

## Integration of wildlife into a National Oil Spill Response Strategy

Morgan, K.J.<sup>1</sup>; Chilvers, B.L.<sup>1</sup>; Vorwerk, P.D.<sup>2</sup>; Finlayson, G.R.<sup>1</sup>; Courtneil, M.<sup>3</sup>

1 Wildbase Oil Response, Massey University, Private Bag 11-222, Palmerston North, New Zealand 4442

2 Maritime New Zealand, P O Box 25620, Wellington, New Zealand 6146

3 Marine Pollution Response Services, P O Box 45-209, Waitakere, Auckland 0651

Author for correspondence: [B.L.Chilvers@massey.ac.nz](mailto:B.L.Chilvers@massey.ac.nz)

### Abstract

There are various international models in relation to the integration of wildlife into the overall oil spill response strategy, ranging from full integration of wildlife into the wider oil spill response strategy, through to sourcing appropriate resources at the time of the spill without any prior preparedness. This paper utilises New Zealand as a case study of how oiled wildlife response may be integrated into Planning and Operations functions in an oil spill response, and the benefits and challenges of this model.

### Introduction

Over the past 20 years, there has been a steady increase in public, government and industry awareness of the need to plan for and respond to wildlife affected by oil (Kelway, Holland et al. 2014). This has been driven by a number of major historical oil spills involving wildlife, in combination with the global increase in offshore oil exploration and shipping, and with legislative changes driving how oiled wildlife preparedness and response is undertaken in some parts of the world (Newman, Ziccardi et al. 2003, Kelway, Holland et al. 2014).

There are various models of how the wildlife function is integrated into the wider oil spill response strategy. These range from full integration, where wildlife is considered a core component of the overall response strategy, to an “ambulance” service, where wildlife has not previously been considered in any pre-planning. In the ambulance service instance, if there is a decision to respond to oiled wildlife, appropriate resources are sourced at the time of the spill.

A review of Country Wildlife Response Profiles, developed as a joint programme between Oil Spill Response and Sea Alarm Foundation, reveal that of the 87 countries profiled, only 10 had a national Oiled Wildlife Response guideline at the time of publication (Belgium, Canada, Denmark, Falkland Islands, France, Latvia (draft only), Namibia, New Zealand, and South Africa), with two additional under development at the time of profiling (Estonia, Netherlands) (Sea Alarm Foundation 2012). In some countries, regional plans may be found (Australia, USA, Germany), and industry oiled wildlife plans have been developed in areas of oil and gas exploration (Azerbaijan, Brazil, Georgia, Russia, Turkey). In some National Oil Spill Contingency Plans, wildlife is mentioned, however a full oiled wildlife response plan does not exist (Greenland, UK) (Sea Alarm Foundation 2012). Of those countries with some degree of oiled wildlife planning, only Australia, Estonia, Finland and New Zealand’s indicated integration with the wider oil spill response system in the Wildlife Country Response Profiles, although there are likely to be gaps in these data. For example, wildlife is well integrated into the US oil spill response system, however the US Wildlife Response Profile did not stipulate this. A good example of integration in the US would be California where responding to oiled wildlife is mandated through both Federal and State statutes, with integration of the Wildlife Branch within the Operations Section of the Incident Command System and clearly outlined roles and responsibilities within the branch organisational chart (OSPR 2011). The Oiled Wildlife Care Network at the University of California, Davis, has a contractual arrangement with the Californian Department of Fish and Game for preparedness and response (OSPR 2011).

Although Egypt does not have a National oiled wildlife response plan, wildlife is reportedly integrated within the Incident Management Structure through the environmental group, who will be charged with defining objectives and strategy for an eventual oiled wildlife response (Sea Alarm Foundation 2012). Similarly, wildlife is “dealt with” within the Environment Group in the UK system (Sea Alarm Foundation 2012). However, in this system, the actual on-the-ground wildlife response is undertaken by the RSPCA, who have an informal agreement with the national government based on the premise that they will turn up to assist when birds are oiled (A. Grogan, pers. comm.). This results in reliance on the RSPCA for building response capability without financial support from government or industry and with varying degrees of integration into preparedness activities (A. Grogan, pers. comm). Although South Africa’s Wildlife Response Profile did not specifically discuss integration with the national oil spill response system, SANCCOB, a not-for-profit seabird rehabilitation organisation based in Cape Town, has an unfunded national mandate to respond to oiled seabirds in South Africa (V. Strauss, pers. comm.). They are tasked with providing planning input into the national and regional oil spill contingency plans, and have close working relationships with national and local decision makers (V. Strauss, pers. comm). During an oil spill response, seabird response is included in the national organisational chart (noting that other species are not included), and seabirds (in particular the endangered African penguin) are considered high priority for protection (V. Strauss, pers. comm).

In those areas with industry plans (e.g. Georgia), integration may be expected through the relevant company’s oil spill response strategy. Norway’s Country Response profile indicated that as of 2007, an integrated wildlife response plan is required for new exploration activities within Norway’s EEZ (Sea Alarm Foundation 2012).

### **Integration of oiled wildlife into National Oil Spill Strategy in New Zealand**

In alignment with the OPRC Convention (1990), Maritime New Zealand has the statutory responsibility for preparedness and response to maritime oil spills in New Zealand waters. In the New Zealand oil spill response system, wildlife response is fully integrated into both regional (Tier 2) and National (Tier 3) systems. To achieve this, Maritime New Zealand has a long-term contractual partnership with Massey University’s veterinary school for preparedness and response to oiled wildlife incidents in New Zealand (Maritime New Zealand 2015).

#### *Preparedness*

During peacetime, Massey University works with Maritime New Zealand to ensure New Zealand is prepared for any incident involving oiled wildlife (Tier 2 & 3). Massey University’s involvement in oil spill response training and exercising includes co-ordination and training of a National Oiled Wildlife Response Team (NOWRT); input into training of oil spill responders, including Regional On-Scene Commander training; and regular input into regional and national oil spill exercises. Oiled wildlife equipment is strategically pre-positioned around New Zealand, with “first-strike” equipment available in each of the 16 regions, backed up by response trailers (n=4), and a national stockpile which is stored at Massey University in the lower North Island for immediate mobilisation. Although there is an oiled wildlife facility based at Massey University, in most instances in the event of an oil spill a dedicated rehabilitation facility would be set up on-site utilising mobile response equipment and pre-assigned facility sites that are identified in each of the regional plans.

At a Tier 2 level, responsibility for responding to an oil spill lies with the local regional council, with support from Maritime New Zealand. Regional oil spill contingency plans include local at-risk wildlife, with the aim to incorporate this information into “sensitive site sheets” within the regional plan. Sensitive site sheets outline resources in each geographic area and cover all sensitivities in the relevant geographic area, including infrastructure, economic and natural environmental sensitivities. The sensitivity information provides decision makers with a means of independently comparing all resources that may be affected to determine priorities for protection and response.

At a Tier 3 level, New Zealand's National Oil Spill Contingency Plan is administered by Maritime New Zealand, and includes a dedicated chapter on oiled wildlife response, which is developed and maintained in conjunction with Massey University. Supporting this document is the New Zealand Oiled Wildlife Operational Plan, with additional detailed animal care Standard Operating Procedures for New Zealand birds and marine mammals.

### *Response*

During a Tier 2 response where wildlife is affected or at risk of becoming affected by oil, a trained regional council oiled wildlife representative takes responsibility for leading the wildlife response under the direction of the Regional On-Scene Commander. This role includes the development and implementation of response options, and the co-ordination of regional oiled wildlife responders. Massey University's Wildbase Oil Response team may be called upon for advice or response assistance during a Tier 2 incident.

In the National Marine Oil Spill Contingency Plan, Wildlife is fully integrated into a Tier 3 spill response. As part of the National Response Team (Oil), Massey University's Wildbase Oil Response staff are notified and mobilised at the same time as the other components of the oil spill response system.

In order to facilitate a co-ordinated and effective response, wildlife is clearly identified and integrated into the organisational structure. Prior to 2011, oiled wildlife sat exclusively within the Operations team. The first time this structure was executed on a large scale was during the *C/V Rena* incident in New Zealand in 2011, where deficiencies in the overall organisational structure were highlighted. As this response had a significant wildlife component, the National On-Scene Commander (in consultation with the Wildlife Co-ordinator) made the decision to alter the organisational structure for this incident and create wildlife as a separate function. This meant wildlife sat alongside Operations, Planning and Admin/Logistics, with the Wildlife Co-ordinator becoming part of the Incident Management Team. Since the *C/V Rena* incident, Maritime New Zealand has revised the oil spill response organisational structure laid out in the National Plan (Figure 1), in alignment with New Zealand's Co-ordinated Incident Management System (CIMS). As a result, wildlife now spans both Planning and Operations, with resource support from Admin/Logistics (Figures 2,3). The majority of wildlife roles sit under the Wildlife Operations Co-ordinator as operational functions, which include deterrence activities, recovery of oiled animals from the environment, and their subsequent rehabilitation (Figure 4). In addition, there are three key wildlife planning roles within the wider Planning function: Wildlife Advisor, Wildlife Planning Officer and Wildlife Reconnaissance Co-ordinator (Figure 3). The role of the Wildlife Advisor is to provide specialist advice on wildlife populations at risk during an oil spill event. This role would typically be filled by a local expert (e.g. scientist, ornithologist, marine biologist). The role of the Wildlife Planning Officer is to coordinate oiled wildlife response planning activities including the preparation and updating of a wildlife section within the Incident Action Plan (IAP); liaison with the Wildlife Operations Co-ordinator to implement wildlife response options and liaison with the Wildlife Advisor for critical species specific information to assist with planning decisions. The Wildlife Reconnaissance Coordinator is responsible for field assessments of wildlife at risk and providing information back to the Wildlife Planning Officer.

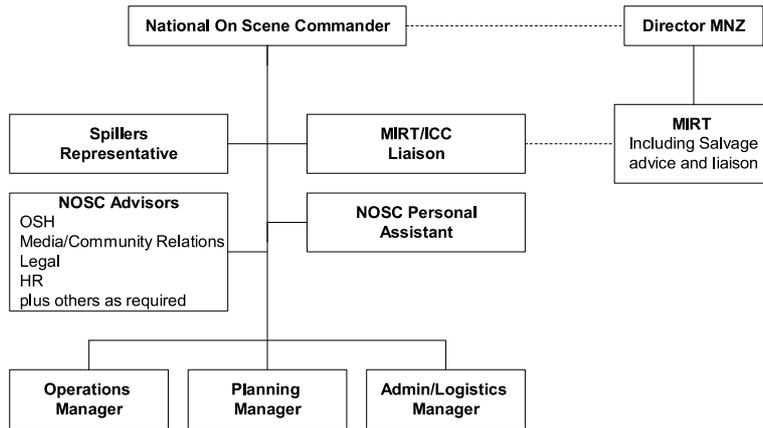


Figure 1: Incident Command Team structure for a marine oil spill in New Zealand (Reference: National Marine Oil Spill Contingency Plan, Maritime New Zealand(MNZ)). MIRT = Maritime incident response team, ICC = Incident command centre, NOSC = National on scene commander, OSH = Occupational safety and Health, HR = Human Resources.

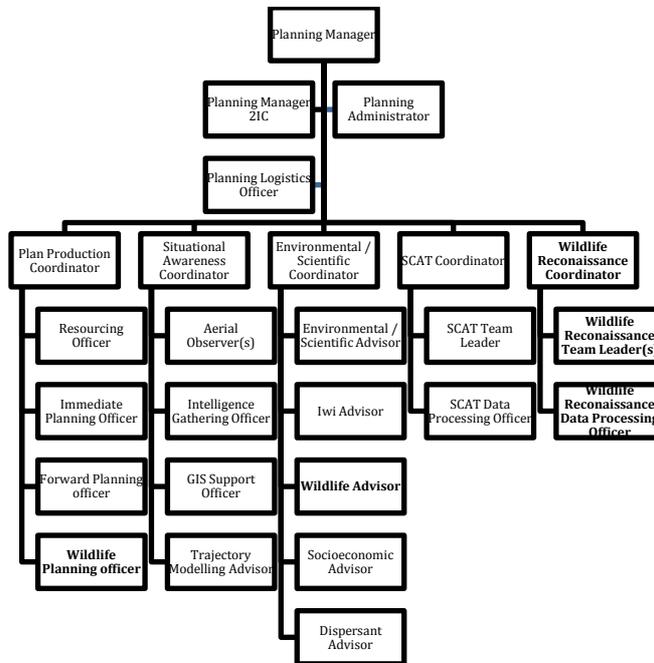


Figure 2: New Zealand's marine oil spill response planning structure, which includes several wildlife functions.

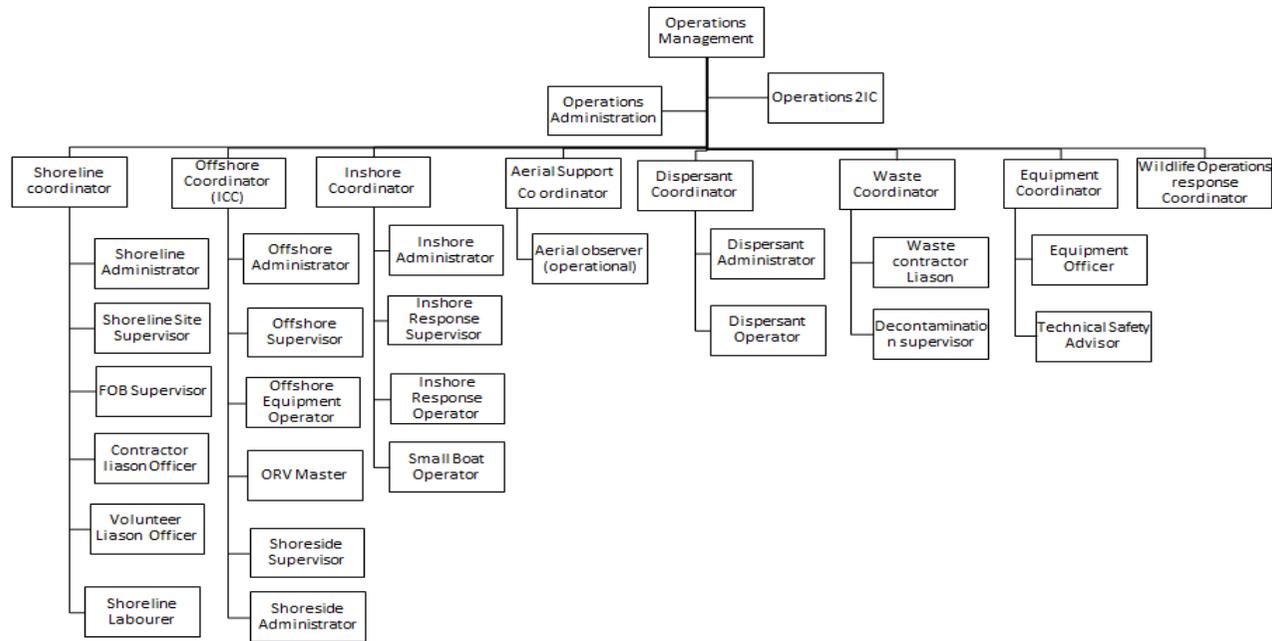


Figure 3: New Zealand's marine oil spill response operations structure, including the Wildlife Operations Co-ordinator (see Figure 4 for further detail).

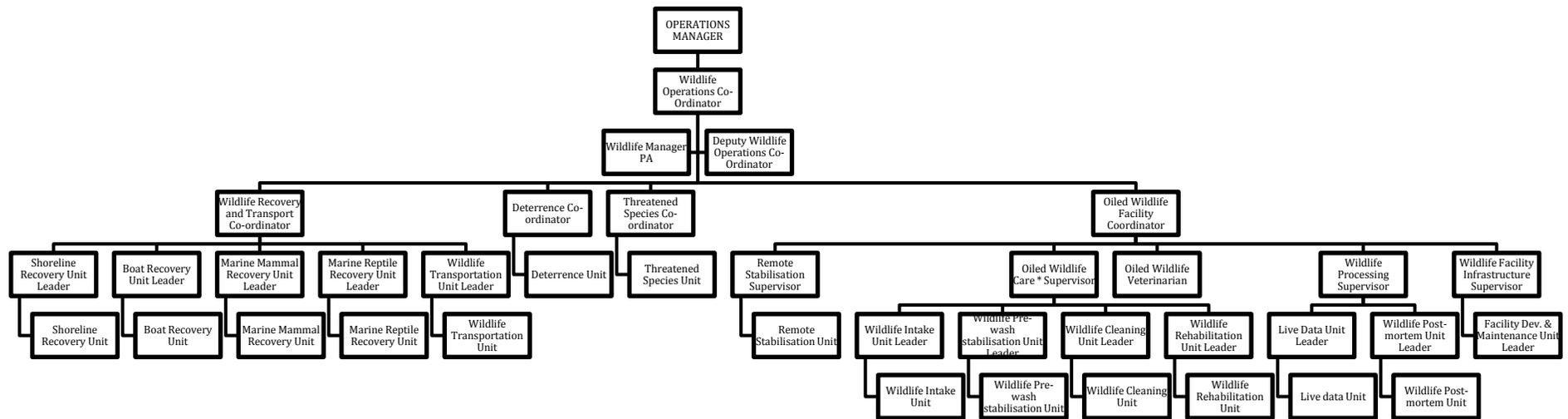


Figure 4: New Zealand's oiled wildlife response operational structure.

## Benefits and Challenges of Integration

There are a number of benefits of integrating wildlife into the overall oil spill response strategy. The ability to mobilise a wildlife capability as part of an oil spill response system leads to faster response times than would occur if a wildlife response capability was sought out and established at the time of a spill. As the prognosis for treatment of oiled animals is highly correlated with their timely retrieval from the environment, the overall success of a wildlife response will be significantly enhanced by faster response times. This success includes maximising animal welfare considerations, as well as the proportion of oiled animals that are rehabilitated and released. Visibility that wildlife is being cared for, in particular during the initial stages, results in increased public confidence in the overall response.

The “warm fuzzy” stories associated with saving wildlife provide an opportunity for positive media outputs during a time of substantial public angst, with potential for significant national and international reach. When integrated as part of an overall response, public messages associated with wildlife are released through the wider media team, ensuring media outputs are consistent with those of the overall response.

Integration into the overall organisational structure provides the ability to share resources during a response. For example, a system for equipment procurement set up for the overall response can be utilised to source wildlife-specific equipment, without the need to duplicate this function. By combining purchasing power, more competitive rates can be leveraged from providers to ensure a more cost-effective response. Integration of wildlife within the Planning section can provide opportunities to share intelligence-gathering resources. For example, if an aerial reconnaissance is scheduled to assess an up-to-date oil distribution, wildlife personnel may also be deployed on the same flight to assess specific wildlife interests, resulting in greater cost-efficiency.

In the New Zealand model, wildlife is considered as one of a number of environmental resources. The Environmental Scientific Co-ordinator receives information from various resource advisors, and response options are determined according to sensitive resource prioritisation specific to the spill and geographic location circumstances. End point criteria are established early in the response to help provide a point in the response at which it can be considered there has been sufficient effort expended, public expectations met and due regard to accelerating natural recovery of the environment. Where efforts to clean-up oil from areas that are critical to a particular wildlife species are required, end point criteria ensuring wildlife considerations are included early on in the planning process to assist with prioritisation of these clean-up efforts, will streamline times for wildlife release after rehabilitation.

There are challenges in having wildlife fully integrated into a response structure, primarily financial. Ensuring a functional wildlife response that can be mobilised at short notice comes at a significant investment. On-going costs associated with preparedness activities should include personnel training; equipment and facility acquisition and maintenance; and plan development and maintenance.

However, in order to ensure that wildlife is a successful component of the overall spill response strategy, investment in preparedness will ensure a smoother wildlife response. Not only will this ensure the wildlife response is more effective and efficient, but wider awareness of wildlife issues within other functions of the oil spill response structure will result in a more seamless approach to all resources at risk during an incident. This in turn will result in a more effective and efficient response to an oil spill.

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