HuDoNet

Indian Ocean Humpback Dolphin Conservation Network
Towards the protection and conservation of the Endangered Indian Ocean humpback dolphin (*Sousa plumbea*) throughout its range

HuDoNET
Indian Ocean Humpback Dolphin Conservation Network

Connect. Share. Inspire.

Report 2024

Executive Summary

The Indian Ocean Humpback Dolphin Conservation Network (HuDoNet) was established to galvanise action to improve the conservation status of the Endangered Indian Ocean humpback dolphin (*Sousa plumbea*). This species is restricted to shallow coastal waters and faces severe threats, including fisheries bycatch, habitat degradation, pollution, and marine traffic. HuDoNet aims to:

- Identify and prioritise knowledge gaps, threats and solutions.
- Build capacity among local stakeholders to support research and conservation.
- Support collaborative research on Indian Ocean humpback dolphins from across the range to answer conservation questions.

Network Establishment

Funding was secured by Drs. Gill Braulik, Ada Natoli, and Els Vermeulen to launch the network. Key milestones in late 2023 included:

- Appointing Dr. Shanan Atkins as network coordinator.
- Inviting 70 experts from 16 range states to join HuDoNet.
- Hosting the first online meeting (Nov 2023) with 36 participants from 13 countries.
- Establishing a Justice, Equity, Diversity, and Inclusion (J.E.D.I.) panel to guide network activities.

Expanding Activities

Building on this foundation, HuDoNet made significant progress in 2024:

- Developed the network logo and launched the website (Aug 2024).
- Formed five working groups focused on biological research, threats and solutions, community engagement, policy, and network success.
- Began drafting a short-term Network Action Plan outlining key priorities for research and conservation.

HuDoNet was introduced at international conservation forums:

- Presented at the International Whaling Commission (IWC) Scientific Committee and the International Marine Conservation Congress.
- Contributed to discussions on formal recognition of *Sousa plumbea* under the Convention on Migratory Species (CMS).
- Shared network activities via news articles, media releases, and university communications.

Looking Ahead – 2025 and Beyond

HuDoNet will focus on:

- Finalising and implementing the Network Action Plan.
- Securing funding and training opportunities to support conservation efforts.
- Expanding public engagement and outreach.

HuDoNet is building momentum to focus conservation efforts across the dolphin's range, ensuring meaningful action to protect this highly threatened species.

Introduction

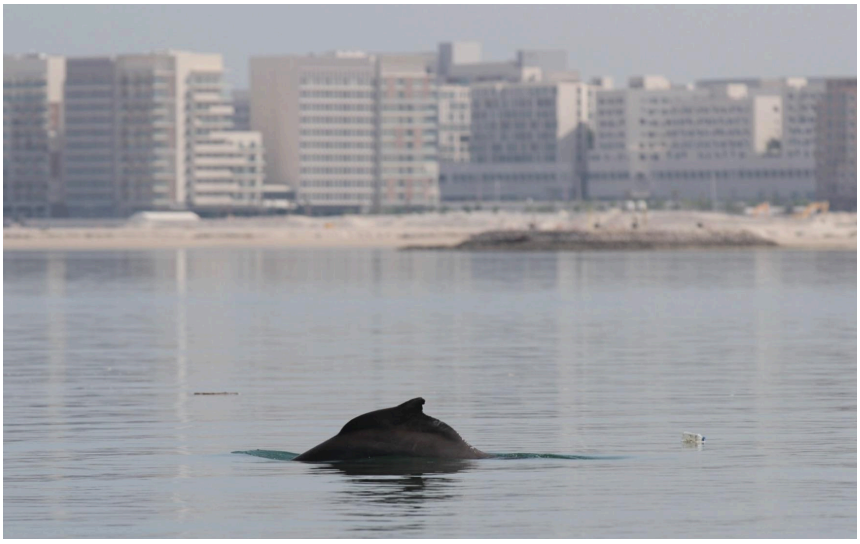
The Indian Ocean humpback dolphin is an Endangered coastal dolphin, one of the world's most threatened dolphin species. It occurs in small populations in the coastal waters of 23 countries around the western Indian Ocean rim, from South Africa in the southwest, to India and Sri Lanka in the northeast. Large gaps exist regarding its occurrence and abundance across many thousands of kilometres. This species occurs only in shallow waters, and its restriction to coastal habitats exposes it to numerous anthropogenic threats, including entanglement in coastal fishing gear, pollution, disturbance, land reclamation, coastal mining, and marine traffic.

Responding to the urgent need for conservation actions, three scientists working on this species decided to try and kickstart coordinated conservation action. Dr Gill Braulik, Dr Ada Natoli and Dr Els Vermeulen submitted a proposal and obtained funding to build a network of researchers and conservationists across the humpback dolphin's range with the aim to galvanise action to improve the conservation status of this Endangered dolphin.

The **objectives** proposed are the following:

1. Establish the Indian Ocean Humpback Dolphin Conservation Network (HuDoNet);
2. Identify and prioritise critical knowledge gaps and threats for the development of a Conservation Action Plan for the species;
3. Build capability among local stakeholders to conduct research and conservation of Indian Ocean humpback dolphins;
4. Support collaborative research on Indian Ocean humpback dolphins from across the range to answer conservation questions.

By developing connections among stakeholders, the network intends to share ideas, research methods and scientific data to fill knowledge gaps, facilitating capacity building to form a skilled and mobilised group across the range. With pooled resources and effort, science-based information can be provided to address threats and support the conservation of this essential marine predator.



Report on Progress

In this first year of activity, the following progress has been achieved:

Establishing the Network

- **Funding** was sourced from EACOP by Drs Gill Braulik, Ada Natoli and Els Vermeulen to hire a coordinator and cover the expenses for the first year.

- A **network coordinator**, Dr. Shanan Atkins was appointed to lead the initiative. As she is based in South Africa, she was hosted at the MRI Whale Unit of the University of Pretoria. Dr Atkins has considerable experience with bringing together diverse stakeholders to find solutions to important conservation concerns and was an ideal candidate to lead the new HuDoNet initiative.

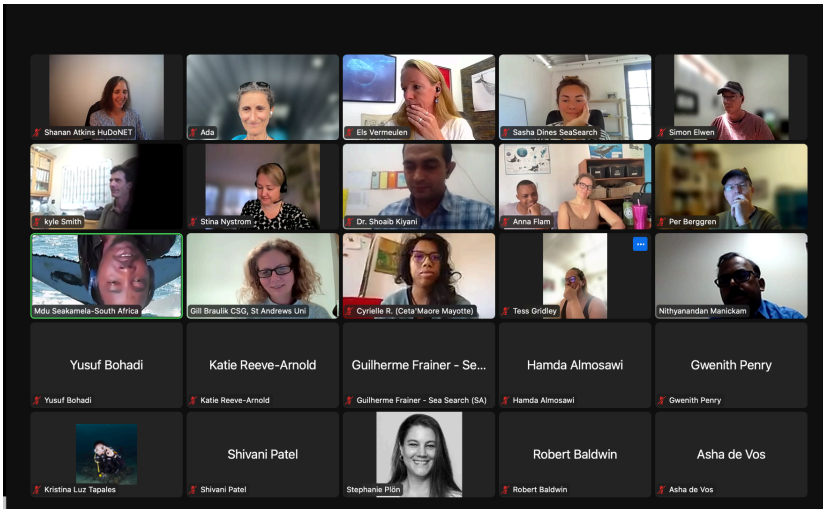
- For the first year while the new HuDoNet network is being established the three founding members (Braulik, Natoli and Vermeulen) are functioning as the **Interim Steering Committee**.

- **Weekly meetings** have been held with the interim steering committee, and the network coordinator to discuss progress and activities.

- **Invitations to join HuDoNet** - A database was curated and a total of 70 potential members who work, or have worked, on humpback dolphins. These potential members came from 16 Indian Ocean humpback dolphin range countries* and from further afield. All were contacted via email to introduce the concept and invite them to join the network.

  *Egypt; India; Iran; Kenya; Kuwait; Madagascar; Mayotte; Mozambique; Oman; Pakistan; Qatar; Saudi Arabia; Somalia; South Africa; Sri Lanka; Tanzania; United Arab Emirates

- **Launch of HuDoNet** - The first online meeting to signal the launch of the new network was held on the 22nd November 2023 inviting all the potential members. A total of 36 invitees, from 13 range states joined the meeting, and 11 sent their apologies for not being able to participate due to other commitments on the day. The meeting lasted three hours and covered the following important aspects:
  - formal introductions
  - discuss the name and



the form of the initiative;
- consider the main long-term targets and;
- decide on short-term actions of the initiative;
- vote on three draft versions of the logo; and
- form a J.E.D.I. (Justice, Equity, Diversity, Inclusion) committee to oversee the network activities.

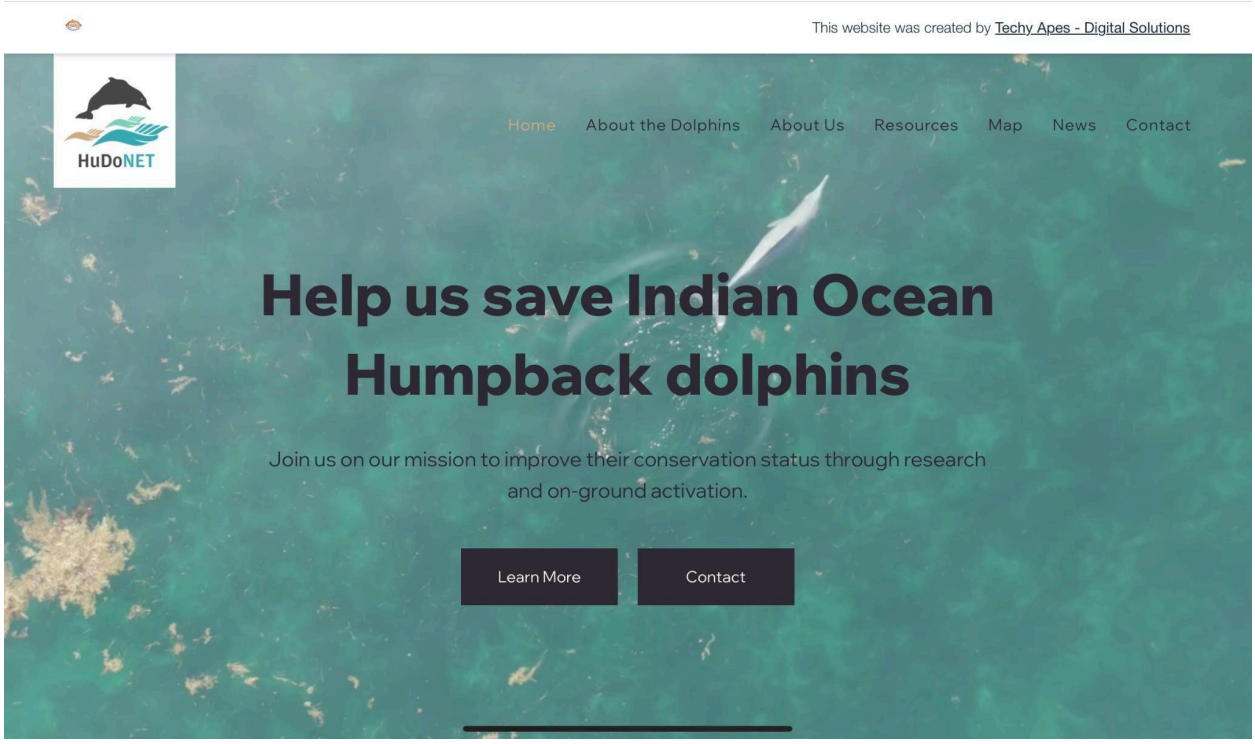
"As a global network, HuDoNet is committed to openness, accountability, representation and recognising every voice. We enact this commitment through our actions overseen by our dedicated Justice, Equity, Diversity and Inclusivity panel."

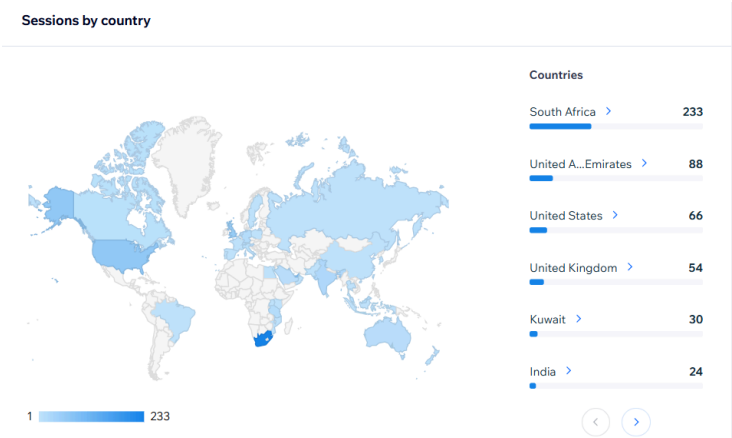
- A graphic design company, TechyApes, was recruited to produce a **logo**. They attended carefully to our aims and interests and produced a number of draft logos. Members of the network voted for the one they preferred and provided comments during the network's first meeting. After a round of edits, the next drafts were presented and the network shared their thoughts and preferences via an online form. The final, co-designed logo is depicted below:

HuDoNET
Indian Ocean Humpback Dolphin Conservation Network

The logo depicts the silhouette of an Indian Ocean humpback dolphin leaping, carefree above the waves and the characteristic hump can be clearly seen. The waves are in the form of cupped hands suggesting the dolphin is a precious resource that is in need of our care and protection. The colours indicate the nearshore habitat of the dolphin, showing the nearby sandy beaches, the shallow green waters and the darker coastal areas that they inhabit.

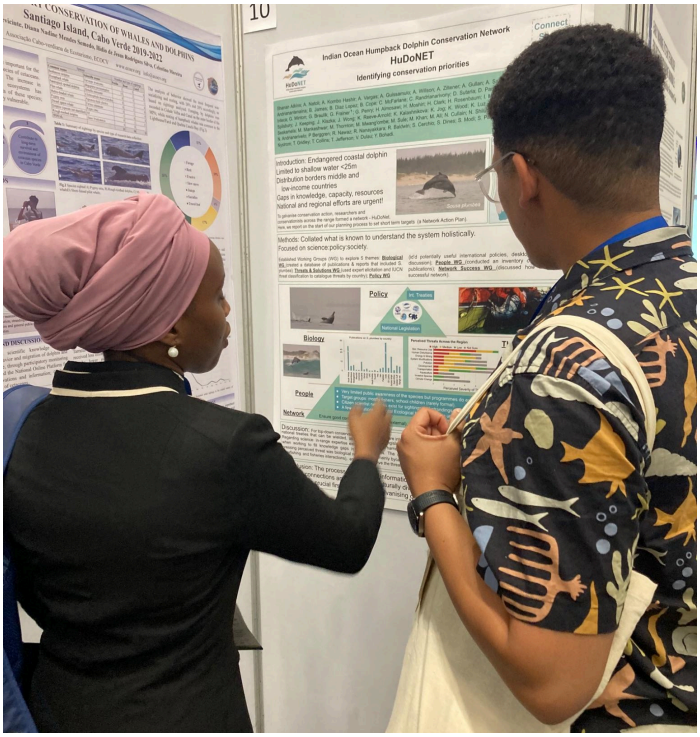
- TechyApes also provided their services in kind to design the **HuDoNet website**, which was launched in mid-August 2024. The website provides information about the species across its range, which is accompanied by videos and images that were provided by the members of the network; details about the network and its aims and work; a database of publications on humpback dolphins; a range countries map; a form to report sighting of humpback dolphins and other useful resources.
    - On average, 89 unique visitors/month have had 106 site sessions/month, with 252 page-views/month. Most visitors have been from South Africa and the UAE and there is an increasing number from the USA.





Network Activities

- The potential themes of **5 working groups** were identified and a second online meeting open to all the network members was held on 28 February 2024 to discuss the themes and identify working group coordinators and members. A total of 39 members from 11 countries participated in the meeting and 48 members joined at least one working group. Each working group is led by a leader who is supported by one or more early-career co-leaders. The working group themes reflect various aspects of the social-ecological conservation system:
    - **Biological Working Group**, led by Dr Simon Elwen (South Africa), Mihir Sule (India) and Hamda Alwosami (UAE), focuses on the biological research of the species including ecology (population demographics), genetics, survey methodology (photo-id, acoustics), strandings and health, and more.
    - **Threats and Solutions Working Group**, led by Sasha Dines (South Africa) and Shaunak Modi (India) focuses on research to understand the drivers of the decline of humpback dolphins, with emphasis on the management of these threats.
    - **People Working Group**, led by Dr Shoaib Kiani (Pakistan) and Yusuf Bohadi (Kuwait), focuses on building capacity to ensure that people, especially communities, are in a good position to implement bottom-up, grassroots conservation action.
    - **Policy Working Group**, led by Dr Gill Braulik (Tanzania/International) and Dr Ada Natoli (UAE), focuses on the top-down approach to conservation investigating formal institutions like legislation and international treaties so that we might use these tools aptly.
    - **Network Success Working Group**, led by Dr Shanan Atkins (South Africa) and Katie Reeve-Arnold (Mozambique/International), focuses on foundational work to build the network, such as communication, fundraising and ensuring that justice, equity, diversity and inclusion prevail in our network.



- The first task for these five groups was to compile a short-term **Network Action Plan** for the HuDoNet, identifying the priority areas for focussed future work. The objectives were to:
  1) outline data gaps and opportunities,
  2) assess feasible strategies to fill the gaps, and
  3) consider the specific actions and resources that would be required.
  Four meetings have been held with WG leaders, all together and in various

combinations. The WG are at different stages of the process:

- **Biological Working Group** met once and compiled a database of publications.
- **Threats and Solutions Working Group** met twice: they designed a useful Threat Assessment table, based on the IUCN's Threats Classification System to identify gaps in our knowledge, which they ranked. They are currently assessing feasible strategies to fill the gaps.
- **People Working Group** met three times: they collated information regarding the bottom-up conservation activities of members by country and identified numerous gaps and strategies. Their two highest-priority strategies include "Foster collaboration within network/regions for bottom-up conservation" and "Apply for grants based on research needs, with help from HuDoNet members"
- **Policy Working Group** met twice: they comprehensively collated information about international treaties to identify numerous opportunities, which they ranked; and they discussed strategies to leverage these opportunities.
- **Network Success Working Group** met twice: they identified and ranked opportunities for communication and fundraising. The two highest-priority strategies they are considering are "Find and share training/guidance to design a communication strategy to communicate with an external audience" and "Increase multi-way communication within the network, sharing opportunities, information, successes and failures, using Whatsapp Communities."

- The testing of a new automated **photo-identification** matching platform "HappyWhale" has been initiated using a stock of already available humpback dolphin photo-identification images from Iran, South Africa and Tanzania. The target is to test if this can be a useful platform for the network that would allow data sharing across the species range. This will facilitate defining population identity and home range and vastly speed up analysis and expand the kinds of questions that can be answered using the photo-ID data.

Impact and dissemination

- Discussions were held with the Secretariat of the **Convention on Migratory Species (CMS)** regarding the need to **formally recognise *Sousa plumbea*** as a distinct species, and to add it to the Appendix I of the convention which provides for the highest level of protection and support from signatory governments. The species was formally recognised at the Conference of Parties (COP) held in Samarkand, Uzbekistan in February 2024 and is listed on Appendix II of the convention. Subsequent discussions focused on different CMS tools that may be useful for humpback dolphin conservation, such as Concerted Actions and Memorandums of Understanding.

- The initiative's inception and progress were reported to the **Small Cetacean Subcommittee of the International Whaling Commission** Scientific Committee held in

Slovenia in April 2024. The report (SC/69B/SM/05) that was submitted to the Scientific Committee 2024 is included in Annex A below or can be found at this link Atkins_etal_2024_SC_69B_SM_05.pdf. The subcommittee **encouraged the continued effort** of all HuDoNet members and recommended that "*a species action plan be developed, as and when sufficient data become available, through a formal mechanism such as the CMS Concerted Action initiative or the IWC Conservation Management Plan process.*"

- HuDoNet's targets and activity were **presented as a poster** at the **International Marine Conservation Congress,** held in South Africa in October 2024. The abstract and poster are included in Appendix B). Most HuDoNet members contributed to the production. The coordinator presented the poster at the congress. **Nine members attended** (6 from South Africa, one each from Tanzania, Saudi Arabia and Sri Lanka. One South African member presented her work on humpback dolphin acoustics.

- The **Biennial Conference on the Biology of Marine Mammals** was held in Perth, Australia, in November 2024. HuDoNet supported a member, Shaunak Modi, to travel to the conference and present his research on humpback dolphins in Mumbai, India. **Shaunak won the Leatherwood Award** for his excellent work. In total, **10 members attended** the conference and many of them presented work regarding humpback dolphins.

Communications

- News announcing the formation of the HuDoNet and its initial meetings was included in the 7th newsletter of the Indian Ocean Network for Cetacean Research (Indocet) published in March 2024. The news can be read here: https://indocet.org/en/indian-ocean-humpback-dolphin-conservation-network-hudonet/
- A **media release** was prepared in September, primarily to share the link to HuDoNet's website widely. It was shared with all members for dissemination, via their organisations and networks. Articles were published by various universities, e.g. Zayed University, Nelson Mandela University. Metrics recorded by Pretoria University's public relations department included 8 printed news items, 15 online news items (including 2 international items) and 5 radio broadcast interviews.
- An article was submitted to the IUCN's Species Survival Commission's Cetacean Specialist Group about the network's activities and was published on their website in November 2024.
- An **infographic** is being developed in collaboration with an artist, Rioka Hayama. It provides a summary of the biology and distribution of the Indian Ocean humpback dolphin, as well as their main threats and potential conservation tools.
- As part of the International Whaling Commission's Species Spotlight Initiative, a **video clip** was created as a collaboration between HuDoNet and the IWC team. It will be released in the near future.

Looking Forward

In 2025, the short-term Network Action Plan will be collated and published. The Working Groups will collaborate to fundraise and implement the prioritised actions. Public engagement will be amplified. Training programmes will be initiated.

Contact Information

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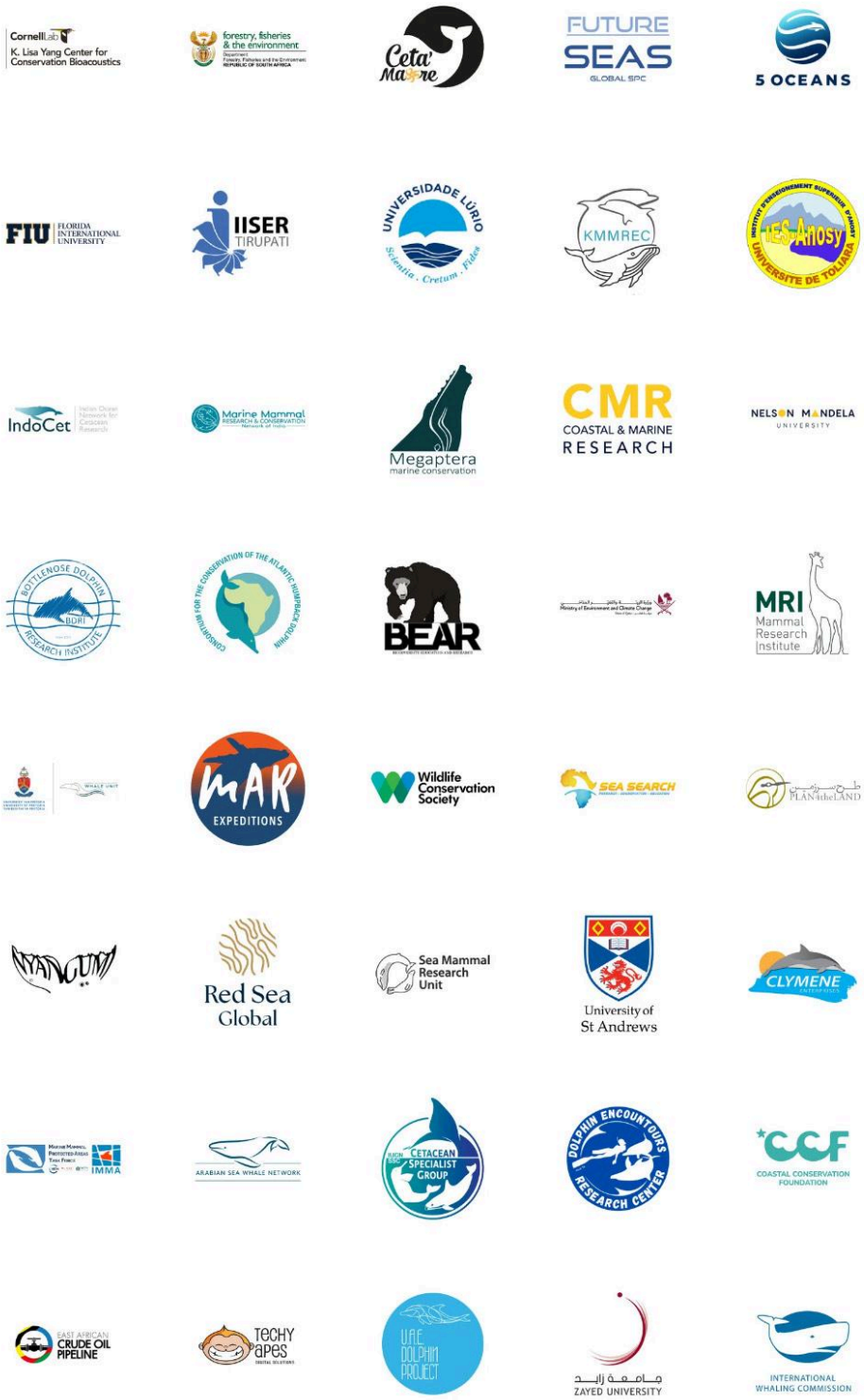
Indian Ocean Humpback Dolphin Conservation Network

Partners and supporters

Thank you to our many partners and supporters.



Appendix A

IWC report:

Indian Ocean Humpback Dolphin Conservation Network (HuDoNet): Collaborating to enhance conservation efforts for the Endangered Indian Ocean humpback dolphin (*Sousa plumbea*)

Shanan Atkins; Gill Braulik; Ada Natoli; Els Vermeulen; Ahmada Kombo Hashir; Alejandra Vargas; Almeida Guissamulo; Andrew Willson; Angela Ziltener; Angie Gullan; Anjara Saloma; Anna Flam; Asha de Vos; Boris Andrianantenaina; Bridget James; Bruno Diaz Lopez; Bryana Cope; Caitlin McFarlane; Cyrielle Randrianarivony; Dipani Sutaria; Divya Panicker; Gelica Eugenio Inteca; Gianna Minton; Guilherme Frainer; Gwenith Penry; Hamda Almosawi; Hamed Moshiri; Harry Clark; Howard Rosenbaum; Isabel Marques da Silva; Isha Bopardikar; Jane Spilsbury; Jennifer Keeping; Jeremy Kiszka; John Wong; Katie Reeve-Arnold; Katya Kalashnikova; Ketki Jog; Kimberly Wood; Kristina Luz Tapales; Kyle Smith; Magreth Kasuga; S. Mduduzi Seakamela; Mahi Mankeshwar; Meredith Thornton; Michael Mwang'ombe; Mihir Sule; Moazzam Khan; Mohamud Ali; Nakia Cullain; Natasha Shilubane; Nazanin Mohsenian; Nithyanandan Manickam; Norbert Andrianarivelo; Per Berggren; Rab Nawaz; Ranil Nanayakkara; Robert Baldwin; Salvatore Cerchio; Sasha Dines; Shaunak Modi; Shivani Patel; Shoaib Kiani; Simon Elwen; Stephanie Plön; Stina Nystrom; Tess Gridley; Tim Collins; Tom Jefferson; Violaine Dulau; Yusuf Bohadi

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Introduction

The Indian Ocean humpback dolphin (*Sousa plumbea*) is a coastal species recognised as one of the world's most threatened dolphin species (Braulik et al., 2023a). It occurs in low numbers in the coastal waters of 23 countries around the Indian Ocean rim, from South Africa in the southwest, Eastern Africa, the Red Sea, coasts of southern Arabia, the Arabian/Persian Gulf to India and Sri Lanka in the northeast (see Figure 1) (Braulik et al., 2015). However, within this range there are large data gaps regarding its occurrence and abundance across many thousands of kilometres. The species occurs only in shallow waters, usually close to shore, and its strict preference for coastal habitats exposes it to numerous anthropogenic threats, such as fishing, land-based sources of pollution, coastal construction and dredging, land reclamation, coastal mining, and marine traffic (Braulik et al., 2023b; Plön et al., 2021). As with many coastal dolphins, accidental entanglement in coastal gillnet fisheries is thought to be the greatest threat to this species in most parts of its range (Brownell et al., 2019). A recent reassessment of the species' conservation status concluded that the global population of the Indian Ocean humpback dolphin is small and declining because of persisting anthropogenic impacts, and it is currently listed as 'Endangered' using the IUCN Red List criteria (Braulik et al., 2023b).

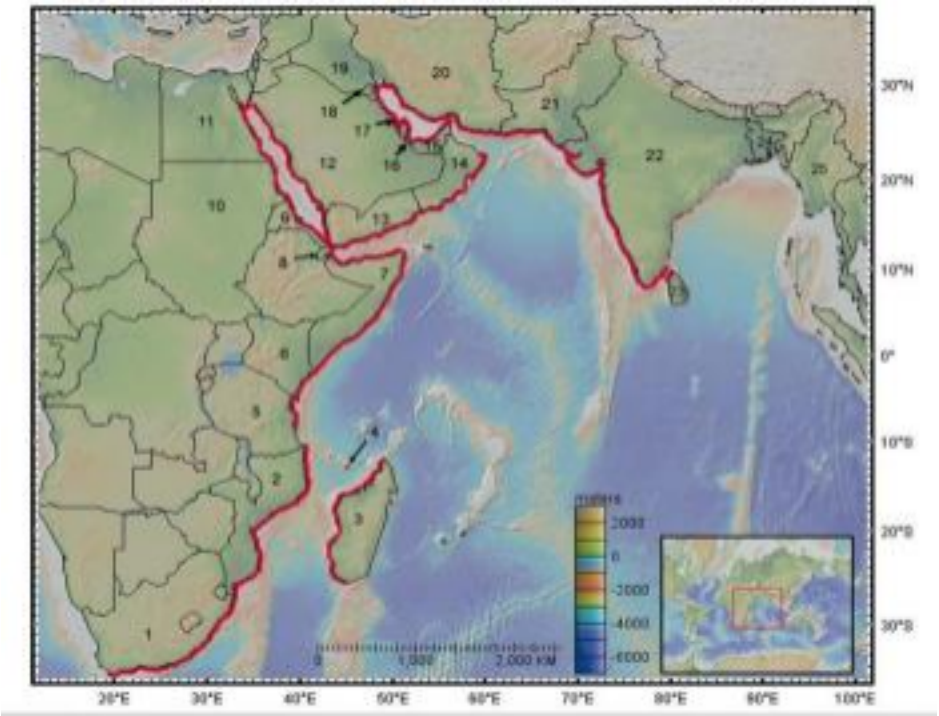

Figure 1. Nominal range of the Indian Ocean humpback dolphin (*Sousa plumbea*); throughout this range there is varying degrees of support for presence of the species, so the true distribution is likely not as continuous as inferred (Braulik et al 2015). South Africa (1), Mozambique (2), Madagascar (3), Mayotte (4), Tanzania (5), Kenya (6), Somalia (7), Djibouti (8), Eritrea (9), Sudan (10), Egypt (11), Saudi Arabia (12), Yemen (13), Oman (14), United Arab Emirates (UAE) (15), Qatar (16), Bahrain (17), Kuwait (18), Iraq (19), Iran (20), Pakistan (21), India (22), and Sri Lanka (23).

The IWC-SC has recognised the plight of humpback dolphins repeatedly over the past. In 1999, concerns were first raised about unsustainable bycatch in fisheries and shark control nets, as well as high levels of contaminants and habitat degradation in many areas of its range (IWC 1999, IWC 2000). In 2002, the SC examined the status of the genus Sousa throughout its range and concluded that the genus was adversely impacted by anthropogenic changes (IWC 2003). At this time, the SC recommended a wide collaboration among researchers and an increase in research efforts in relation to population parameters, genetic sampling, and effects of anthropogenic pressures, among other things. Further concern on the genus was raised in subsequent SC meetings (e.g., IWC 2017), with
a specific recommendation in 2019 on the formation of a *Sousa Task Team* to work towards developing a comprehensive framework of conservation actions for the genus (IWC 2019). In 2021, it was further agreed that this Task Team solely focuses on *Sousa plumbea* given the success of the Conservation Consortium of the Atlantic humpback dolphin (CCAHD; IWC 2021).

Understanding the urgent need to implement the above recommendations and to stimulate research and conservation action for the species throughout its range, the Indian Ocean Humpback Dolphin Conservation Network (HuDoNET) was established. HuDoNET was modelled to the successful initiatives of CCAHD and the South African SouSA Consortium, with the aim to develop and build connections and collaboration among stakeholders throughout the

species' range to encourage coordinated conservation actions.

Aim

The aim of HuDoNet is to galvanise action to improve the conservation status of the Indian Ocean humpback dolphin throughout its range by promoting conservation research and action. The objectives include fostering collaboration and boosting resources and capacity among researchers and conservation practitioners in all range states to gain a better understanding of the species' conservation biology, threats, and management needs. A major goal is to draw attention to the plight of this species by working together under a common umbrella.

Progress made to date

HuDoNET was first conceived by Dr Ada Natoli, Dr Els Vermeulen and Dr Gill Braulik who drafted a preliminary roadmap and raised funds to employ a coordinator for a year (with possibility to extend to a second year) to implement the initiative. Dr Shanan Atkins was appointed to build and coordinate the network in October 2023. Seventy-five potential members from 16 countries (including international researchers based outside of the species range) were initially invited to join the network. A first introductory meeting was held online on 22 November 2023. To date, there are 70 members from 17 countries including Egypt; India; Iran; Kenya; Kuwait; Madagascar; Mayotte; Mozambique; Oman; Pakistan; Qatar; Saudi Arabia; Somalia; South Africa; Sri Lanka; Tanzania; United Arab Emirates (UAE); and international experts from outside of the range. A functional Justice, Equity, Diversity and Inclusivity panel has been established to facilitate upholding HuDoNET's values.

A second planning meeting was held online on 28 February 2024. So far, five broad working groups have been formed: Biological Research; Threats and Solutions; People; Policy; and Network Enhancement. A logo has been developed collaboratively (figure 2) and a website is under construction (www.hudonet.org).

Figure 2. Collaboratively designed logo of the Indian Ocean Humpback Dolphin Conservation Network (HuDoNet).

Next steps

Over the next six months - one year, HuDoNET will embark on implementing the following objectives: 1. Prepare an immediate Network Action Plan

The five working groups (Biological Research; Threats and Solutions; People; Policy; and Network Enhancement) will work together to conduct a review of the conservation biology of the Indian Ocean humpback dolphin, recognised threats to the species, existing recommendations regarding mitigation measures and other likely conservation options. Based on this review, the working groups will prioritise actions that can be carried out over the short-term (two years) and specify the resources and capacity that would be required to meet these targets.

2. Source funding for the priority actions

Based on the process and outputs above, funds will be sought to realise the prioritised actions.

3. Develop the website into an information hub

Resources, such as peer-reviewed literature, technical reports, educational materials, will be gathered and made accessible on a website. Communication tools, such as multilingual infographics and presentations will be developed and shared for use and adaptation by network members. Updates of the network's activities and initiatives will be posted.

4. Provide opportunities for capacity building among network members

Based on the Network Action Plan's assessment of capacity requirements (in step 1 above), concerted effort will be made to provide opportunities to begin building leaders in scientific research, science communication, the science-policy interface and/or social scientists for conservation.

In the longer term

A major goal of HuDoNET is to collaboratively draft a Species Conservation Action Plan. In this regard, it is envisioned to hold an in-person workshop once the network is more mature and has the data and membership required to draw up a well-informed, well-supported, realistic plan.

Other envisioned long-term actions include:

- Facilitate data sharing across research groups, and taking advantage of traditional ecological knowledge, to improve the assessment of the species' status, to increase our understanding of the threats and to identify solutions to reduce human impacts;
- Work towards standardisation of research methodologies across the region to enable data comparison across the range of the species;
- Promote exchange programmes among scientists to enhance interchange of knowledge and skills; • Test potential strategies to mitigate threats and share these results within the network; • Organise regional training workshops on bycatch mitigation,

stranding response, etc; • Encourage the development of local conservation strategies and action plans, as well as appropriate

guidelines and policy by range state governments and other stakeholders, aimed at improving the protection of the species and its conservation status.

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Appendix B

Identifying conservation priorities for the Indian Ocean Humpback Dolphin Conservation Network (HuDoNet)

The Indian Ocean humpback dolphin (*Sousa plumbea*) inhabits a very narrow strip of coastal, anthropogenically-impacted waters of the western Indian Ocean and associated seas and gulfs. Its range spans the southern tip of Africa to the southern tip of India, including some islands, and borders 23 countries, many of which are low-income. This species is Endangered due to fisheries bycatch and habitat degradation. Significant gaps exist in the knowledge, capacity and resources needed to conserve the species. To galvanise conservation action, researchers and conservationists across the species range recently formed the Indian Ocean Humpback Dolphin Conservation Network (HuDoNet). We report on our planning process that aims to set short- and medium-term targets in the form of a Network Action Plan. Focusing on the science:policy:people interface, the process includes 1) understanding the system by collating and synthesising available data to determine where there are gaps in understanding or conservation action; 2) identifying leverage points and weighing up the costs, benefits and feasibility of potential interventions, and 3) specifying the resources and capacity required for prioritised actions. This process should improve our ability to address priority gaps and improve conservation outcomes for the species.

Co-Authors
We recognise the whole network's contributions to this process:
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One sentence, plain language summary:
The Indian Ocean Humpback Dolphin Conservation Network reports on a planning process to understand the social-ecological system pertaining to these Endangered dolphins to identify priority actions for the network to galvanise conservation.

Indian Ocean Humpback Dolphin Conservation Network

HuDoNET

Identifying conservation priorities

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Introduction: Endangered coastal dolphin

Limited to shallow water <25m
Distribution borders middle and low-income countries
Gaps in knowledge, capacity, resources
National and regional efforts are urgent!

To galvanise conservation action, researchers and conservationists across the range formed a network - HuDoNet. Here, we report on the start of our planning process to set short term targets (a Network Action Plan).

Methods: Collated what is known to understand the system holistically. Focused on science:policy:society.

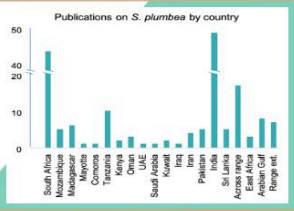
Established Working Groups (WG) to explore 5 themes: **Biological WG** (created a database of publications & reports that included S. plumbea); **Threats & Solutions WG** (used expert elicitation and IUCN threat classification to catalogue threats by country); **Policy WG** (id'd potentially useful international policies, desktop research and discussion); **People WG** (conducted an inventory of projects and publications); **Network Success WG** (discussed how to build a successful network).

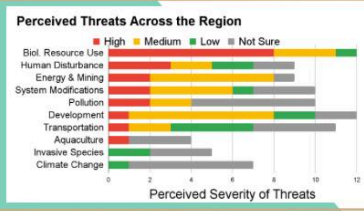
Policy

Int. Treaties

National Legislation

Biology





Threats

People

- Very limited public awareness of the species but programmes do exist.
- Target groups: mostly fishers, school children (rarely formal).
- Citizen scientist networks exist for sightings and strandings.
- A few publications use Local Ecological Knowledge - an untapped resource.

Network

Ensure good communication (internal & external), raise funds for network structure, attend to JEDI*

*Justice, Equity, Diversity & Inclusivity

Discussion:

For top-down conservation, i.e. policy, there are international treaties that can be wielded, as well as national legislation. Regarding science: in-range expertise exists and could be harnessed when working to fill knowledge gaps in other countries. The most pressing perceived threat was biological resource use (mainly bycatch, overfishing and fisheries interactions), and many perceive the threat of residential and commercial development, and transportation. For bottom-up conservation, i.e. interacting with people, researchers in some countries are engaging with fishers though rarely with developers or shipping. Next steps include identifying opportunities, 2) prioritising potential interventions based on feasibility and impact, and 3) for the highest-priority actions, specifying the resources and capacity required.

Conclusion:

The process of gathering information about this social-ecological system created connections among a large, culturally diverse, widely dispersed group of people - a crucial first step towards galvanising conservation action for EN dolphins.

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