



Research has suggested that over 300,000 whales and dolphins die each year due to entanglement in fishing gear or marine debris.

Entanglement is arguably the single most significant threat to cetacean welfare, and an obstacle to the recovery of some endangered whale populations.

Some animals drown whilst others tow heavy, tightly wrapped lines which cut through skin and blubber causing infection, starvation and even amputation of fins or tail.

In response to the rising number of reported entanglements, the IWC held a workshop on the welfare implications in 2010. This was followed by the appointment of an expert advisor, tasked with the development of a Global Whale Entanglement Response Network. A further workshop in 2011 assembled a panel of international experts to establish safe and effective disentanglement protocols which were then developed into a training programme, available to all IWC member governments interested in building or expanding their entanglement response capability.

Disentangling large, often injured animals at sea is a difficult and dangerous task. Another priority identified by the expert panel was to highlight the risk involved, and emphasize the importance of professional, trained and equipped response.

The programme was developed as a partnership between the IWC and the Center for Coastal Studies (CCS), Provincetown, USA. The CCS is a very appropriate host for the Entanglement Network. It has been at the forefront of entanglement response since the problem was first identified in the 1970s, developing some of the tools, and pioneering techniques in use today.

The first IWC-CCS training workshop was held in Brazil in 2012. Since then, more than 700 entanglement responders have been trained and the Network has reached across twenty six countries and four continents.

Several workshops have been held in conjunction with regional agreements such as the IWC Conservation Management Plan for South Pacific right whales, and the marine mammal action plans of the Permanent Commission for the South Pacific, the United Nations Environment Programme's Specially Protected Areas and Wildlife Protocol and the Secretariat of the Pacific Regional Environment Programme.

THE TRAINING

Training workshops are tailored to the specific requirements of the host government, but all follow the protocols and curriculum devised by the international expert panel in 2011. The majority of workshops last for two days.

The first day is spent in the classroom where participants receive an overview of the global entanglement problem and approaches taken by other countries. The importance of collecting data from every entanglement is also highlighted. This is followed by region-specific information, examples of local entanglement events and relevant regulations. Correct use of tools, techniques and safe decision-making procedures are also discussed.

On the second day, participants put theory into practice on the water. One boat simulates an entangled whale, trailing ropes, nets and other objects likely to form part of a local entanglement. A second 'rescue' boat carries two of the trainees at a time, equipped with the custommade tools to practice the techniques learnt in the classroom.



Demand has enabled the programme to expand, now offering Spanish language training (conducted by some of its own apprentices) and advanced workshops, helping those already trained to perform more difficult disentanglements.



YEAR	LOCATION	NUMBER OF TRAINEES (classroom and boat-based)
2012	Brazil	43
2012	Argentina	60
2012	United Kingdom	23
2012	Mexico (Pt Vallarta)	53
2012	Mexico (La Paz) inc. Costa Rica, Dominican Republic and Panama	46
2013	Ecuador (Salinas) inc. Chile, Columbia, Panama and Peru	34
2013	Panama	30
2013	French Caribbean inc. Anguilla, Belize, Colombia, Dutch Caribbean, Trinidad and Tobago, Puerto Rico, St Lucia, St Kitts and Nevis, Venezuela	12
2014	Mexico (El Vizcaino Biosphere Reserve)	34
2014	Dominican Republic inc. Puerto Rico	36
2014	Tonga inc. Vanuatu	12
2014	Mexico (Oaxaca)	35
2014	Mexico (La Paz, advanced)	33
2014	Mexico (Pt Vallarta, advanced)	40
2015	Japan (Shiogama)	30
2015	Oman (Muscat)	52
2015	Chile (Vina del Mar)	64
2015	Guadeloupe	42
2015	Dominica	3
2015	Martinique	42
2016	Greenland (Nuuk)	18

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APPRENTICESHIP SCHEME

As the Network has grown, an apprenticeship scheme has been developed, enabling trainees previously attending a workshop to spend time with the experts at CCS in Provincetown and build the advanced skills needed to lead entanglement response teams in the future.

To date, eight entanglement responders have each undertaken a three week apprenticeship. All had previously attended a training workshop and been assessed as suitable to play a key role in further capacity building.

The apprenticeship covers a variety of subjects, from boat safety and design of the custom-built tools, to study of the approaches taken by different response teams around the world.

In 2015, two apprentices were also able to join the CCS team on a real and very challenging 11-hour operation to free a humpback.

The most important aspect of the apprenticeship is learning effective ways to deliver entanglement response training to others. David Mattila, who leads the training programme and coordinates the Network, explains which topics should be covered, and works with apprentices to develop presentations and teaching materials most appropriate to the region where apprentices will subsequently work. Former apprentices are now delivering their own training workshops, strengthening the Network in Latin America.

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PREVENTION

Long-term entanglement prevention is one of the Network's overriding principles.

More data is required to understand which types of fishing gear or debris pose the greatest threat, and which species or regions are most affected. Every training workshop covers the importance and methods of data collection.

In 2015, the original expert panel and newer Network members gathered to discuss the way ahead for entanglement prevention. A global database was one of the key recommendations. Operated by the IWC, this aims to coordinate international data

gathering efforts, enabling scientists to build a clearer picture of the situation worldwide; to identify regional hotspots and types of entanglement that occur most often, or have the most damaging impacts.

The workshop also recognised that prevention work is in its infancy. For the foreseeable future, the Global Whale Entanglement Response Network has an important role to play.



SUPPORTERS

The IWC Entanglement Response Network has been supported by a wide variety of organisations. This support ranges from generous financial contributions to provision of boats and equipment. It is not possible to list them all here, but the success of the Network is in large part down to these organisations and the IWC extends sincere thanks to them all.

Intergovernmental Organisations

- United Nations Environment Program (Caribbean Environment Program)
- Cartagena Convention (Specially Protected Areas and Wildlife, Regional Action Committee)
- Permanent Commission of the South Pacific
- Secretariat of the Pacific Regional Environment Program
- Global Environment Fund

IWC Governments and Governmental Organisations

Argentina

- Ministry of Foreign Affairs (Ministerio de Relaciones Exteriores y Culto)
- Direccion de Fauna y Flora Silvestre Province of Chubut
- Prefectura Naval Argentina (Coast Guard)
- Facultad de Ciencias Veterinarias Universidad de Buenos Aires

Brazil:

- Centro Nacional de Pesquisa e Conservação de Mamíferos Aquáticos (CMA)
- Chico Mendes Institute for Biodiversity Conservation (ICMBio)

Chile:

- SERNAPESCA (Fisheries)
- Chilean Navy (Armada de Chile)

Caribbean (esp. Lesser Antilles)

- Agoa Sanctuary
- Réserve Naturelle Nationale de Saint-Martin
- Parc national de la Guadeloupe
- Agence des aires marines protégées
- Government of the Netherlands

Dominican Republic:

- Sistema Nacional Areas Protegidas
- Ministerio de Medio Ambiente y Recursos Naturales
- El Santuario de Mamíferos Marinos de la República Dominicana

Ecuador

- Gobierno de Ecuador
- Ecuadorian Navy (Armada Ecuatoriana)
- NOAA

Greenland

- Naalakkersuisut (Government of Greenland)
- Kanuaana (Greenland Fisheries License Control)

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- CONANP (Comisión Nacional de Áreas Naturales Protegidas)
- Mexican Navy (Armada de México)
- PROFEPA (Procuraduría Federal de Protección al Ambiente)
- NOAA (National Oceanic and Atmospheric Administration)

Panama

- ARAP (Autoridad de los Recursos Acuáticos de Panamá)
- SENAN (Servicio Nacional Aeronaval)
- NOAA

Oman

- MECA (Ministry of the Environment and Climate Affairs)
- Royal Oman Police Coast Guard (قين اطلسلا نامع قطرش)
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- USA Department of Interior

Non-Governmental Organisations

- Fundacion Cethus Argentina
- World Animal Protection (formerly WSPA) UK (Ecuador, Dominican Republic, Tonga, Mexico)
- Humane Society International
- Ecologia y Conservacion de Ballenas Mexico
- Universidad Autonomous de Baja California Sud (La Paz, San Ignacio)
- World Wildlife Fund Chile
- Conservation International Ecuador
- National Resources Defense Council San Ignacio, Mexico
- Ecotourismo Kuyima San Ignacio, Mexico
- Center for Coastal Studies USA (All and apprentices)
- Centro de Conservacion Cetacea (CCC) Chile
- International Fund for Animal Welfare USA (Tonga, Oman)
- Oceancare
- Animal Welfare Institute
- Cetacean Society International
- DJ&T Foundation

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