlife and environment protection. While not as broad as the State and Provincial agencies, the two federal agencies had a broad scope of duties when compared to that in Australia. These agencies were responsible for laws relating to the marine environment including aquatic wildlife, fisheries and habitat protection (including pollution).

This broad scope provides a number of benefits over a narrow focus on purely fisheries policing. Firstly the broader focus meant that the agencies had a greater critical mass with which to perform their functions. This enables a greater spread of officers throughout the jurisdiction than would be the case with a narrow focus, and also the ability to swiftly access a greater number of personnel to deal with emergencies and crime. Secondly, multi-tasking provides less duplication of resources and arguably a better level of service to the community. For example an officer on patrol would be on the lookout for all environmental issues ranging from pollution, habitat destruction, wildlife and fisheries – a true ecosystem based natural resource policing system. Similarly it would reduce a duplication of expenditure on items such as intelligence information technology systems, boats and offices and provide the community with a ‘one stop shop’ for environmental policing. Thirdly, the larger scope of duties provided a greater job satisfaction for officers due to the wider range of areas for which to operate in. Given that three major threats to fisheries resources are over fishing, habitat destruction and pollution it makes sense for fisheries agencies to be involved in enforcing laws dealing with these areas.

One feature of North American agencies was that they had a functional leadership structure. Here the policing function is a discrete business unit
within the agency, with the director of enforcement having both management, operational and technical responsibility for the function and all enforcement officers. Historically in many agencies, the senior enforcement officer had only technical and policy control over the policing function, with officers operationally controlled by generalist district and regional managers, who were also responsible for many other areas of the organisation, such as fisheries management, advocacy, research and policy. The functional leadership model is now seen as best practice for the reasons outlined below.

A functional leadership structure is essential to dealing with the increasing complexities facing natural resource policing. Contemporary methodologies and tactics for preventing, disrupting and reducing natural resource crime, even at a low level, are becoming more complex and specialised. Agencies must also now manage a function that is high risk from both an occupational health and safety and litigation perspective. Field officers are making decisions, exercising powers and dealing with criminality at a level of complexity that is completely different to past practice. Natural resource policing is no longer a simple offshoot of natural resource management, but a specialty within its own right. The consequence can be that without professional leadership with law enforcement experience, decisions are made to avoid inherent risks, rather than manage them. This in turn can result in a significant reduction in the effectiveness of the policing function, and consequently the prevention, disruption and reduction of crime.

A functional leadership structure provides for professional leaders by creating a career path for officers. It also provides a level of confidence to agency heads that the function is overseen by leaders who are able to manage the inherent risks and also be very effective in achieving agency objectives. Field officers led by specialists experienced in managing risks and the craft of natural resource policing, would be effectively: recruited, trained, deployed and supervised. It also enables agency heads to receive the best possible advice on natural resource policing matters.
Powers

One finding of the fellowship was that officers in all of the agencies visited were considered ‘peace officers’ under legislation within their jurisdiction. This status was conferred in a number of ways, but is essentially split into two categories: full police powers, or restricted police powers. Agencies with full police powers, as the term implies, were vested with all powers of a police officer, and not limited to enforcing fisheries, wildlife or environmental laws. Agencies with restricted police powers had all of the powers and protections of a police officer, while enforcing fisheries, wildlife and environmental laws, but were unable to use those powers for enforcing other laws unless there was a connection to their principal function (i.e. forgery of a fisheries document). The latter category is similar to the situation in Tasmania under the Living Marine Resources Management Act 1995 (s.169).

The increasing complexity of natural resource crime means that traditional ‘compliance’ powers are no longer adequate. While natural resource policing is a specialised field and should remain within environmental agencies, conferral of full or restricted constable status on officers could enable access to a broader range of powers necessary for dealing with crime. These powers would include powers of arrest, search and seizure, and the taking of fingerprints and forensic samples. Similarly status as a constable would also provide for better access to law enforcement intelligence currently restricted to police agencies. Police status of officers would also provide additional protection to officers while engaged in law enforcement duties as penalties for assaulting or obstructing police officers are often greater than for natural resource enforcement officers. Conferral of police powers would also avoid a duplication of a number of powers and offences within the natural resource legislation. Accountability mechanisms could be provided through independent oversight by the relevant anti-corruption body. Any consideration of increasing the powers of officers would need to consider the processes associated with the recruitment, selection and training of officers.
Recruitment, Selection and Training

A well developed recruitment, selection and training program is essential to an effective fisheries policing function. This program is also essential for ensuring high standards of integrity within the agency and preventing corruption (Haberfield, 2006). It is also necessary to ensure that officers are well suited, prepared and equipped to deal with the increasingly complex operational environment.

Recruitment and Selection Process

In North American agencies, the recruitment and selection process for enforcement officers closely resembles that of the police. Agency web sites provide recruiting information to potential applicants so that they can assess their interest and suitability for the role. The screening process for applicants was rigorous and can be summarised as having:

- a written test to assess reading, writing and comprehension skills,
- a physical aptitude test based on job requirements,
- thorough background screening, including a security interview, fingerprinting, and, in some cases drug testing,
- a selection panel interview, and
- a medical and psychological assessment.

Often a tertiary qualification was mandatory, and generally can be from one of the areas of: biological science, natural resource law enforcement or criminal justice. Community colleges in both Canada and the US offer specialised courses, often to degree level, in conservation and natural resource law enforcement (Lethbridge College; Unity College).

Training

In the majority of agencies visited, recruits were not considered ongoing employees of the agency until they had completed all of their classroom and
field training. Recruits were essentially cadets during the classroom phase, and even when appointed were on probation during the field training phase. This served as an important quality control measure, as it provided the opportunity to terminate recruits who were not up to the required standard and therefore providing an incentive for achievement. Training for all agencies was a two stage process involving an initial training academy and a structured field training program.

**Initial Training Academy**

The initial training of officers was lengthy and of a very high standard. For example in DFO Canada, recruits receive 17 weeks initial training. In California, the Department of Fish and Game provides a 30 weeks academy to recruits before they commence field training. In Massachusetts, environmental police recruits are initially sent to the Boston Police Academy to complete the full police training course before attending an agency academy, to learn subjects specific to environmental law enforcement.

In Western Canada the provincial conservation law enforcement agencies combined forces to run a regional academy each year. Under this model, common subjects are taught to the group, such as: interviewing skills, firearms and defensive tactics, boat and vehicle handling, and criminal law and procedure. Agency and jurisdictional specific subjects would either be covered in break out sessions at the academy or on return to the agency. There are a number of advantages to this model. Firstly, the costs of running the academy are shared between the agencies. Secondly, the curriculum is standardised to a degree, allowing officers to move between agencies, and work together in joint operations.

There are, however, some limitations to this model. Firstly there needs to be a certain level of commonality in the laws, procedures and psyche of the agency. This is not such an issue in Western Canada due to the nature of the Canadian federal system. The federal criminal code deals with crimes and criminal procedure throughout the country. Therefore the law of evidence,
crimes and criminal procedure is common throughout the country. In Australia the opposite is true. While most jurisdictions have adopted, or are in the process of adopting the Uniform Evidence Act, criminal laws and procedure are different in each jurisdiction. Similarly agencies have different approaches to the level of law enforcement duties carried out by officers, powers of officers, and the carriage and use of defensive equipment. These factors would limit the number of common subjects deliverable in a joint academy. They may also serve to reduce the level of training provided down to the lowest common denominator of the agencies.

Another solution observed was to send recruits to the Police Academy of the respective jurisdiction. This approach is utilised by the Massachusetts Environmental Police, where recruits are sent to the Boston police academy to complete the full program alongside Boston police recruits. At the completion of this training, officers are provided with more specific training by the agency. The advantage with this option is that officers are trained to the same level as the police providing greater credibility for the officers in the community. It also provides officers well equipped to deal with the complex nature of law enforcement, and enhances the relationship between the officers and the police. The disadvantage in this model, is that officers would be trained in a number of areas not relevant to their future career. In Massachusetts officers are fully appointed police officers and therefore the police training was relevant.

Field Training

The majority of agencies visited had a highly structured field training and assessment program for recruits. While it was standard practice for officers to patrol alone, new employees were put through an extensive field training program before this was permitted. In California, the field training component runs for 13 weeks where trainees are assessed daily by a qualified field training officer on a number of competencies, including: dress and bearing, driving, public contact and radio operation. The purpose of the Field Training Program is to facilitate the officer’s transition from the academic setting to the actual performance of general law enforcement duties. It prepares the new
officer to perform in a patrol assignment, possessing all skills needed to operate in a safe, skilful, productive and professional manner. The Field Training Officer (FTO) is an experienced officer trained in the art of: supervising, training and evaluating entry level and lateral police officers in the application of their previously acquired knowledge and skills. FTO’s complete a 40 hour training course and complete refresher training every three years.

**Policing Methods**

**Intelligence systems**

Natural resource policing (like general policing) operates in a target rich environment, with the crime-problem outstripping available resources resulting in a need to be more focused and obtain the best results possible with available resources. At the same time, agencies are under greater scrutiny to ensure efficiency and effectiveness. These factors have led to a refocussing of policing methodology from a reactive model to a more proactive intelligence-led model (Radcliffe 2008). Intelligence-led policing has evolved from movements such as problem oriented policing and Compstat whereby decision making and tactics are led, supported and justified through intelligence product. The result is a more objective, efficient and effective focus of policing resources and measures.

One of the side-effects of a shift towards intelligence-led policing in the fisheries arena, is its impact on compliance rates as a measure of effectiveness. Executives, treasury officials and governments see the compliance rate as the best performance measure for compliance. This measure is usually communicated as a percentage of inspections resulting in non-compliance. The problem with this measure is that an agency utilising intelligence-led policing methods will have a very low compliance rate\(^1\). This is because inspections, surveillance and investigations will be directed towards areas where there is likely to be non-compliance and criminal activity.

\(^1\) In fact investigation units within agencies that are effective will ultimately have 100% non-compliance.
A number of North American agencies were in the process of embracing intelligence-led policing. Some agencies had trained intelligence analysts providing tactical intelligence support to investigations. There did not appear to be a strategic intelligence capacity to provide strategic advice to commanders and executives, although this was identified as an objective in some agencies.

**Technology**

An area where the North American agencies were well developed was the availability of the agencies information systems to officers in the field. All agencies visited either had mobile data terminals (‘MDT’) in their patrol vehicles, or had pilot programs underway. Where MDT’s were not fully implemented, officers had 24 hour radio contact with a dispatcher who was able to manually search information systems. These included: agency and police prior conviction records, vehicle and boat registration and licensing records. The MDT’s installed in all agencies consisted of a ruggedised notebook computer connected to a global positioning system (‘GPS’) and the internet. Patrol vehicles and boats had a special mount for the notebook, enabling information checks, mapping and report writing to occur in the field. The MDT deployment occurred in most agencies because officers were becoming more desk bound in the office writing reports and completing paperwork and spending less time in the field on patrol. The MDT’s allow the officers to complete some of the paperwork out in the field and make better decisions regarding enforcement action due to the availability of information.

Agencies also used Vessel Monitoring Systems (‘VMS’) extensively for preventing and detecting breaches by licence holders. These systems had developed from solely providing position data, to integration with video cameras and sensors on fishing equipment. The latter allowed real time data on the location of all fishing equipment set in a fishery to enable targeting of aerial and surface patrols. The National Marine Fisheries Service, reported a successful prosecution solely from VMS data.
Equipment

North American officers were well equipped and had uniforms that were of a high standard and worn with pride. While it may seem simplistic at face value to discuss uniforms and equipment when studying measures for combating fisheries crime, it does have a role to play in both the credibility and respect of officers by the community - which in turn can have an impact on deterrence, officer safety and morale (Henry 2002). The uniform also has a legal purpose – it clearly identifies the officer as a law enforcement officer, removing any defence to a charge of obstructing or assaulting the officer on the grounds the defendant was unaware of the officer’s status. Officers wearing their uniform with pride and high standards of dress and bearing project a positive image for the organisation. The uniforms worn distinguished the officers from the police, park rangers and other agency officers, while clearly identifying the officers as law enforcement officers. Officers also wore rank insignia enabling officers from other agencies on joint operations to clearly identify the command structure. Agencies had detailed uniform policies, with different classes of uniform for formal occasions (such as court), general field work and ‘rough’ field work.

In addition to uniforms, officers were well equipped with personal safety equipment, vehicles, boats, cameras, video and night vision equipment. Officers in all agencies were armed with firearms, oleoresin capsicum spray, batons and handcuffs. Patrol vehicles were fully marked with decals, emergency warning lights and sirens and equipped in a standardised way with storage containers and MDT’s. I was highly impressed by my observations of these officers’ interactions with the public and by their professional appearance.

Some agencies in North America utilise service dogs for policing duties. For example the California DFG has a large canine program (largely funded through private donations) and is working towards having 24 dog teams in operation. The DFG utilise both detector dogs and dual purpose dogs. Detector dogs are trained and certified to locate odours, such as fish, wildlife
and invasive species, firearms and evidence. Dual purpose dogs are trained in handler protection, tracking and apprehension, as well as odour detection. The high level of training, dog selection, strict certification and recertification requirements, and detailed deployment policy serves to minimise any risk to the organisation from the program. The canine program generates a great deal of public interest and has helped raise the profile of the agency. It also provides a level of deterrence to criminal activity, particularly in relation to the concealment of unlawfully taken fish and wildlife, and assaults on officers.

**Forensic Science**

Forensic science plays a big part in fisheries law enforcement in North America. A number of agencies have a forensic science program providing direct support to investigators.

The Canadian DFO has a forensic DNA program in its Pacific Biological Station. The lab equipment for the program was initially funded from a compensation order made by a court in an abalone prosecution. Currently the lab has DNA markers for abalone and salmon, the two priority species for the region. The DFO has successfully used DNA evidence to secure convictions in a number of cases. In a 2001 prosecution DNA evidence was used to prove that a salmon found in a restaurant was taken from a river closed to fishing. Similarly in two cases in 2000, DNA evidence was used to identify species of fish where visual identifying marks had been removed through filleting. In a third case in 2000, DNA evidence was used to prove that a salmon claimed to have been farmed was actually taken from the wild. DNA evidence obtained from blood and tissue samples has also been used in cases to assist in proving that a certain quantity of abalone was taken by an offender when the original fish have been dumped at sea.

In California, the DFG has a forensics laboratory providing a wide range of forensic services including genetics ('DNA'), chemistry and microscopy. The lab conducts its own DNA testing, but contracts out background studies (such as DNA marker development) to universities and private providers. The DFG
lab has developed markers for the State’s white sturgeon population and is currently developing markers to source red abalone from different geographic areas in the State to assist in proving a take from areas closed to fishing.

A relatively recent area of forensic science utilised in fisheries and wildlife cases in North America is stable isotope analysis. This involves the identification of the isotopic signature, the distribution of certain stable isotopes and chemical compounds within the fish. The heavy isotope content of precipitated water and snow varies widely and systematically across the globe, providing a label that is incorporated through diet into animal tissue (Bowen, Wassenaar, & Hobson 2005). Inferences can then be drawn as to the geographic origin of the fish. This will be an important forensic method where genetic markers cannot be developed for locating populations within a species.

Forensic science will be an essential tool in combating natural resource crime in Australia. Ideally a national forensics laboratory modelled on the US Fish and Wildlife Service facility could be set up to provide services to all agencies throughout the country. This model would provide many benefits, such as collaboration for forensic scientists, and avoid the duplication of resources that would occur if individual agencies set up their own capability. If this model was not viable, individual agencies could leverage existing equipment and expertise found within their research facilities, or alternatively they could engage in partnerships with universities.

**Legal Sanctions**

One focus of the project was to review and consider the legal sanctions used to prevent and deter over fishing. These sanctions have been split into two categories – criminal and civil.

**Criminal Proceedings**

One consequence of globalisation and the increasing mobility of criminals and criminal organisations, has been an increase in fisheries crime which has
crossed jurisdictional boundaries. This creates issues where fisheries laws and focus in jurisdictions, are directed internally. Organised criminals can exploit jurisdictional loopholes to escape apprehension, by operating across jurisdictional boundaries. For example fish can be unlawfully taken in one jurisdiction and transported interstate for sale. In this case the apprehension, extradition and subsequent prosecution of the person taking and transporting the fish is reasonably achievable. The successful prosecution of any principal organisers in the other jurisdiction, however, is not so easily achievable. There are difficulties in gathering evidence and exercising powers in the second jurisdiction, as powers contained in fisheries legislation are generally limited to the local jurisdiction and for investigating offences under that legislation. Fisheries law enforcement powers cannot currently be used to investigate offences committed under an interstate Act.

The United States has an important legislative tool in dealing with cross jurisdictional crimes involving fish and wildlife. The Lacey Act (U.S.C. Title 16, Chapter 53), was passed in 1900 and is a federal law that was originally enacted to outlaw the interstate trafficking of fish and wildlife illegally taken in their State of origin. The Act was subsequently amended and now prohibits the interstate trafficking of fish or wildlife taken, possessed, sold or transported contrary to a law of a State or foreign law. This offence is a felony punishable by imprisonment for up to 5 years. The Act has become a vital tool in dealing with the smuggling of unlawfully taken fish and wildlife.

Canada has a similar provision to the Lacey Act, the Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act 1992 (Ca) prohibits the transport of wildlife from one province to another without authorisation. This provision is an indictable offence punishable by up to 5 years imprisonment. Under Memorandums of Understanding, the interprovincial trade provisions of the Act are enforced by the provinces, while the international trade provisions are enforced by the federal government.

The Australian Parliament could pass a law similar to these cross-border provisions under the interstate trade and commerce provisions of the
Constitution. An example of how this could be done can be found in Division 360 of the *Criminal Code* (Cth), which deals with interstate firearms trafficking. The appropriate place for the provisions would be in the *Environment Protection and Biodiversity Conservation Act 1999*(Cth) as this Act regulates the import and export of fish and wildlife to and from Australia, and already prohibits the import of wildlife taken unlawfully in a foreign country (s.303GQ). State fisheries officers could be appointed as officers under the Act to enforce the inter-state offences.

**Civil and Administrative Proceedings**

One area of interest in the fellowship was the use by overseas agencies of civil and administrative remedies for breaches of the fisheries legislation. While criminal prosecutions are essential for dealing with offending by offenders outside the licensed industry and for fraud and serious or repeated contraventions by licence holders, administrative sanctions are a useful alternative for dealing with less serious breaches of licence conditions.

A number of fisheries agencies in North America utilise civil and administrative sanctions to aid in fisheries management and protection. Administrative proceedings have a number of advantages over criminal prosecution. Firstly, administrative sanctions are imposed in hearings that do not necessarily follow strict rules of evidence, are expedited and have a lower standard of proof. This approach overcomes evidentiary difficulties in using VMS records in prosecutions. Secondly, administrative processes allow for a negotiated settlement. The fisheries agency can notify the person alleged to have contravened the legislation of the alleged breach, present a summary of its case with an indication of penalties; and request the alleged contravener to show cause (Kuemlangan 2000). If the fisher agrees that a breach has occurred, then the agency may attempt to negotiate a penalty to be paid. If the fisher does not admit liability for the contravention or feels that the penalty is too harsh they have an automatic right of appeal against the decision to an independent administrative tribunal. They may also seek judicial review of the decision if they believe there was a legal error made by the decision maker.
The regime relies on a penalty guide that details the manner in reaching the appropriate fine taking into account aggravating and mitigating factors.

There are advantages to this system to both the community and the fisher. For the fisher the main advantages are twofold. Firstly, if they admit the contravention and settle the penalty they can avoid the legal costs associated with a court hearing. Secondly they avoid the stigma of a criminal conviction. For the community the cost of prosecution is reduced significantly, contraventions are easier to prove, and justice is administered quickly.

CONCLUSIONS

The aim of this fellowship was to examine methods for combating the unlawful exploitation of fisheries resources. The study examined the organisational context of agencies, recruitment, screening and training of officers, powers, policing methods and prosecution systems.

While unlawful fishing was the initial focus of this project, it was found that agencies in North America conduct fisheries policing activities on an ecosystem management basis. This means that agencies have a broad focus including unlawful fishing activities, habitat destruction, pollution and wildlife offences. This is in clear contrast to Australia, where fisheries management falls within the respective primary industries agency, rather than the environment agency. Given that three major threats to fisheries resources are over fishing, habitat destruction and pollution it makes sense for fisheries agencies to be involved in enforcing laws dealing with these areas.

North American agencies managed natural resource law enforcement on a functional basis, with the director of law enforcement having command and technical control of all law enforcement operations and officers. This structure is essential to dealing with the increasing complexities facing natural resource policing by providing a level of confidence to agency heads that the function is
overseen by specialist leaders who are able to manage the inherent risks while also achieving agency objectives.

Enforcement officers were considered ‘peace officers’ under governing legislation, with either full or restricted police powers. This provided a broader range of options for dealing with natural resource crime and avoided a duplication of powers within the natural resource legislation. It also allows agencies to better adapt to the increasing complexity and changing nature of environmental crime.

North American agencies had very high standards for the selection and training of officers. Selection processes mirrored those of police agencies and involved written, physical and psychological testing, medical and security screening, and a structured selection panel interview. Training was intensive, with initial academy training ranging from 17 to 30 weeks in duration, followed by a structured field training and assessment program.

Agencies were provided with significant resources in the areas of technology, equipment, and forensics. Mobile Data terminals were the norm in patrol vehicles and officers were supplied with high quality equipment including firearms and defensive equipment, patrol vehicles and boats. Uniforms were of a high standard presenting a professional image to the community while also creating a deterrent to would be offenders.

Forensic science plays a big part in fisheries law enforcement in North America. A number of agencies have a forensic science program providing direct support to investigators. DNA and stable isotope analysis will become increasingly important tools in detecting and prosecuting fisheries crime in the future.

Long reaching fish and wildlife trafficking laws, such as the US Lacey Act, are essential in preventing, disrupting and reducing natural resource theft in an
increasingly complex and mobile criminal environment. Organised crime has diversified into natural resources and is well equipped to exploit jurisdictional legislative shortfalls. Our laws need to adapt to this changing environment if we are to have any chance of reducing the flow of illicit natural resources.

While serious fish trafficking becomes an indictable offence and resources are focussed on serious criminal activity, agencies need to maintain effective legislative provisions for licensed industry regulation. A number of North American agencies have reduced the cost and difficulties associated with the criminal prosecution of the licensed sector by implementing a highly effective administrative penalty regime. By keeping low to medium level breaches out of the criminal courts, legal costs to both the alleged offender and the agency can be reduced. While serious, fraudulent and repeated breaches should be dealt with in the criminal system, minor acts involving negligence could be dealt with administratively.

RECOMMENDATIONS

1. Governments should reassess whether the fisheries regulatory function is appropriately located within primary industries departments, rather than environment departments.

2. Natural Resource law enforcement should be managed within agencies on a functional basis, with a director of enforcement having operational and technical control of the function and enforcement officers. Ideally this could be modelled on the British Columbia Conservation Officer Service, with a distinct ‘trading name’ with responsibility for ecosystem law enforcement, including fisheries, wildlife and habitat protection.

3. Recruitment and selection processes for officers should be set at a standard similar to police agencies to ensure officers are able to meet

---

2 Fisheries Victoria has recently moved to a functional model for law enforcement activities.
the demands of modern law enforcement and to reduce the risks of corruption.

4. Training standards for officers should be reviewed by agencies to assess whether they are sufficient to cope with the increase in complexity and risk associated with contemporary natural resource policing.

5. Agencies embrace intelligence-led policing and develop analytical capacity at both a tactical and strategic level. Intelligence should inform decision making at every level of the organisation, including natural resource management and allocation.

6. Consideration should be given to installing Mobile Data Terminals in patrol vehicles and vessels.

7. Vessel Monitoring Systems, with equipment sensors should become the norm rather than the exception for high value or high risk fisheries.

8. Agencies should review their uniforms and vehicle markings to ensure they clearly identify officers as enforcement officers, and that they promote a professional image.

9. Agencies should consider the trial of a service dog program to increase deterrence and raise their public image.

10. Consideration should be given to establishing a national natural resource forensics laboratory. This could be utilised for fisheries, wildlife and pollution cases. Alternatively, agencies should develop a forensics capability in-house or develop a partnership with an external provider.

11. The Environment Protection and Biodiversity Conservation Act 1999(Cth) should be amended to insert ‘Lacey Act’ style provisions prohibiting the trafficking of unlawfully taken, sold or possessed fish and wildlife across State borders and out of Australia.
12. Administrative penalties should be inserted into fisheries legislation to provide an alternative to criminal prosecution for negligent minor breaches by licence holders. These could be modelled on disciplinary provisions found in legislation regulating other industries (see Div 2 of Part 3 of the Gambling Regulation Act 2003(Vic))

BIBLIOGRAPHY


