Agenda Item 8 — Any other Business

Document 8-01

Suggestions for returning "*Morgan*" the orca (killer whale) to a natural life in the ocean

Action Requested

- Take note

Submitted by — WDCS

NOTE:
IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING THEIR OWN COPIES OF DOCUMENTS TO THE MEETING

Suggestions for returning "*Morgan*" the orca (killer whale) to a natural life in the ocean

www.freemorgan.nl

Executive Summary

*"*Morgan*" is a young female orca (killer whale), probably 3-4 years old, who was rescued on 23 June, 2010, from the Wadden Sea (an intertidal zone in the southeastern North Sea, off the coast of the Netherlands). She is currently at the "*Dolfinarium Harderwijk*", in the Netherlands. Now, four months past her rescue, concerns are arising about* Morgan's *extended confinement in a small concrete tank and the impact this could have on her ability to return to the wild. The suggestions in this proposal are intended to assist Dutch authorities and the* Dolfinarium Harderwijk *in providing an opportunity for* Morgan *to return to the ocean and her community and in doing so contribute to orca conservation and scientific knowledge.*

The development of this rehabilitation and relocation proposal has been a cooperative project by a number of regional and international partners; including researchers, conservation groups, and animal welfare advocates, who all share the goal of returning Morgan *to a free life in the ocean, preferably where her extended family may reunite with her.*

We suggest that a Steering Committee be appointed to oversee the "Release Morgan" project. The proposal in this document is intended to assist the Government in its decisions and actions. This proposed Morgan Release Plan incorporates four main Phases, each with a set of Contingency Plans. The continuation on from any one Phase to the next is reliant on fulfilment of criteria which will be established by the Steering Committee. The health and well being of Morgan *is paramount for this plan and she will be continually monitored including during Post-Release.*

Photo of Morgan © Jenny van Twillert

Background and Overview Information

The basis of this strategy is drawn from some of the participants' prior work and experience with three other orca rehabilitation efforts; 'Springer', a two-year old orca orphan found alone near Seattle Washington, USA in 2002; 'Luna' another two-year old orca, discovered alone in Nootka Sound, British Columbia, Canada in 2001; and 'Keiko' a young orca captured at the age of two near Iceland, who lived for twenty years in marine parks before an attempt was made during 1999-2003 to reintroduce and release him back into the ocean near Iceland. Of the three previous efforts, Keiko was released into the wild (albeit short-term), but subsequently became re-affiliated with humans and then died of pneumonia; Luna, who's relocation program was not implemented, died when struck by a vessel's propeller; while Springer survived, and is now fully incorporated into her wild family, which ranges through the central coast of British Columbia. In each effort, political and economic factors played significant roles, but valuable scientific information was gained, adding to our collective body of knowledge and helping us improve our ability to develop comprehensive and successful orca whale/cetacean rehabilitation and reintroduction programs world-wide.

This proposal seeks to benefit from the opportunity we have been offered with Morgan to increase our collective knowledge about rehabilitating wild cetaceans and improve our capability to conduct another successful reintroduction of a young orca to her home waters in the wild. In light of global environmental climate and ecosystems changes, progressing the science of successful cetacean reintroduction programs is becoming more and more crucial. In some cases, critical biodiversity exists in very isolated cetacean populations (e.g., St. Lawrence and Cook Inlet beluga, Southern Resident orca, Yangtze River baiji, Mexico's vaquita, Indus River dolphin, etc.) and our ability to implement a successful reintroduction of any stranded or injured cetaceans – or the ability to introduce captive-held/captive-bred individuals back into these wild populations – could determine whether these unique species become extinct or not. The circumstances presented to us with a large delphinid like Morgan represents a tremendous opportunity for researchers, aquariums, governments and others to advance our global and collective knowledge as well as our abilities to conserve and strengthen wild populations of depleted cetaceans.

At the threshold of an era when many large cetacean species and other mammals are facing extirpation and/or extinction, every opportunity to learn more about population rehabilitation and reintroduction is significant and should be taken. Despite different perspectives or approaches to conservation, one element that is universal is our mutual agreement to protect global biodiversity and to ensure that healthy, sustainable populations of cetaceans continue to exist in our world's oceans and rivers. This proposal to rehabilitate and reintroduce Morgan back to her open-water home fulfills both moral and ecological imperatives; we cannot allow this opportunity to be lost as we race to learn and improve our knowledge of the science of cetacean reintroduction. With cooperation and common vision, we can turn this tragic circumstance of Morgan's into a progressive learning opportunity and move towards improving the chances of survival for all whale and dolphin populations inhabiting the oceans of our planet.

GOAL

Reintroduce Morgan back to the ocean environment, her home range and her orca community.

Whether or not Morgan forms long-term social affiliations with other orca, her release should be considered a success if she is able to survive in the ocean, ideally without further human intervention.

Benefits of Release Project Effort

- For Morgan; provide an opportunity to resume her life in the ocean.
- For future whale rehabilitation efforts; the rescue and re-introduction of Morgan will help develop better planning and preparation techniques.
- For the public; engage and create awareness and concern for the protection of orca communities in the North Atlantic and around the world.
- For the Dolfinarium Harderwijk and other stakeholders involved; provide positive feedback for their contributions.
- For science & conservation; provide data for long-term collaborative studies of the social organization of Northern Atlantic orca communities.

Contributions from Non-Government Organisation (NGO) Groups

The Expert Panel and associated NGOs thank and congratulate Dutch authorities and Dolfinarium Harderwijk for their decision to rescue Morgan, and applaud the good and timely effort made by the Dolfinarium in helping Morgan regain her health. The Dolfinarium Harderwijk readily made their facility and the expertise of their staff available to Morgan. They consulted with many experts when Morgan was found alone and in poor condition in the Wadden Sea in June 2010. The welfare of Morgan is paramount to the Dolfinarium Harderwijk, the Expert Panel and the general public. The Expert Panel will give their full support and co-operation to Dutch authorities and the Dolfinarium Harderwijk, to help obtain a positive outcome for Morgan.

The Expert Panel will use their extensive networks worldwide to:

- Encourage positive public awareness by holding a public forum to discuss Morgan and the plan to re-introduce her back to her natural home.
- Help raise funds for the project.
- Help with planning, logistics and documentation.

Pre Release

Prior to release, to ensure Morgan's successful reintroduction, every effort should be made regarding the following,:

- Establish, if possible, Morgan's prey preference: this will assist in understanding a) which population she might come from; b) her nutritional needs; c) her social dependencies.
- DNA and other pertinent analyses to determine any possible comparisons with known populations.
- Acoustic analysis of her vocalizations to determine comparison with known North Atlantic orca communities.
- A complete digital photographic record of her body, dorsal fin, eye patches, saddle patches, flukes, body and skin markings to enable subsequent matches to be made.
- Morgan's progress and readiness would be monitored and assessed by marine mammal veterinarians and experts experienced in wild orca behaviour and research.

<u>Phase 1</u>. Captivity: Initial Return to Health at the Dolfinarium Harderwijk

When first found in the Wadden Sea, Morgan was solitary, in poor health and underweight. Since her rescue in June 2010, Morgan has been under the care of the Dolfinarium Harderwijk in Harderwijk, the Netherlands. The Dolfinarium Harderwijk medical staff and trainers have helped Morgan regain weight as well as treated her various physical ailments. By all accounts, Morgan is now physically much improved and Phase 1 is almost complete.

Phase 1 Contingency:

If Morgan's health deteriorates rapidly during this phase, she should remain under care at the Dolfinarium Harderwijk until she recovers.

<u>Phase 2</u>. Captivity and Extended Physical Rehabilitation:

As soon as the Dolfinarium Harderwijk veterinary staff determines that Morgan is sufficiently healthy for transport, she would be moved to an ocean enclosure. The goal, during and immediately after transport, will be to provide Morgan with as much continuity as possible. Given the strong social bonding of orca, her veterinarian(s) and other support staff should accompany her during all stages of the transport and should remain with her as long as possible after her arrival.

- Morgan would undergo further physical rehabilitation and re-adaption to a more natural ocean environment;
- Exposure to people (visitors) would be controlled & reduced;
- Morgan would be re-introduced to live prey;
- Morgan's physical health and well being would continue to be assessed;
- Morgan would undergo further reconditioning regimes to aid her survival in the ocean;

DeltaPark Neeltje Jans Location and Details

We suggest that a suitable location for Phase 2 is DeltaPark Neeltje Jans, located on the Netherlands coast approximately midway between Antwerp (Belgium) and Rotterdam (the Netherlands). This site has;

- Semi-natural sea pens;
- Easy access for staff and medical care;
- Ample opportunity to test survival skills;
- DeltaPark management has already expressed willingness to participate.

The DeltaPark Neeltje Jans is a water park facility with a number of artificial embayment's / harbours. The name Neeltje Jans comes from the big sand bar in front of the facility, of the same name. The Neeltje Jans area is a natural reserve and boat traffic is prohibited on both sides of the facility. Two storm surge barriers, constructed to avoid flooding, are normally open but can be closed if required.

The deeper channels surrounding the facility, which are created by strong currents and tidal movement, have an average depth of approx 25m. The artificial embayment's / harbours (Figure 2) range to a depth of 5 m, which is deeper than the tank Morgan is presently held in. These enclosures are also bigger than the current tank Morgan is held in, as Enclosure #1 is approximately 200x150m, Enclosure #2 and #3 each approximately 100x200m.

Figure 1. Overview of the Neelje Jans area, depicting outlying sandbar.

Figure 2. Close-up of the DeltaPark Neelje Jans enclosures. The area of the DeltaPark facility is ideal for conducting a wide range of tests to ensure that Morgan has necessary survival skills and to further increase her physical strength and endurance.

DeltaPark Neeltje Jans Benefits During Phase 2.

- There is an opportunity for food to be delivered by a variety of methods and in a variety of areas around the pens to stimulate Morgan to search for food.
- Cameras (both underwater and above-water) as well as hydrophones, could be set up to provide 24 hr observations and data collection.
- During Phase 2, Morgan could be trained to respond to an acoustic recall-signal in preparation of Phase 3.

Phase 2 Contingency:

In the unlikely event that Morgan's health deteriorates rapidly during this phase, given the nature of the facilities at Delta Park, intensive care could be easily implemented.

Phase 3. Return to Home Range

Determination of Morgan's home range and the community she comes from may take some time, or it may be a relatively simple matter aided by existing DNA, photographic and/or acoustic data.

Given the uncertainty of being able to determine the exact home-range of Morgan, it may still be feasible to implement Phase 3 by relocating Morgan to an area in which wild orcas are known to frequent. Given the social flexibility of some populations of orcas, even non-related groups may accept her. Alternatively, Morgan could be relocated to an area where opportunities exist for her to forage on her own.

Once Morgan's probable home range has been determined, or if an alternate location where she could forage successfully is identified:

- Morgan would be moved to a temporary Sea-Pen.
- At this facility, Morgan would finish the training needed to re-acclimatize her to the ocean environment, including demonstrating that she is able to forage successfully and if possible, reconnecting her with wild orca.

As per the Phase 2 section, Morgan's veterinarian(s) and other support staff should accompany her during all stages of the transport. They should remain with her as long as possible after her arrival in her home range.

After Morgan has adapted to her Sea-Pen, training procedures for recall and "boat-follow" exercises may begin, as recommended by the Steering Committee:

Step 1. Morgan would receive additional training to come to the source of an acoustic signal, while remaining within the Sea-Pen.
Step 2: Signal training would continue outside her Sea-Pen, preferably in a larger area that has been temporarily netted off.
Step 3: Extended boat-follow exercises ("walks"): Morgan would be taken out on boat-follow excursions to an area where orca are known to forage and travel. Supplementary food would be available if needed.

Prior to the extended boat-follow exercises:

- Photographs of Morgan would be distributed throughout the communities closest to her release and to boaters, fishers etc in the area. As well, broadcasts of information would occur on local VHF radio frequencies and public radio stations. These initiatives should help create an effective sightings network. Informants will be requested to report Morgan's location to the appropriate persons or organization.
- Morgan would have a radio/satellite tag attached to her dorsal fin so she can be located continuously and to provide direct information about her behaviour (depth of dives, time spent underwater, area visited or preferred).

- Morgan would be trained to respond to a long-range signal during preliminary short walks. The walks would then be gradually extended until she is able to be out for long periods, eventually overnight.
- Broadcasts of Morgan's vocalizations into the surrounding waterways would occur, to potentially attract other orcas to her locale.

If, during walks, Morgan makes contact and associates with free ranging orca(s) for an extended time, then the boat should initially remain in the area to provide Morgan with appropriate support, if she requires any. Observers would continue to monitor Morgan and the other orca(s) through photographs, video and acoustic recordings. As the encounter with the wild orca(s) progresses, the boat could remain stationary, therefore by default creating greater distance from the orca(s). Eventually the boat would leave the area without sounding the recall signal.

Morgan's location would continue to be tracked via the radio/satellite tag and over-flights could determine if she remains in the company of other orca(s). If during the over-flights Morgan is found alone, her situation would be assessed and a decision made as to whether to sound the recall signal. If it is decided that Morgan should return to the Sea-Pen, the condition of her health would be assessed. If Morgan is alone when located and appears to be healthy and behaving normally, a decision would be made as to whether it is appropriate to leave Morgan and simply track her movements. It is recognized that the process of reintroducing Morgan to a "normal" life in the ocean might take several attempts.

We also suggest consideration of a "soft release" approach as an alternative. Soft-release would involve providing a permanent opening in the perimeter fence of the Sea-Pen whilst maintaining the infrastructure of the facility and care. Morgan would continue to be cared for until she ventured out on her own. As in the above procedure, a radio/satellite tag attached to her dorsal fin would enable tracking of her movements, behaviour and her health status. In this situation, the option for Morgan to return to the Sea-Pen would remain for an extended time. Returns would be at the discretion of Morgan, unless there are indications that she is in distress, such as not being able to forage successfully, or in need of intervention for health reasons.

Phase 3 Contingency:
If Morgan demonstrates an inability to forage successfully and shows weight loss or disorientation, options include recalling her to the Sea-Pen where she would receive longer-term care and additional training. If Morgan meets other orca(s) and is unable to bond with them, one possibility would be to leave her on her own and simply track her via radio and satellite, provided she demonstrates an ability to forage successfully. She could also be recalled to the Sea-Pen where provisioning would be available to her, whilst allowing her to leave and return.

In the event that all systems and procedures for monitoring and recalling Morgan during "walks" and after her release should fail, over-flights designed to locate her whereabouts may be needed.

Phase 4. Post-Release Monitoring

If re-introduction proves successful, post-release monitoring of Morgan will be essential, not only for Morgan, but for gathering information about her and the North Atlantic orca population.

With an attached radio/satellite tag it should be possible to track Morgan's movements over considerable time and distance. Whenever possible, boat based data collection, with trained observers would provide additional detailed information about her activities. Each reliable report from the public observer network would be followed-up by trained personnel. The records of sightings and encounters would contribute to a "Morgan" Database.

Following Morgan's successful release, the "Morgan" Database will be frequently updated and made accessible on the Internet, so her story can be followed by internet users and stakeholders around the world.

Project Management: Steering Committee

Tasked with overall direction of the project, The Steering Committee should include a Project Manager appointed by the Dutch Government, a representative of the Dolfinarium Harderwijk, Ministry of LNV Officials, and respected members of the marine mammal scientific community who have wild orca research experience.

Project Management: Project Manager

A salaried Project Manager will supervise on-site and day-to-day operations.

Project Management: Scientific Committee

A Scientific Committee, to be chosen by the Steering Committee, will advise the Project Manager on all aspects of procedures involving diet, care, training, transport, rehabilitation and reintroduction.

Funding

All phases involved in Morgan's return to a natural life in the ocean will incur costs. It will be important to identify the components of these costs and estimate their magnitude as soon as possible after a plan is agreed to by Dutch authorities and a Project Manager appointed. Once the estimated costs are known, steps should be immediately taken to source the required funding. This should include obtaining commitments from the Dutch Government and possibly other Governments within Morgan's proposed Home Range. Additionally, international NGOs and other interested stakeholders such as the public can be asked to provided financial assistance. There can be no doubt that Morgan's return will be costly, but if the will exists, the means will be found.

Liability
The Expert Panel recognize that returning Morgan to a natural life in the ocean will involve complex procedures and unknown factors, all of which may carry risks to Morgan. The Expert Panel are prepared, from the outset, to attribute no blame to participants for any failure, or hindrance to Morgan's successful release and request only that best efforts are made to help Morgan regain her ocean life.

Endorsements

This proposal for Morgan is endorsed by the following individuals (in no particular order). Further details can be obtained from www.freemorgan.nl

Paul Spong & Helena Symonds	OrcaLab Pacific Orca Society www.orcalab.org
Howard Garrett & Susan Berta	Orca Network www.orcanetwork.org
Ingrid Visser & Terry Hardie	Orca Research Trust www.orcaresearch.org
Kenneth Balcomb	Center for Whale Research www.whaleresearch.com
William Rossiter	Cetacean Society International www.csiwhalesalive.org
Michael Kundu & Bob MCLaughlin	Project SeaWolf Coastal Protection www.projectseawolf.org
Mark Berman	International Marine Mammal Project of Earth Island www.earthisland.org Free Willy Keiko Foundation www.keiko.com
Christopher Porter	Free the Pod www.freethepod.org
Robin Baird	Cascadia Research Collective www.cascadiaresearch.org
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DISCLAIMER

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