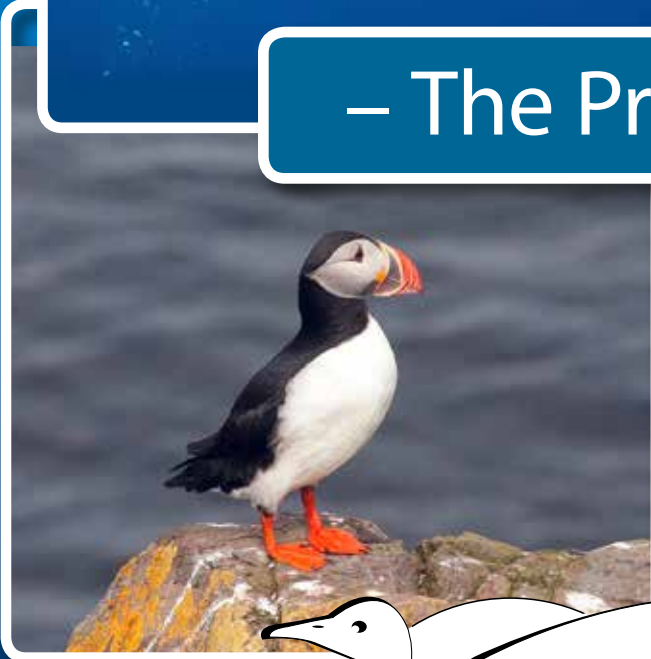


The future of professional oiled wildlife response in Europe



– The Proposal –



EUROWA
EUROPEAN OILED WILDLIFE ASSISTANCE

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This Manual is available at www.euowa.eu

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1 Preface

This publication is one of the deliveries of the project 'EUROpean Oiled Wildlife Assistance-2' (EUROWA-2), that was co-financed by the European Commission under the Union Civil Protection Mechanism and carried out from January 2021 to May 2023 by the partners Sea Alarm Foundation (Belgium, lead partner), WWF Finland, Submon (Spain), Royal NIOZ (The Netherlands) and multiple assisting EUROWA experts.

The aim of the project was to deliver a range of new tools and resources that would help coastal states to better understand the needs of a professional response to impacted wildlife in case of a deliberate or accidental pollution of the marine environment following a marine incident.

The project also aimed to strengthen and expand the EUROWA Network and the capabilities of its members, experts, personnel, and volunteers, by developing and delivering accredited courses, exercise modules and manuals of good practice. It also firmed up the governing structure of EUROWA as a coordinated international network of accredited professional expertise for wildlife response that can be mobilised and integrated in a national wildlife response.

This publication aims to provide European coastal authorities with background insights, information on EUROWA and an internationally oriented action plan that enables them to prepare better for marine wildlife pollution emergencies.

More information about EUROWA can be found at www.eurowa.eu



Fig 1. In the context of this document, European refers to Union Civil Protection Mechanism (UCPM) Member and Participating States.

2 Introduction

Oiled wildlife incidents do not happen very frequently, but when they do, they may have a large impact on coastal societies. Scenarios of impacted marine birds, turtles or mammals on the shore, followed by a reaction of media and citizens, will confront authorities with a range of challenges which are not easy to solve without being prepared. Having a professional wildlife response capability available to deal with the animals is a worthwhile investment, as this document will demonstrate. A professional response that is well designed, planned and prepared for that can work based on clearly defined objectives and strategies will make a difference under these emergency conditions.

Professionalism will ensure the impacted animals receive humane treatment that minimises their further suffering either in care (rehabilitation) or via euthanasia. In a rehabilitation process, professionalism will significantly improve the chances of animals to regain a good health status and long-term survival after their release. The availability and fast mobilisation of a professional wildlife emergency response benefits the animals and will provide an effective structure to which self-mobilising citizens and inexperienced NGOs can make invited contributions. To this purpose, and in collaboration with the responsible authorities, the EUROWA initiative aims to develop and implement such response strategies, generate science-based knowledge and effective methodologies for dealing with wildlife at risk.

Developing effective emergency response systems for marine incidents has not lost its urgency even though the frequency of deliberate and accidental oil spills seems to have gone down over recent years. The risk profile for marine incidents and their potential consequences for human health, marine life, environment, and ecosystems is changing. Shipping is intensifying, the size of vessels is increasing with larger volumes of transported goods and variety of chemicals on board.

The energy transition leads to expanding wind farm areas and related infrastructure at sea, and less space for vessels to manoeuvre if in distress. Meanwhile vessels increasingly are using new low-sulphur fuel oils that lead to less harmful emissions, but many of which have properties that seem to make traditional oil spill response equipment less effective. While the frequency of oil spill events have gone down, an incident is never far away.

Incident management systems in coastal countries must look at all variables of a range of new possible scenarios and ensure that adequate incident response capabilities are in place and keeping up with these developments. The potential wildlife risks of the new scenarios also need to be considered and assessed carefully.

This document demonstrates that professional wildlife response measures should be designed and taken as part of a holistic and integrated response management framework. It outlines arguments for the idea that international wildlife expert assistance can be organised in a cost-effective way and should be embedded in the existing systems of mutual assistance between countries.

It has been developed to provide a manual for authorities to better understand the complications that a wildlife scenario can bring to the response. It provides concrete steps as to how authorities, expert groups and networks such as EUROWA can work together nationally and internationally to further develop professional response capabilities where they do not exist today, or where they are insufficient. These new forms of collaboration will automatically contribute to the professional preparedness of Europe as a whole.

□ 2.1 Guide to the chapters

Chapter 3 explains the current trends in the use of the marine environment, the development of new risk profiles for marine emergencies and how wildlife response preparedness should be made part of a framework of holistic and integrated management.

Chapter 4 provides an overview of the international legal and policy framework in which the protection of marine fauna is regulated, and which is important to consider also from the perspective of marine pollution emergency management.

Chapter 5 provides a dozen reasons why national authorities should prefer to have a professional wildlife emergency response capability instead of leaving a wildlife response in the hands of self-mobilising citizens or inexperienced NGOs.

Chapter 6 describes the EUROWA philosophy that aims to develop and manage professional capabilities based on internationally defined standards of good practice. It also describes how the EUROWA initiative is fully dependent on mutual respect and trust between leading authorities and the EUROWA Member organisations.

Chapter 7 aims to provide a coherent action plan for the development of professional marine wildlife emergency response preparedness in Europe, which could eventually become the wildlife component for a framework of holistic and integrated management.

Annex I of this document provides a detailed template that can be used by national governments to develop an integrated wildlife emergency response plan.

□ 3 Wildlife aspects of a holistic and integrated emergency response

Developing a framework for holistic and integrated response is defined as an action by the main European Regional Agreements in their Strategic Action Plans. The need for such an approach has been identified from the observation that authorities tend to prepare and respond within their own responsibility but would

benefit from doing this together. In practice there is often a division of activities between “at sea response” and “onshore response”. The Contracting Parties of the Regional Agreements aim to improve the collaboration between these two domains of responsibilities¹.



Fig 2. Seals are vulnerable and can be impacted in the coastal zone, which should be considered as part of holistic and integrated response management.

¹The EU funded IRA-MAR project aims to explore the concept of holistic and integrated response and develop proposals for developing the envisaged framework for implementation.

3.1 Integration of marine wildlife emergency response

Marine wildlife emergency response is a component of the wider marine emergency response that depends for its success on how well it is fully integrated into both at-sea and onshore response. There are three main observations that support this:

1. Marine wildlife will become affected

A man-made pollution incident can lead to marine wildlife being threatened or impacted. Most large-scale impacts take place at sea where high concentrations of wildlife, such as aggregations of seabirds, can become polluted. The incident response manager should be aware of these early potential impacts on wildlife and have instruments in place to prevent and mitigate the effects as part of the tactical decisions in the at-sea response.

2. Wildlife response requires a professional approach

Wildlife response is not something that can be improvised. It requires knowledge of:

- The whereabouts of animals in relation to the pollution
- Which species are present and their behaviour
- The possible effects of oil on wildlife and
- The kind of active interventions that could be successful in preventing and mitigating these effects.

Expertise that can bring this knowledge to the table needs to be ready and able to take a pre-defined role in the emergency response system so that they can advise and guide the response. Professional advice is needed in the at-sea response and, later on, in the onshore

response. If a human interaction with live animals, their colonies or nesting areas is unavoidable, professional teams and equipment need to be mobilised and deployed. Most of their activities need to be accommodated as part of the shoreline response. This requires timely planning, logistical support of shoreline activities, also in relation to oil combat activities on the shore, and the identification and preparation of professionally led facilities. Health and safety issues must be addressed as well as a dedicated management plan for waste and wastewater.

3. Social effects of impacted wildlife can be considerable

The social impact of large numbers of impacted wildlife coming ashore alive and dead can be considerable and needs to be recognised by the emergency response plan. The images of animals sick, dying or dead as a result of a pollution event become ambassadors of a larger trauma felt by local communities who see their marine environment being destroyed. Not having any professional solution for dealing with the animals coming ashore, likely over many tens of kilometres of shoreline, creates a control vacuum in which self-mobilising citizens and NGOs start doing things that they see authorities are not doing, or not doing it as well as they should. Such improvised activities are bound to fail, may lead to health and safety issues, media criticism and an escalation of reputational damage. In the early stages of an incident response at sea, these potential social aspects need to be anticipated, and mitigated on the shore via a proactive mobilisation of professional resources and a predefined communication strategy.



Fig 3. Health and safety is important when capturing birds on slippery and uneven surfaces.

3.2 Holistic management: wildlife response in future incidents

There are various developments in the maritime sector (see Box 1) that pose new challenges to coastal states in their task to keep society and the environment safe from incidents and their impacts.

Box 1: Several developments that can be observed in the maritime sector that could contribute to changing incident risk patterns in European marine waters².

- Shipping operations have become safer, but there is an increase in vessel size and increase in overall maritime traffic (e.g. containerships) in European waters and globally.
- A large variety of possible pollutants is transported as cargo, sometimes in large bulk volumes, with a potential to create complex incident scenarios, when different substances are mixed.
- Emerging of new propulsion systems and related new fuels (e.g. low sulphur) or energy carriers (e.g. batteries).
- Reducing navigable space due to expanding spatial claims from energy generation (e.g. wind farms) and Marine Protected Areas.
- Increasing vessel traffic that is needed for the maintenance of wind farms and other new offshore activities.
- Increasing number of reported small and unknown spills in European waters.
- The effects of climate change, including the increase of severe weather events, changing patterns of weather events, and new arctic shipping routes that become available due to changes in ice conditions.

New forms of marine pollutant are becoming apparent, therefore changing the way they may affect the environment and how they respond to the traditional response equipment and capabilities in coastal states. As the character of pollution may change, the effects these pollutants or substances may have on marine wildlife should also be studied and considered from an integrated wildlife response perspective. This would fall within the concept of holistic and integrated management. Holistic means that all the aspects of potential incidents should be considered, especially if risk



Fig 4. Marine shipping.

profiles are changing and the pollutants are becoming more diverse such as Hazardous and Noxious Substances (HNS).

HNS incidents are incidents by which substances are introduced to the marine environment which are “likely to create hazards to human health to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea (according to the 2000 OPRC-HNS Protocol). The term “substances” could include oil or exclude oil, depending on the convention (e.g. the HNS Convention includes oil, whereas the 2000 OPRC-HNS Protocol does not).

There is a broad range of different HNS incidents that could happen offshore, inshore, onshore or in harbours, and they could lead to air pollution such as gas clouds, the pollution of marine waters, seabeds or the coast, or the pollution of marine and coastal ecosystems. Depending on how and where they happen, HNS incidents may also affect marine wildlife.

Pollution can lead to physical and physiological impairment, leading to illness and mortalities and food chain effects. Such effects of pollution on both fauna and flora can also lead to temporary or long-term malfunction of local ecosystem dynamics, possibly leading to long-term shifts in abundance of species, habitat quality and ecosystem performance.

² 2020 Call for proposals European Union Civil Protection Mechanism

3.3 Integrated management: preventing and dealing with effects on wildlife

Whether we are dealing with oil spill responses or HNS incidents, the governmental agencies who lead the response should take the possible effects on marine fauna into consideration for the following reasons:

- To prioritise the combat of the pollution at sea or near the shore to avoid that pollution reaches concentrations of animals
 - To provide an early warning about the pollution to on-shore authorities so that they can quickly mobilise response capacity to:
- Take the right health and safety measures to protect responders that will get in contact with the pollutant
 - Consider interventions to protect un-polluted animal populations and their habitats in coastal areas from the approaching pollution
 - Set up a professional wildlife response that can effectively deal with polluted or impacted animals arriving ashore
 - Start a pro-active communication strategy to inform the public and control self-mobilisation of citizens or inexperienced NGOs.

3.4 Professional response to wildlife affected by HNS

Experts in oiled wildlife emergency response (e.g. EUROWA) should be enabled and encouraged to receive and develop health and safety strategies to deal with animals affected by HNS arriving on the coast and in the public domain. They also need to develop a better understanding about the risk profile of the most common HNS substances and develop scientific knowledge as to how these substances may affect the health of animals as well as potential treatment options, if there are any. The development of science based protocols and professional HNS wildlife response capabilities is a task that should be adopted and encouraged by authorities.



Fig 5. Blood sampling is essential in professional rehabilitation.

4 International policies supporting wildlife response preparedness

Although it may not be their core responsibility, authorities of coastal countries dealing with pollution incidents must be aware of international policies aiming to protect species and their habitats against a range of human threats, including the effects of pollution. Marine wildlife such as seabirds, sea turtles and marine mammals receive special attention from several legal instruments and policies, the most important of which are highlighted in this chapter. The recommended way forward is to develop an integrated wildlife response

plan that recognises the vulnerability of certain species and habitats for forms of pollution. Such a plan should address which professional response capacity (advisors, hands-on responders) is available and prepared to deal with the pre-identified aspects of identified wildlife emergency scenarios, as part of an integrated management system. Their preparedness and capability development can be accommodated via a more holistic and integrated approach to marine emergency preparedness and management.



Fig 6. Discussing regional oil spill preparedness at a HELCOM RESPONSE meeting.

4.1 EU legal instruments

The EU has developed several instruments that are of significance when considering response strategies to spills of oil and hazardous substances. Although they may not all contain direct references to pollution incidents, Member States (MS) are legally obliged to ensu-

re that certain habitats and species are protected, and that good environmental status of the marine environment is achieved or maintained. Below is an overview of the main EU Directives that are relevant to consider for a wildlife response.

4.1.1 Birds and Habitats Directives, EU Biodiversity Strategy

The Birds and Habitats Directives, also known together as the Nature Directives, form the backbone of species and habitats protection in the EU. The Birds Directive aims to protect around 500 wild bird species, including seabirds, as well as establishing Special Protected Areas for rare and endangered birds. Similarly, the Habitats Directive protects over 1,000 plant and animal species and 200 different types of habitats both on land and at sea. Together, they form the backbone of the EU's Natura 2000 network – the largest coordinated network of protected areas in the world.

The EU Biodiversity Strategy to 2030 aims at to halt the loss of biodiversity and ecosystem services in Europe and to restore them as far as possible, contributing to the global effort to curb biodiversity loss, so that by 2050, all of the world's ecosystems are restored, resilient, and adequately protected.

During an incident, authorities will need to be aware of which habitats and species they are dealing with, whether the incident impacts legally protected areas, and to be aware of protected species that are either already affected by the pollution or likely to be as the incident develops.

The development of sensitivity maps that are fit for purpose for use in marine pollution events is the best way forward in dealing with the Birds and Habitats Directive. In such maps, the location of protected habitats and the spatial and seasonal distribution of sensitive species are highlighted. The format of these maps should be simple so that they can be easily interpreted and used in an operational context for strategic and tactical decision making. Ideally, they should be included in incident management tools for ease of access.

4.1.2 Marine Strategy Framework Directive

The Marine Strategy Framework Directive (MSFD) is one of the main pillars of the protection of the marine environment in Europe because it establishes a framework within which MS take the necessary measures to achieve or maintain Good Environmental Status (GES) in the marine environment. The MSFD defines what GES is for marine waters and sets out targets and indicators to assess progress towards the GES aim. Under the

MSFD, MS are obligated to have National Marine Strategies which outline their plan and progress towards GES of their marine environments, including through economic activities such as fisheries and aquaculture.

During a pollution incident in the marine environment, the GES is likely to be impacted.



Fig 7. National oiled wildlife preparedness workshop, Spain.

4.1.3 Safety of Offshore Oil and Gas Operations Directive

Being recognised as one of the major sources of oil spills after the Deepwater Horizon spill in the Gulf of Mexico (2010), offshore oil and gas activities have since been more and more controlled and regulated by a legal framework. In Europe the Safety of Offshore Oil and Gas Operations Directive establishes minimum requirements for preventing major accidents by the operators and limiting the consequences of such accidents. Environmental damages by oil and gas operations should be prevented as much as possible to preserve, protect and improve the quality of the marine environment.

In that respect, each operator/owner is obliged to develop and maintain an internal emergency response plan, including response equipment and expertise, to deal with an incident in case of a spill. The Directive puts an obligation on the MS to develop external emergency response plans in accordance with various specifications that includes: *“arrangements for the mitigation of the negative impacts on wildlife both onshore and offshore including the situations where oiled animals reach shore earlier than the actual spill”*.

4.2 Regional Agreements

In Europe there are various regional sea agreements or conventions in place that facilitate arrangements between their Contracting Parties (CPs) to work together to prevent and respond to deliberate and accidental marine pollution. The three major conventions discussed here are:

- The Helsinki Convention (HELCOM) in the Baltic Sea
- The Bonn Agreement in the North Sea/North-East Atlantic and
- The Barcelona Convention in the Mediterranean Sea

These Agreements develop frameworks of cooperation and mutual assistance between CPs, and to improve the effectiveness of marine pollution prevention and response. By working together at their regional level, countries can share their resources and expertise to deal more efficiently with spills, especially in the case of cross-border incidents.

In this way, Regional Agreements also implement the objectives of the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC). This global Convention created a framework for more effective pollution response by coastal states having pollution response plans in place, and providing mutual assistance to each other.

The main objective of the three Regional Agreements is to protect the marine environment and the interests of the coastal states that are threatened by the incidental pollution.

The following sections will focus on the activities and initiatives that the different Regional Agreements have put in place to develop wildlife pollution response preparedness and capabilities at national and regional levels.

4.2.1 HELCOM

The Convention on the Protection of the Marine Environment of the Baltic Sea Area (the Helsinki Convention) from 1992 and its associated recommendations contain many references to marine pollution incidents.

In the Convention text on Co-operation in combatting marine pollution outlines that *“The Contracting Parties shall individually and jointly take [...] all appropriate measures to maintain adequate ability and to respond to pollution incidents in order to eliminate or minimize the consequences of these incidents to the marine environment of the Baltic Sea Area.”*

Under the Convention, the HELCOM RESPONSE Group has been created in which countries continuously collaborate for that purpose. Since 2010 the focus of the Group has been extended to also include response on the shore and wildlife response.

This led to the adoption in 2010 HELCOM Recommendation 31E/6 on Integrated wildlife response planning in the Baltic Sea Area from 2010 (and revised in 2021). The Recommendation encourages CPs to develop integrated wildlife response plans and develop and capabilities to deal with marine wildlife emergencies.

A dedicated Expert Group on Wildlife Response (EG WILDLIFE)³ was established to facilitate collaboration between CPs to implement the Recommendation and develop their individual and collective preparedness.

Wildlife response has also been integrated into the HELCOM Manual on Co-operation in Response to Marine Pollution. In 2021 the manual was revised and updated, and Chapter 7 describes Co-operation in Oiled Wildlife Response. It defines the mechanism by which international assistance from experts (e.g. EUROWA) and contributions of volunteers (self-mobilising citizens) can be mobilised and integrated in the Command structure to support decision-making processes for euthanasia, rehabilitation and release of impacted animals.

The current Baltic Sea Action Plan (2021-2030) includes three actions that are highly relevant for firming up the regions marine wildlife response capabilities:

- Action S32 aims to develop a framework for holistic/integrated management of marine pollution incidents to enable coordinated response operation at sea and on shore by 2025.
- Action S33 aims to strengthen mutual assistance for oiled wildlife response in the Baltic Region by 2025, and
- Action S38 aims to undertake monitoring and pollution risk assessment regarding species and habitats in the Baltic Region by 2026.

HELCOM Response continues to be the most advanced and forward thinking of the European Regional Agreements regarding oiled wildlife preparedness and response in national and regional emergency response systems.

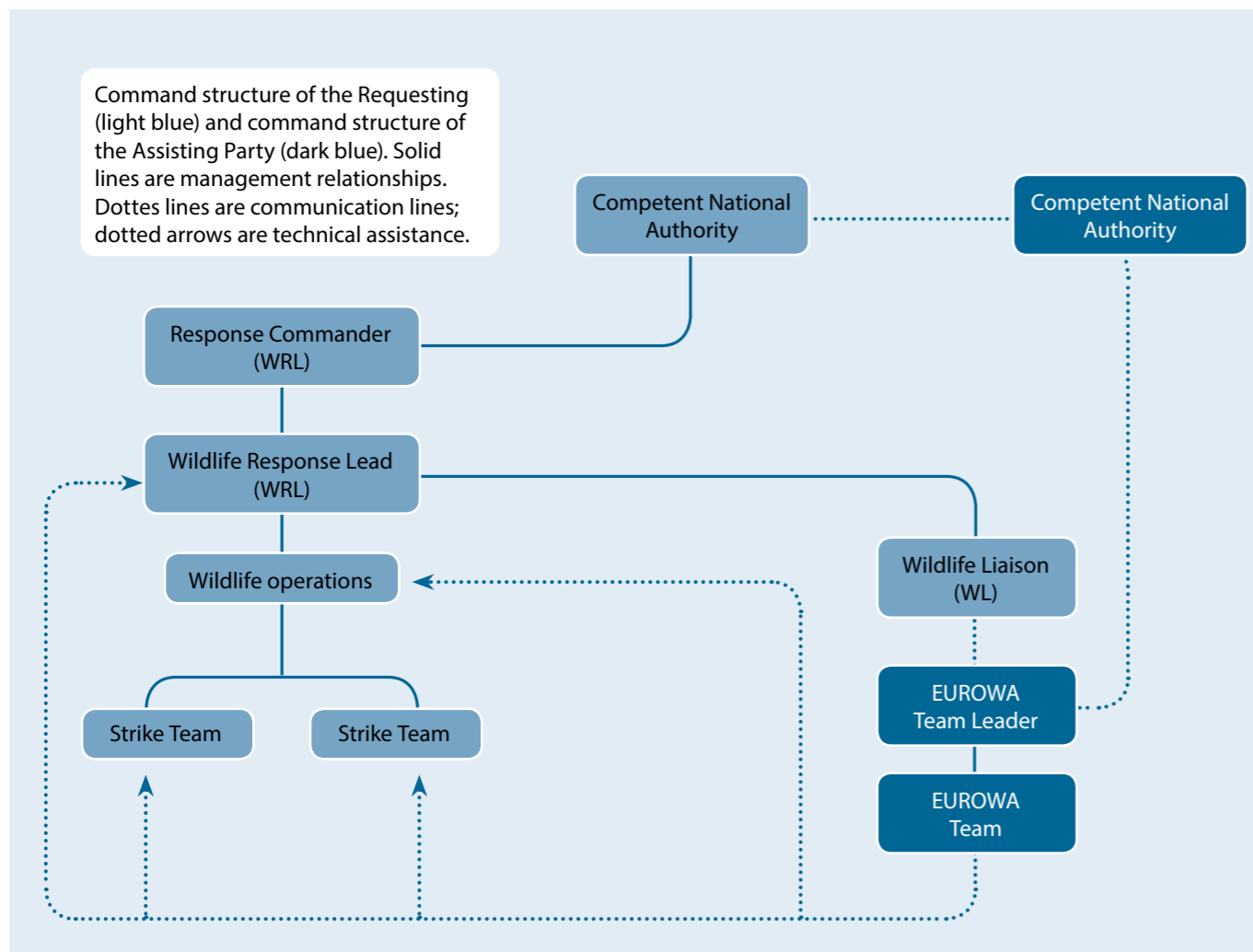


Fig 8. Procedure for integrating a wildlife response assistance team such as EUROWA into a national wildlife response, as described in Section 7.6 of the HELCOM Manual on Cooperation in Response to Maritime Pollution.

³ <https://helcom.fi/helcom-at-work/groups/response/ewg-owr/>

4.2.2 Bonn Agreement

The Agreement for cooperation in dealing with pollution of the North Sea by oil and other harmful substances (the Bonn agreement) from 1983 and amended in 2001 outlines how CPs shall cooperate in oil spill preparedness and response as well as surveillance for detecting and combatting oil spills.

The Bonn Agreement is closely associated with the 1998 Convention for the protection of the marine environment of the North-East Atlantic (OSPAR) which refers to pollution from offshore activities and offshore sources, as well as outlines that CPs shall “...take the necessary measures to protect and conserve the ecosystems and the biological diversity of the maritime area, and to restore, where practicable, marine areas which have been adversely affected;”.

Oiled wildlife response is not explicitly mentioned in the Bonn Agreement text. However, the Agreement’s Counter Pollution Manual has had a dedicated chapter (Chapter 34) on Wildlife Response which is scheduled for a revision in 2023. This chapter provides guidelines and principles facilitating the integration of foreign wildlife response experts or teams in a national response organisation but also guidance on how to use existing emergency communication systems to send

international alerts or requests for oiled wildlife response assistance. Finally, it provides a set of guidelines for the development of national oiled wildlife response plans that would support the international mobilisation of expertise (such as EUROWA) from abroad.

The Bonn Agreement has also adopted a Self-Assessment Tool to monitor progress made by the CPs in developing wildlife response preparedness.

The Bonn Agreement Strategic Action Plan (BASAP) (2019-25) notably promotes the establishment of efficient and optimum preparedness systems to ensure that response action by CPs is properly formulated to safeguard the marine environment. Action C3 of the Plan calls on CPs to “Strengthen the development of joint approaches to wildlife response, including identification of best practice and communication of wildlife response work to the public” to encourage its CPs to maintain information exchange on national wildlife response systems and further their national systems to better integrate oiled wildlife.

In 2021, the EUROWA network was granted observer status to the Bonn Agreement.



Fig 9. Contracting Parties to the Regional Sea Conventions in the Baltic, North and Mediterranean Seas aiming to improve the effectiveness of marine pollution preparedness and response.

□ 4.2.3 Barcelona Convention

The Convention for the Protection of the Mediterranean Sea Against Pollution (the Barcelona Convention) was adopted in 1976 and amended in 1995.

This Convention sets ambitious goals in Article 4 in order to “prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and to protect and enhance the marine environment in that Area so as to contribute towards its sustainable development”. In Article 9 and Article 10, it also obliges “the contracting parties to co-operate in taking the necessary measures for dealing with pollution emergencies [...]” and “[...] take all appropriate measures to protect and preserve biological diversity, rare or fragile ecosystems, as well as species of wild fauna and flora which are rare, depleted, threatened or endangered and their habitats, in the area [...]”.

These environmental objectives are supported by the Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol), from 1976 and updated in 2002. The Protocol sets the foundations for regional cooperation between the CPs. For instance, they are encouraged to follow a multi-stakeholder approach with the participation of local authorities, non-governmental organisations and socio-economic actors (Article 3, point 2) when dealing with incidents.

This Protocol led to the establishment of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), mandated for its implementation within the Mediterranean Coastal States. REMPEC has been instrumental in developing the region’s capability to deal with wildlife aspects of a marine pollution scenario.

Since 2011, REMPEC and Sea Alarm have been cooperating via the Mediterranean Assistance Unit (MAU), a network of experts in the field of preparedness for and response to marine pollution that can be mobilised to provide onsite and remote assistance to the CPs impacted by pollution. As part of this agreement, Sea Alarm can assist CPs with their wildlife response training and planning activities to further their national preparedness.

REMPEC also progressed wildlife preparedness in the region through various EU-funded projects such as POSOW I & II (2012-2013 & 2016-2017)⁴ which contributed to in-country capacity building and knowledge transfer, as well as West MOPoCo (2019-2020) which trained CPs to use Sea Alarm’s Self-Assessment Tool to assess their level of preparedness at a national level.

Finally, in the Mediterranean Strategy for the Prevention, Preparedness, and Response to Marine Pollution from Ships (2022-2031), various actions under CSO1 aim to develop further wildlife response capabilities:

- Action 1.2.1. advocates training via EUROWA model wildlife courses (BASIC Responder, ADVANCED Responder, SPECIALIST Responder, Manager, Wildlife Branch Director)
- Action 1.3.4 advocates development of “a framework for holistic integrated management of marine pollution incidents that enable a coordinated preparedness and response operation at sea and onshore, incorporating the response to oil-affected wildlife, at a national level and in the region-wide cooperation”
- Action 1.12.3 advocates the use of the guideline Oiled Wildlife Response Manual (POSOW 2013, now updated as Part G of the EUROWA Standards Series available at www.eurowa.eu).

⁴ <https://www.posow.org/>

□ 5 Twelve reasons why wildlife response should be professional

This chapter provides 12 reasons why a wildlife response should not be left to self-mobilising citizens, and why authorities should be in the lead of having a planned and professional response ready to go.



Fig 10. Wildlife experts and volunteers must be provided with PPE.

5.1 Improvising life-saving operations is not an option

Most textbooks on contingency planning point at improvisation as an important skill that emergency responders should have under their belt. This is often raised to counter the impression that response plans are the best way to prepare for a response, as every developing scenario will have some unique characteristics that a plan will be unable to capture. However, this cannot be applied to a wildlife response operation. When responding to life threatening situations, the response preparedness and capabilities must meet high standards, as every minute counts. This goes for the availability of ambulances and the proximity of hospitals, but also for at-sea Search and Rescue (SAR) operations, where the availability of communication systems, helicopters and lifeboat rescue teams are part of a maritime country's emergency preparedness.

Of course, ambulance and lifeboat personnel must improvise their work given the traffic or weather and sea conditions, but training, exercises, planning, and equipment make sure their operations have a high probability of success. Preparedness is truly lifesaving.

Wild animals that have been struck by a man-made pollution event become extremely vulnerable. They have lost the ability to live as normal in the wild and will try to make their way to a safer shoreline. This will be the "public domain" of a coastal country, and citizens will recognise the needs of the animals and try to assist.

Improvising the rescue of these animals without knowledge of their wild nature and behaviour, the veterinary understanding of the problems they are suffering from, or the toxicity of the oil that is covering their body, is both dangerous and doomed to fail. Although it will feel good to organise a "rescue" of the animals from the beach and start washing the oil off, the efforts will not benefit the animals, and in the end, it will not benefit the overall response. Most of the animals assisted by inexperienced actors, without implementing tested and internationally accepted standards for care, will die from stress during handling, at night in their boxes or cages, or shortly after they have been washed and released.

5.2 Be aware of the feel-good factor

For citizens and local NGOs who respond to a wildlife incident it will feel good to help the animals, and this feel-good factor is often the main component in their motivation. Media will also report on these efforts as something "good" that happens in the aftermath of the incident, and will be a vehicle for mobilising public support in the form of financial donations, towels, boxes, people wishing to volunteer, etc.

While the animal welfare aspects may become compromised under these conditions, the positive social impact of a rehabilitation effort organised by NGOs with the help of well-willing volunteers will be evident. In the past, NGOs have been effective in raising considerable sums to support the rehabilitation efforts. NGOs often have professional systems in place to set up a public campaign, but do not have professional systems in place to provide the veterinary care to the animals they want to help.



Fig 11. Rehabilitated animals being released often generates a lot of media interest (Bow Jubail oil spill, 2018).

In the emerging presence of such self-mobilising citizen initiatives and NGO campaigns, the authorities will be tempted not to step forward and leave the initiative and responsibilities to these improvising parties, regardless of the anticipated low success.

But by that stage, authorities are too late to effectively respond themselves, leaving a vacuum in the overall response to the oil spill emergency. Only the authorities should be held responsible for not having a professional oiled wildlife response ready to go. Wildlife im-

pacts should not be a surprise to the authorities who claim to be prepared to respond to the impacts of an oil spill in the marine environment. This environment has inhabitants including wild animals, some of which are there in high concentrations and highly appreciated by society. But these animals are very sensitive to the effects of pollution, when they may make it to shore, seriously debilitated and sick. They cannot be left there by design for the unprofessional rescue activities of self-mobilised citizens, who are driven by feel-good emotions.

5.3 Considering health, safety, and environmental aspects

Responding to an oiled wildlife incident can be dangerous. Oil is a toxic substance and may lead to health issues if protective measures are not in place. Working with wild animals can also be dangerous for untrained and inexperienced personnel, as animals can bite, peck, or pass on diseases. Self-mobilising citizens who act on the shore in an untrained and uncoordinated way in self-created facilities, are bound to increase the overall environmental impact of the incident. In their efforts they may interfere with economic activities (e.g., har-

bour incidents) or with the professional clean-up operations. They may spread the oil under their boots and pollute shoreline facilities, cars, and restaurants. They will enter and disturb vulnerable habitats to search and capture animals. They will also create unnecessary polluted waste and wastewater in their attempts to do the right thing. In other words, they will further complicate the response led by the authorities and increase damages and costs.

5.4 Need for a professional authority led response

The social and environmental effects of the arrival of oiled animals in the public domain should not be underestimated. In the case of a few animals arriving, these effects are probably minimal and insignificant in terms of management attention they need. But when many tens or hundreds of animals are arriving on the shore over days, weeks, or months, this can become a major issue for the authority-led incident response system to deal with. Professionalism is needed and professionals must be in strategic positions to deal both with the animals and with self-mobilising citizens and NGOs. Motivated citizens can be given a role as volunteers, but a well-designed volunteer management programme needs to be in place to do this successfully.

The fact that animals are still alive when they arrive in the public domain does not mean that each of these animals must be rehabilitated. However, their collective arrivals and visual presence cannot be ignored nor left to the public. Something must be done, and whatever that is must meet professional standards to be successful. Not only professional standards in the way individual animals are approached, captured, treated, euthanised and/or released, but also in the way the authorities are in the lead of these efforts and provide the infrastructure, communication, coordination, and decision-making powers. Even critics of the response should characterise it as being healthy, effective, at the right scale, environmentally just and meeting legal requirements.

5.5 Considering the polluter pays principle

A man-made pollution event ideally should lead to the identification of the polluter - the Responsible Party (RP). It is the task of the authorities to identify the RP and apply the polluter pays principle. For maritime incidents there are a range of international conventions in place that may apply and will provide the context and clarity for making sure that the RP or its insurer in

the end will pay the costs of the response. These legal instruments provide the standard mechanisms for claims and claim compensation. Criteria are in place that define which costs can be reimbursed via a claim, and procedures are provided that describe how these claims can be put together and submitted. The lead document for these criteria and procedures is the IOPC

Claims Manual⁵. This manual explicitly addresses the costs of an oiled wildlife response. The national authorities should be aware of this and assist professional parties dealing with the wildlife response to have their costs compensated for. As part of the oiled wildlife response plan, the authorities should plan for compensating the professional responders involved in the response and include these costs in the overall claim that the authorities submit to the polluter.

In many cases the polluter is an internationally operating company, who also feels embarrassed with having caused the oil pollution and the devastating effects to nature and society. Providing and funding a professional wildlife response is also in the interest of such a company and could even be demanded by the company in the immediate aftermath of the incident. In such a case it is also important that the authorities can lead

and integrate such a response and have the wildlife professional parties ready to respond as part of their preparedness system.



Fig 12. Harbour oil incident (Bow Jubail, 2018).

□ 5.6 Accounting for geographic complexity

A single marine oil spill event can easily affect stretches of tens of kilometres of coastline, where oil and oiled animals may arrive. Both can arrive on the same beaches, but oiled animals may typically arrive outside of the area where the oil is predicted to come ashore. Live animals will need immediate attention, especially if it is the aim of the response to reduce and minimise suffering. The geographical challenge will be to plan and provide various hotspots of coastal activity across

the long stretches of coastline where professional assistance to animals can be provided. This will require the mobilisation of many actors, going hand in hand with the logistics of material and equipment, and a solid network activity of communication and operational coordination. Such coordinated efforts could be based on standard approaches that coastal authorities will have under their belt to deal with other types of geographically complex response operations.

□ 5.7 Preparing for low probability, high impact events

While shipping activity is intensifying, the observation of oil spills in regional European seas has been decreasing. The occurrence in Europe of large tanker oil spills such as Erika and Prestige seem to have virtually disappeared. But the threat remains.

Not every marine pollution accident leads immediately to visual wildlife impacts. Although impacts at sea can happen (oil does not naturally stay away from animals), casualties will remain at sea, and an occasional animal that arrives somewhere oiled on the shore will probably go unnoticed. When pollution incidents happen near to the shore, close to high densities of marine animals, large numbers of casualties may start to appear in the public domain. Such visual impacts, and especially if many tens or hundreds of animals wash ashore over

many days in a row, will have a considerable impact on society. The public reaction to the Bow Jubail incident in 2018, where hundreds of swans got oiled within hours following an oil spill in the Rotterdam harbour, demonstrated this. The observation of oiled animals by citizens will immediately go viral on social media, activating large armies of citizens and NGOs who self-mobilise to try lead activities without necessarily having the skills and knowledge.

Whereas seabird impacts can be severe in quantitative terms, impacted seals, dolphins, or sea-turtles are also media-friendly when individual animals are observed oiled. Traditional radio and tv media will quickly pick up the dramatic images of impacted animals, and report on the activities of citizens.

These reactions ensure that even a relatively small oil incident may lead to a high social impact, which will overwhelm in-country resources and challenge the leading authorities. It is important that authorities anticipate these reactions via planning and preparedness. Even though such incidents only happen infrequently, authorities should make sure that they are prepared and

ready to activate a professional response. An important element of this preparedness is a well-designed public communication strategy that can be launched immediately to address the anticipated media or social media storm and lead the public initiatives into a coordinated and professional response effort.

□ 5.8 Recognising the role of pre-identified NGOs

The pollution of wildlife at sea and the sudden stranding of live and dead oiled animals on long stretches of coastline has the potential to ignite strong public reactions. The collaboration with NGOs can be very useful to help channel strong public reactions into a collective effort that builds on the positive energy of citizens to assist the response and the animals. Some NGOs have expertise with aspect of nature protection, nature reserve management, animal rescue or rehabilitation.

Other NGOs may have experience in training and managing volunteers. Such NGOs can be recognised and pre-identified, invited and involved in a preparedness programme, and enabled to develop useful contributions that meet the professional standards. NGOs can become the trusted intermediaries that can recruit volunteers from the public and multiply the coordinated work forces that are needed for a professional wildlife response, and which authorities must lead, but are unable to provide themselves. It is important to engage these NGOs as part of the emergency structure and enable them financially to set up structural long-term programmes, so that staff can be trained to professional levels to work alongside the authorities in the emergency response system. Such long-term programmes will also enable personal relationships to develop between authority officials and NGO representatives and an increasing level of trust and mutual reliance. In some cases, in-country EUROWA member organisations could play such a role, in addition to their assigned role of training and exercising responders as well as higher qualified professional wildlife experts who might take lead positions in the hands-on response.



Fig 13. Field exercise instructions.

□ 5.9 Protecting species of conservation interest in an emergency response

The protection of species of conservation interest is normally organised via monitoring their populations and the conservation and protection of their critical habitats and clean environmental conditions (free of pollution and disturbance).

Although aiming at preserving healthy populations, the legislative protection is also defined at the level of individual animals. Individual animals with a protected status are not to be disturbed, caught, killed, held in captivity, etc., although in practice this is not always complied with.

A man-made pollution incident can threaten such species in their wild environment. When they get oiled and arrive on the beach their legal protective status is still in place, and it will require authorities to oversee that the

animals should only be treated by licensed personnel. This requires the authorities to define as part of their response plan who is pre-identified as such, but also what the scope of treatment should be. Euthanasia may be considered as a valid option, but this needs to be explicitly defined and licensed. The same goes for attempts to rehabilitate. Some countries have written down that species of conservation importance (e.g., "red list species") should be rehabilitated, but fail to describe and facilitate the professional preparedness and readiness that this would require.

In case oil is spreading towards areas where large numbers of vulnerable species are concentrated (e.g. in-shore/offshore feeding areas, coastal moulting areas, nesting areas, nearshore haul-out sites), there may be a window of opportunity to remove the oil from the

⁵ https://iopcfunds.org/wp-content/uploads/2018/12/2019-Claims-Manual_e-2.pdf

water before reaching those areas. If this is no longer an option, there may be a window to actively disturb individual animals so that they move away from the oil or capture them unoiled and release them in an un-oiled environment. For these unusual and very disturbing activities, which are available in the armoury of a wildlife response, professional advice is needed, as well as a license.

It goes without saying that all the above decision-making needs careful planning and preparedness, and a pre-identification of the professional parties and actors that can be mobilised and deployed to carry out these activities. It also goes without saying that the responsibilities for decision-making and creating a state of readiness belongs to the domain of authorities, not NGOs. However, NGOs and scientists are still important parties to be involved as valuable resources of knowledge and operational capacity. This requires investments



Fig 14. Discussing wildlife response organisation structure during Authority workshop in Montenegro (2022).

into risk assessments, planning, scientific study and sensitivity mapping, pre-spill identification and licensing, training, and exercises.

□ 5.10 Dealing with game species in an emergency response

Some species of wildlife are defined as game species. This means that they can be killed for human consumption or for population control purposes. Exceptionally, the hunting of species of conservation interest such as whales and dolphins is allowed to defined groups of people, such as indigenous communities.

When game species become oiled and wash ashore alive, their survival must be subject to informed deci-

sion-making by authorities. The context for an interaction is an emergency response one: the animals are vulnerable in their oiled condition and should either be euthanised or rehabilitated. The latter may be controversial, as after their release they may eventually get shot, and criticism may be heard that an investment into the rehabilitation of the animals is a waste of money. Obviously, this an economical argument, but the situation still requires a solution, and other groups of the public may want to see an effort to try rehabilitating the animals. For euthanasia, hunters can be sent to the beach to shoot oiled animals, but their effectiveness needs to be assessed. Can they stop suffering without further complicating the situation, e.g. by damaging unoiled animals or scaring them into the oily environment? Health and safety aspects of shooting in the coastal area should also be seriously considered. Euthanising animals using other methods will still require capture teams to be sent to the beach and professional euthanasia being conducted or overseen by a veterinarian. All these strategies should be pre-defined via an oiled wildlife response plan, supported by the necessary investments into capacity and capability of pre-identified operational professionals.



Fig 15. Atlantic Puffin (*Fratercula arctica*), one of the most threatened endemic European seabird species.

□ 5.11 Making strategic decisions: Euthanasia or rehabilitation?

Euthanasia should always be considered as the important-to-have option in any wildlife response. Not all animals are fit enough to be rescued and rehabilitated. Even not all fit animals can be rehabilitated, as some species cannot be held in care successfully. In some cases, the maximum capacity of a professional facility may be overwhelmed by large numbers of oiled animals arriving ashore over the course of days or weeks. To rehabilitate successfully, triage must select the fittest animals that are thought to benefit from the treatment, and others should be humanely euthanised.

Whether to euthanise an animal or not is again an informed decision that must be taken by a veterinarian and under the responsibility of the appropriate authority that provides the license to operate. Capture, rehabilitation and/or euthanasia are all part of a licensing system that has been developed specially for dealing with pollution emergency response. The licensing authority will (and should) require a description of the methodologies and protocols that will be applied, so that the license will be about professional and science-based approaches. It should be kept in mind that the application of euthanasia will require that animals are captured from the shoreline (unless shooting is chosen as

the preferred method). This will still require a capture strategy to be developed, including the pre-identification, training, and exercising of operational parties who will carry out the systematic professional capture in the days/weeks following a pollution incident.

Euthanasia as a methodology can be controversial, and not all methods will have the same effect on individual animals. A suitable methodology can be selected based on available international literature on euthanasia in an oiled wildlife response context.



Fig 16. Tabletop exercises can provide insight into complex processes.

□ 5.12 Defining responsibilities: Authority-led planning and preparedness

Having in place an integrated wildlife response plan is the best remedy for authorities to describe how they will play their leading role. Apart from describing scenarios and defining objectives and strategies for wildlife response, the principle focus of the plan should be to address the multiple responsibilities and jurisdictions that are connected to responding safely and professionally. Which are the professional resources that are needed, how can they be mobilised, and how can they best be supported in the context of various relevant responsibilities and jurisdictions laying with multiple authorities. The plan should recognise these needs against the fact that probably none of these authorities would necessarily recognise the support to a wildlife emergency as their core business. Still, all key authorities must come onboard to make the preparedness system work, to enable a successful response that delivers on the agreed objectives. The plan should re-

cognise the position of typical "wildlife authorities" for the fact that they may not have any relevant 24/7 duties in their package and are unable to set up and run a complete wildlife emergency response across the jurisdictions of multiple other authorities. It is the reality of a wildlife planning process that it must be designed as a multi-stakeholder process to ensure that it will lead to a plan built upon shared ownership, regardless of a range of underlying jurisdictions. As such it will create a basis for collaboration that will have many unexpected spin-off benefits that will go beyond what is strictly needed for delivering an effective wildlife response.

Annex 1 in this document provides guidance on what an integrated wildlife plan should look like, with an annotated table of contents giving guidance on what information should go into each section and why.

□ 6 Developing capacity: the EUROWA philosophy

The preparedness and response capabilities for European wildlife emergencies must be further developed as many countries do not have an integrated response plan nor a programme for capacity building. The EUROWA philosophy is a useful engine for this development. EUROWA has an explicit vision and mission (See Box 2), an existing framework for capacity building and aims

for structural collaboration with leading authorities based on mutual trust and dependency. Taking constructive steps towards a more European approach in developing authority-NGO relationships is the logical next phase following decades of history and in consideration of what EUROWA currently can offer.



Fig 17. EUROWA Network during a technical meeting in Ostend (April 2022).

□ 6.1 History of professional marine wildlife response

Over decades, the international community of marine wildlife responders has matured because of the collective endeavours of a collaborative network of the leading NGOs and universities in the field. They have been able to develop their professional capabilities based on jointly published good practice guidelines thanks to increasing structural support received from the oil industry and some of the more forward-thinking European authorities.

The benefit of this structural support has been mutual. While the wildlife responders are better able to explain the challenges and needs of a professional wildlife response to industry and authorities, they are likewise

educated and trained/exercised on the wider aspects and methodology of marine emergency response and management. All parties have developed collective insights about the best way that wildlife response should be planned for, how it should be delivered, and how it should be fully integrated into the overall response. This has led to new guidelines, international publications and joint campaigns in international conferences and events.

Today the leading European NGOs have created the EUROWA network and aim to develop 24/7 European wildlife emergency response preparedness for and with European governments.

□ 6.2 The EUROWA charter and network

A first formal collaboration between European expert organisations was agreed via multiple MoU's that were signed in the early 2010's. 2015-2016 were key years as a new EU-funded project allowed the founding organisations to develop the technical basis and the collaborative structure of the **EUROPEAN OILED WILDLIFE ASSISTANCE** (EUROWA). In 2019 a more visionary and structural collaboration was agreed via the EUROWA Charter⁶ which all network members have signed. This document replaced the initial MoU's and is a shared declaration that describes the vision, mission, and purpose of the network and how it operates. It aims to provide a mechanism to reinforce the bonds between organisations but also the bonds between them and their national authorities, enabling EUROWA to become an integrated and recognised professional service available to governments and NGOs in Europe. The EUROWA Charter also creates various governing bodies, a secretariat, and technical committees of experts who oversee and manage the standards of good practice. Standard training modules have been developed to train and exercise wildlife responders who can be accredited by the Network. Different levels of expertise

for this accreditation have been developed, and the accreditation is based on proven capabilities and centrally registered in a database.

Box 2: EUROWA's Vision and Mission Statement

EUROWA's vision is that European countries can deal effectively with emergencies that threaten and affect marine wildlife, because each country has developed and adopted an integrated marine wildlife response plan and invests in training and exercising the actors of that plan, where possible in close cooperation with neighbouring countries for purposes of cost-efficiency and mutual assistance.

EUROWA's mission is to support and empower European authorities, NGOs, and potential polluters in Europe in dealing jointly and professionally with the challenges connected to the assistance of affected marine wildlife using agreed international standards and procedures.

□ 6.3 The EUROWA Charter and authorities

The EUROWA Charter explicitly reaches out to national authorities in each European coastal country, to endorse the development of professional and integrated marine wildlife emergency response and support the endeavours of the EUROWA Network. Authorities are also encouraged to support EUROWA at international levels

via Regional Agreements, international conventions or EU programmes and institutions.

A Governmental Advisory Committee was created with the aim of promoting the EUROWA charter and activities amongst European governments, and to provide advice to the EUROWA network.

⁶ <https://eurowa.eu/resource/eurowa-charter/>

6.4 The EUROWA network membership

The Associated Membership of EUROWA is reserved for NGOs. By adopting and signing the Charter, an NGO can become an Associate Member of the network and subsequently join the General Assembly in the decision-making structure. By signing, Members make an explicit commitment to adopt and help to further improve the value of the Network, the published good practices, and apply these good practices via training and exercises in real time emergency response situations.

An Affiliated Membership of EUROWA is open to NGOs, universities, authorities, or scientific research institutes, subject to General Assembly approval. Affiliated Members formally declare that they commit to adopt the philosophy, standards and mission activities described in the Charter, as if they were Associated Members, but they do not have access to the decision-making structure. Affiliated Membership allows parties to have personnel registered as qualified responders and as trainers after successful completion of the training/exercise modules. Their qualified personnel can be part of technical committees and be invited for response teams.

6.5 EUROWA Response Team (experts and equipment)

Responders with the appropriate qualification can be invited to join an international EUROWA response team. This team can be mobilised to assist with a wildlife emergency response around Europe and further afield. Mobilisation of the Team can be requested by authorities of the country that is confronted with a wildlife emergency that overwhelms their national resources. The mobilisation will be effectuated via procedures described in the published EUROWA Standard Operating Procedure⁷. The mobilised Response Team has an internal organisation structure and a code of conduct for their operations abroad.

The EUROWA Response Team can also be mobilised with the EUROWA Equipment stockpile, currently stored in Belgium. The equipment aims to provide a useful starting point for the Response Team to work with, with the aim of providing minimum care to oiled animals that have already been captured. In all cases though, additional equipment will have to be sourced and purchased at the time of the spill to carry out a complete oiled wildlife response.

6.6 EUROWA Expertise Networks

The EUROWA initiative was first developed by wildlife responders dealing with oiled seabirds. Seabirds are always the most challenging group in a wildlife response because they can be impacted in large numbers and their sensitivity to oil pollution requires advanced facilities to be available and highly detailed protocols with species-specific elements. As part of an EU funded project in 2015-2016 the protocols and handbooks were developed, as well as a training portfolio, and the first network was created by the establishment of MoU's.

As part of the EUROWA-2 project a second expertise network was started to deal with sea turtles. Regional and international experts supported the development of good practice handbooks, protocols and training packages that are now in place to develop regional capacity in the Mediterranean. The organisations of



Fig 18. EUROWA Oiled Wildlife Veterinarian training.

⁷ <https://eurowa.eu/resource/part-a-standard-operating-procedure-external/>

experts that contributed to these discussions are now in a process to consider EUROWA Membership and set up a EUROWA Technical Committee with a sea turtle expert group.

A marine mammal expert group is a logical next step for EUROWA to explore but does not exist as yet. EUROWA is also investing in bringing other expert groups together and facilitating their discussions. Expert groups of EUROWA-qualified Specialist veterinarians and seabird scientists have been initiated.



Fig 19. EUROWA Equipment stockpile.

6.7 The future of EUROWA as a professional network

EUROWA network members were interviewed in 2022, revealing that national oiled wildlife preparedness in their home countries is quite limited and variable. Most of the countries do not have a formally approved National Oiled Wildlife Response Plan and EUROWA partner organisations are also not always mentioned in the national Oiled Wildlife Response Plans or Oil Spill Response plans. From discussing preparedness levels with the EUROWA organisations, some joint concerns emerged:

- Most of the organisations do not have a direct channel of communications or regular exchanges with the authorities regarding oiled wildlife response.
- Only two countries provide a stable state/regional budget for oiled wildlife preparedness.
- Most of the authority-led exercises on oil spill response do not include wildlife components and if wildlife components were to be included, the EUROWA organisations would not be involved.

As a growing professional network, EUROWA is facing various challenges for its ongoing development and maintenance work. Without funding, the continuation of the network and its training courses, meetings, standards development etc., are difficult to sustain. All Members already provide in-kind support to ensure continuation of network activities. Still, EUROWA's international training events require resources and a budget to cover course costs (e.g., equipment and facilities to run them, travel, accommodation and subsistence costs for participants and trainers, trainer's fees, etc.).

The structural collaboration with the national authorities of network members becomes more and more important to sustain the EUROWA network. In the end the professional qualities that EUROWA is aiming for will benefit national authorities who have the responsibility to develop and maintain adequate resources for all aspects of holistic and integrated management of marine emergencies. When wildlife response becomes more formally recognised as an element of such a national response structure and its preparedness, training of national EUROWA members' personnel could accordingly be accommodated under a national budget allocation.

If all European coastal countries would have a national EUROWA member and if these members would be supported by their national authorities for their EUROWA training and exercise programme, three objectives would be served:

- The national preparedness and response capability would increase, and the country would eventually have a highly qualified and professional community of first responders that can take care of incidents and help with training further EUROWA expertise in their own and/or other countries.
- In an emergency response that overwhelms the national capabilities, the assistance of a EUROWA Team can be invited to help deal with the challenges at a larger scale. The Team would be able to seamlessly blend with the national capacities already dealing with the response following EUROWA standards and protocols.
- By developing its national capabilities based on the EUROWA philosophy, a country would also contribute to the preparedness of Europe as a whole.

7 Actions for the future of European marine wildlife emergency response

The former chapters of this document provide a rationale for the urgency to develop, strengthen and maintain professional marine wildlife response capabilities. The last chapter provides a proposed European Action Plan by which that ambition can be realised. It provides actions that can be adopted and realised at national

and international levels, by governmental agencies, but also by collaborative expert networks such as EUROWA. Together these actions present a coherent wildlife programme in a framework of holistic and integrated management.



Fig 20. Authority involvement during the Bow Jubail wildlife response incident (2018).

7.1 Actions at national level

7.1.1 National authorities

- Identify a lead authority to start a process amongst all key authorities (authorities with at-sea and on-shore response capabilities) for developing objectives and strategies by which a professional wildlife response can be delivered.
- Develop an integrated wildlife response plan (see Annex 1) that specifies which objectives (incl. e.g. euthanasia, rehabilitation) for wildlife response are prioritised, how they can be achieved and by whom, if appropriate making use of a tiered response approach.
- Ensure a multi-year implementation programme to build in-country capacity to deliver on the objectives set out in the integrated wildlife response plan.
- Develop a relationship with the national EUROWA Member(s) based on mutual trust and understanding and facilitate their professional contribution to the implementation programme via dedicated and reasonable budgets.
- Maintain EUROWA's registration (by a Member State e.g. Belgium) in the Common Emergency Communication and Information System (CECIS), under the Union Civil Protection Mechanism.
- Facilitate the EUROWA network's access to Union Civil Protection Mechanism training opportunities as appropriate.
- Develop wildlife pollution risk profiles and response capabilities both at sea (preventive) and on the shore (preventive and mitigating).
- Consider needs for EMSA to stockpile wildlife response equipment, to support cross-border wildlife response.



Fig 21. Aerial view of temporary rehabilitation centre in the Bow Jubail incident (2018).

7.1.2 EUROWA Members

- ✓ Engage with the leading national authorities and agree the services (24/7 readiness, capacity building via e.g., training, exercises, equipment, and facility advice) to be provided as part of the integrated wildlife response plan.
- ✓ Ensure the delivery of a formalised EUROWA-standardised training programme for their own personnel and identified target groups (other NGOs, experts, citizens) to ensure capacity building of hands-on resources according to the levels identified by the integrated wildlife response plan.



Fig 22. Practicing bird capture on the beach.

7.2 Actions at European level

7.2.1 European Union's Civil Protection Mechanism

- ✓ Maintain dedicated project funding for marine emergency preparedness and response by describing priorities that would call for projects. For example in the field of HNS challenges in relation to

marine wildlife; develop cross border wildlife response strategies, protocol and training development for marine mammal response, etc.

7.2.2 EMSA

- ✓ Explore stockpiling of wildlife response equipment, according to Member State needs, to assist cross border wildlife response.
- ✓ Develop awareness for the aspects of wildlife impacts at sea and stimulate pro-active decision-making regarding wildlife protection measures and early warning of coastal authorities.
- ✓ Promote the concept of holistic and integrated management and ensure that wildlife response is explicitly recognised as an integrated part of such a response.



Fig 23. Trainees receiving EUROWA qualifications.



Fig 24. Oiled Wildlife response is a standard agenda item at HELCOM Response meetings.

7.2.3 Regional Agreements

- ✓ Develop and maintain a chapter in the Agreement's Response Manual that describes the mutual assistance procedure for mobilising a EUROWA wildlife response team and work with the CPs towards adoption and implementation of this procedure.
- ✓ Promote the concept of holistic and integrated management and ensure that wildlife response is explicitly recognised as an integrated part of such a response.
- ✓ Allow the specific inclusion of wildlife response and preparedness in the standard agenda of meetings.
- ✓ Identify seasonal hotspots for vulnerable wildlife where an oil incident could potentially cause large impacts and help to ensure that national wildlife response plans, preparedness and capabilities in these areas are sufficiently developed.

7.2.4 EUROWA Network as a whole

- ✓ Secretariat to facilitate network continuity, organise joint activities and represent the Network at international meetings as appropriate (e.g., Regional Agreements).
- ✓ Standards to be developed and kept up to date by engaging technical working groups (seabirds, sea turtles, and -in future- marine mammals), professional network activities (veterinarians, scientists, rehabilitators, authorities) and via connections with professional networks at global level (e.g., GOWRS) and global industry.
- ✓ Work to implement the actions identified in the agreed EUROWA Annual Work Plans, such as animal care protocols for other marine wildlife species at risk, expanding and strengthening the training portfolio and development of protocols for HNS-impacted animals, including the additional health and safety measures for professional wildlife responders.
- ✓ Structural meetings of EUROWA governance and advisory groups, e.g., General Assembly, Governance Committee, technical committees, Government Advisory Committee, etc.
- ✓ Monitoring progress of national activities, lessons learned, developing good practice, and ensuring international communication and advocacy.
- ✓ Identify funding and engage in opportunities for international activities, e.g., EU projects, international workshops, and conferences.

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Marc Guyt / www.agami.nl Fig 15

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Sea Alarm Fig 3, Fig 4, Fig 6, Fig 7, Fig 11, Fig 14, Fig 16, Fig 17, Fig 18, Fig 19, Fig 24

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Will Leurs Fig 10, Fig 13, Fig 22, Fig 25

Acronyms

BASAP	Bonn Agreement Strategic Action Plan
BSAP	Baltic Sea Action Plan
CECIS	Common Emergency Communication and Information System
CPs	Contracting Parties
EMSA	European Maritime Safety Agency
EUROWA	EUropean Oiled Wildlife Assistance
HELCOM	Helsinki Commission
HNS	Hazardous and Noxious Substances
MS	Member States
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
RP	Responsible Party
UCPM	Union Civil Protection Mechanism

□ Annex I. Integrated Oiled Wildlife Response Plan – Annotated Outline

This document provides an outline with an annotated table of contents for an Integrated Oiled Wildlife Response Plan, giving guidance on what information should go into each section of the Plan and why. The

template is based on existing plans in place in Europe and the IPIECA Good Practice Guide on Oiled Wildlife Preparedness⁸.

The integrated oiled wildlife response plan is divided into four parts:

- I. Foundations
- II. Strategy – operational strategies, participants, preparedness
- III. Operations
- IV. Annexes



Fig 25. Oiled swans waiting to be washed during the Bow Jubail incident in Rotterdam (2018).

⁸<https://www.ipieca.org/resources/wildlife-response-preparedness>

Part I: Foundations

1. Plan – owner's introduction	An introduction explaining the motivation of the plan owner to develop the plan, the process by which it was developed, and what it contains.
2. Risk, rationale	A description of potential sources of marine pollution and risk of incidents, in relation to scientific data on the distribution of vulnerable species such as marine birds, marine mammals and/or sea turtles. If relevant, past spill scenarios could be mentioned to illustrate risk. Quantitative data on numbers of animals that are known from certain areas, and an assessment of what a realistic worst-case scenario would look like. It is important that the potential social impacts of a wildlife incident are addressed and the need to ensure a fast and professional response.
3. Relationship with other plans	List of existing response plans in the area of scope (e.g. National Oil Spill Contingency Plans), and how this new Wildlife Plan relates to and complements those plans. Indicate how the management of a wildlife response is embedded into the overall emergency response system.
4. Scope of the plan	Illustrate by a map that shows which geographical area the plan is confined to. This can be further described with text, if relevant. The map could also provide data on borders of authority responsibility (e.g. at sea/onshore response, limits of jurisdiction for municipality, region, province, if relevant)
5. Cooperation public and private	Explanation of the government lead in the response and the extent to which private parties (contractors, animal assistance groups, NGOs) have been included and why (or why not). Explain the role of citizens if relevant as volunteers or otherwise. Define what are the conditions under which can these parties make a contribution, and which positions or roles have been assigned to them.
7. Legal and policy context of the plan	List of all relevant legislation, National and International, that applies, and how: <ul style="list-style-type: none"> ■ Environmental legislation (waste management) ■ Legislation that defines key roles of authorities in pollution response ■ Aims and relevance of conservation legislation (protected species, national transport of wildlife) ■ Aims and relevance of animal welfare legislation (wildlife handling permits, rehabilitation permits) ■ International conventions (conservation of species and habitats, regional conventions)
9. Plan implementation and maintenance	Reinstating the ownership of the plan, how it will be implemented and how it will be maintained (plan adoption, signatory process, future updates and revisions, etc.).
10. Description of content	An overview for the reader to explain the structure of the plan, and how/where information can be found.
11. List of abbreviations	Speaks for itself

Part II: Strategy – operational strategies, participants, preparedness

1. Operational strategy	Describes the organisation of operational management, staffing, planning and logistics, describes which parties participate in the implementation of the plan, and which tasks and responsibilities they have in this regard.
a. Objectives	A range of objectives can be listed here, in different subcategories: <ul style="list-style-type: none"> ■ Options of a response and their quality objectives (prevention, mitigation [including rehabilitation and euthanasia], monitoring [live and dead animals], documentation, etc.) ■ Objectives of response in terms of health, safety, environment, social ■ Objectives of cooperation between authorities, between authorities and private responders
b. Principles and standards	Principles underlying the response, e.g. nature conservation, animal welfare, good practice, science based guidance. Should make reference to published standards that have been adopted for defining what good practice means.
c. Species of concern	Species groups and strategy to dealing with potential risks and species impacts from pollution incidents.
d. Tiered response	Definition of tiers (categories of incident – see also III.5).
e. Management	Which authorities provide overall supervision and management of the wildlife response (Wildlife Branch) and how this is integrated into the Incident Management System. What are the main responsibilities of the managing authorities, wildlife response manager and supporting units. Incident organisation chart.
f. Assignment of functions	How functions are assigned within the plan, which parties undertake the following functions: <ul style="list-style-type: none"> ■ Legal, policy and financial ■ Operational technical and support ■ Health and safety
g. Planning, logistics and communication	Description of the chain of operations in oiled wildlife response and how operations will be planned and managed (animal arriving ashore, organisation of prevention activities, search & collection activities, use of permanent and temporary facilities).
h. Finances, budget management, claims management	Overview of budget arrangements during an oil spill, guiding financial principles, what is covered and basic arrangements regarding reimbursement of costs
i. Internal and Public communications	Structure and flow of communications: internally in the IMS, including response details and wildlife activities; and externally with authorities or media.
j. Reporting and evaluation	Reasons why records of decisions, agreements made and costs incurred must be kept. How records are integrated into the Common Operating Picture and importance of evaluation.

Part II: Strategy – operational strategies, participants, preparedness (Cont.)

2. Participants and responsibilities	
a. Governmental actors	Overview of roles of all governmental plan actors, their responsibilities and powers in an oiled wildlife response. Can include Ministries/entities working on at-sea response, shore-line response, local (municipal authorities), environmental and conservation issues, emergency response, habitat protection, game management, food safety, social issues during an emergency, communications, utility providers (water, electricity, waste management), police, fire brigades, health providers etc.
b. Non-Governmental actors & contractors	Overview of roles of all national non-governmental (NGO) and contractors identified in the plan as actors, their responsibilities and powers in an oiled wildlife response. Can include national wildlife response organisations, volunteer providers and coordinators, veterinarians, animal keepers, scientists. Also refer to international NGOs with oiled wildlife response expertise.
3. Preparedness	
a. Training	Description of training programme in place to support the plan, what it entails (type of courses and regularity), and who is responsible for funding and running it.
b. Exercises	Description of exercise programme in place to support the plan, what it entails (type of exercises and regularity), and who is responsible for funding and running it.
c. Multi-year programme	Description of an overall picture of a dedicated multi-year training and exercise programme aiming at creating an adequate level of tiered preparedness in a specific time framework.

Part III: Operations

1. Flow chart: From notification to response	Flowchart summarising the decision-making process in response to an incident from start to finish. Steps to be taken in the diagram refer to other sections in this plan which describe the process steps and participants in more detail.
2. Notification, activation & mobilisation	Process and summary flowchart of process to activate the plan, inform all key parties and set up crisis committee. Describe process for reporting the incident, alerting all relevant parties (key team members and authorities), process to activate the plan and convene initial coordinating committee (establish and staff the control room). Describe process to assess the scale of the incident (based on location and season), what type of information and where to get it from on (oil type, location of spill, weather, animals oiled etc.), identify species immediately at risk, and decide on level of resources to be mobilised (need to assemble an assessment team, a full response team, mobilising or putting resources on standby).
3. Management domains – roles and job descriptions	
a. Operational lead	Job Description for Operational Lead including: who is responsible for implementation (name of the assigned function), tools available to assist performing this role, actions in preparation of first crisis meeting, target activities in first 48 hours, indicators to measure performance of the role).
b. Field management	Job Description for Field Manager (field operations, deterrence, reconnaissance, recovery and transport) including: as in 4a above.
c. Facility management	Job Description for Facility Manager including: as in 4a above.

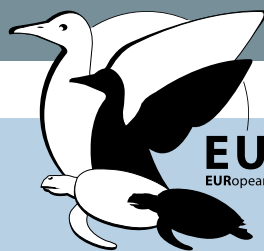
d. Facility event management	Job Description for Facility Event manager (person responsible for setting up temporary rehabilitation facilities) including: as in 4a above.
e. Wildlife care manager	Job Description for Wildlife Care Manager (person responsible of overseeing all issues related to animal care, animal welfare, protocols, etc.): as in 4a above
f. Health and safety prevention management	Job Description for Support Manager (person responsible for providing biological advice on risks to wildlife and how to mitigate those risks), including: as in 4a above.
g. Management support	Job Description for other roles supporting the managerial structure (to provide support on various issues e.g. liaison, data collection and reporting, communications, environmental/relationship issues, financial, logistics, information technology and sharing, volunteer coordination etc.) including: as above.
4. Guidance to operational wildlife response decision making	Flow diagrams guiding on potential wildlife issues encountered during an incident, response strategies and references to operational guidelines (Part IV: Annexes)
5. Scenarios and response capacity	
a. Tier 1 capacity	Describe operational strategy for a 'local capacity' incident, which can be dealt with by local oiled wildlife response resources within the vicinity of the spill. Includes the 'when', 'what', 'who' and 'how'.
b. Tier 2 capacity	Describe operational strategy for a 'national capacity' incident, describe response arrangements for larger scenarios which will require assistance from oiled wildlife response resources over a larger area within the country. Includes the 'when', 'what', 'who' and 'how'.
c. Tier 3 capacity	Describe operational strategy for a 'national complex' incident, describe response arrangements for full scale, complex scenarios which require extensive mobilisation of national oiled wildlife response resources (including construction of temporary wildlife rehabilitation centres) and assistance from international experts (e.g. EUROWA). Includes the 'when', 'what', 'who' and 'how' and additional mobilisation procedures for incidents at this level.
6. Demobilisation	Criteria and procedures for downscaling and demobilising resources (facilities, equipment, personnel) in relation to the decreasing scale of the incident, process to develop a demobilisation plan. For equipment includes cleaning, maintaining and replacing and any transfer of ownership.
7. Evaluation	Agreed process for post-incident evaluation, preparing a formal detailed report, topics to be covered and process to ensure that lessons learned are incorporated into future revisions of the plan.

Part IV: Annexes

1. Information	
a. Maps	<ul style="list-style-type: none"> ■ Wildlife sensitivities (spatial and seasonal vulnerabilities) ■ Risk locations and probable fate of oil ■ Wildlife response equipment stockpiles, oil spill response equipment stockpiles and staging areas ■ Coastal facilities, staging areas, access roads, hotels, etc. ■ Shoreline types and zones for search and collection strategies ■ Area plans (in case of remote, complicated or vulnerable sites)
b. Species at risk, seasonal sensitivity and spatial vulnerabilities	<ul style="list-style-type: none"> ■ Species lists, seasonal distribution of marine wildlife species, location of sensitive/protected areas for wildlife. ■ Vulnerable species and their susceptibility to oiling, natural history, behaviour in captivity, expected, rehabilitation success, most common diseases

Part IV: Annexes (Cont.)

c. Notification list	<ul style="list-style-type: none"> ■ Contact details for organizations and identified emergency officers ■ Relevant organizations and their field(s) of responsibility: local and national government; animal welfare organisations, universities, wildlife rehabilitation centres etc. (including name of contact person, rank and responsibility, address, telephone and email) ■ Sources of personnel: veterinarians and veterinary nurses, wildlife rehabilitators, wildlife biologists; necropsy specialists, local authorities, caterers, security providers, volunteers (including availability and contact details)
d. Equipment lists	<ul style="list-style-type: none"> ■ Equipment needed during the initial phases of a response where operations like search and collection, transportation and stabilisation will take place ■ Equipment for shoreline search and collection: PPE, nets, boxes, plastic bags; labels, communications equipment, etc. (including manufacturer/supplier, type, size, location, transport, contact, delivery time, cost and conditions) ■ Basic equipment to provide stabilisation to species before a full rehabilitation takes place. ■ Other support equipment: communications, catering, housing, transport, field sanitation, shelter, freezers (including availability, contact, cost and conditions)
e. Other lists	<ul style="list-style-type: none"> ■ Staffing, veterinary kits, customs, waste management, safety briefings; etc.
f. International Standards of good practice	<ul style="list-style-type: none"> ■ List of documents reflecting internationally agreed standards of good practice (global and European experts).
2. Guidelines	
a. Response Operations - Euthanasia	Criteria and protocols for applying euthanasia for the different species identified at risk in the area of scope of the plan.
b. Response Operations - Rehabilitation	Protocols/instruction sheets handling, care and rehabilitation of oil affected animals for the different species identified at risk in the area of scope of the plan. Link to EUROWA Manual Animal Care during an Oiled Wildlife Response (EUROWA Standards series part B)
c. Response Operations - Field operations	Strategies for prevention (hazing and deterrence, pre-emptive capture), protocols/instruction sheets needed for search and collection. Search and collection team equipment kits. Carcasses collection and scientific analysis.
d. Facility setup and facility operations	Guidance on setting up different facilities depending on the size of the incident (Wildlife response Command Centre, Beachhead Collection Point, Forward Holding Centre, Wildlife Rehab Centre). Protocols for managing populations of animals in rehabilitation facilities, including all associated support and logistics functions (utilities, waste, personnel management etc.), protocols for necropsy facilities. Lists of facility equipment available.
e. Other general operations	Protocols to follow regarding health and safety measures when working with (oiled) animals, development of Health and Safety Plans, PPE recommendations, etc. Communication instructions, dealing with media, etc.
3. Forms	Templates for all forms and log sheets to record information during a response, for animals, personnel and operational tasks.



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