

MIGRAMAR
2017-2021

STRATEGIC PLAN





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Foreword by Dr. Sylvia A. Earle

Our Earth is defined by an ocean that was once considered unfathomable in its depths and diversity. However, our ingenious species has now plumbed those depths and labeled and hunted much of the diversity. Our ability to find schools of fish, rake ocean floors, and farm saltwater species has nourished us and fostered our propagation along ocean shores. Yet this manipulation of species populations, and our proven ability to deprive some species of their very existence, is short-sighted, lacking the ability to anticipate wider consequences and the impact the paucity we are creating will have on our own ability to thrive.

For the past few decades our consumption has surpassed the ocean's capacity to restore itself. Humans catch fish needed for our sustenance, but along the way kill hundreds of species through bycatch and habitat destruction. We don't destroy just one generation, but by focusing on large reproductively fertile animals, we ensure ongoing population declines. We can also learn from our experience in causing major fishery collapses as fish populations crash. These events destroy livelihoods and economies. They also lead to population declines in countless species in the trophic chain that depended upon that fish population. The numerous malnourished sea lion pups washing up on California beaches and the lack of breeding in blue-footed boobies in the Galápagos were both connected to the crash of the Pacific sardine populations in 2014.

The Eastern Pacific teems with life and nature's complex interactions. Gray whales migrate from Canada to Baja to calve, whale sharks cross the Pacific to spend time along coastal islands, scalloped hammerheads maintain home ranges here while in tragic decline across the globe. Green turtles, tiger sharks and albatross, all highly migratory species, rely on the Eastern Pacific Ocean for part—or all—of their life cycle. For millennia, nature's intricate interrelationships allowed these species to flourish while moving through the seas, building a complex web that we have yet to understand and adequately protect. Today, these highly migratory species are experiencing severe population declines in oceans around the world, including the Eastern Pacific.

Science plays a key role in identifying the most important marine areas for biodiversity. Protecting these areas as marine reserves, both national and transboundary, is an imperative investment—spots of hope to save the blue heart of our planet. The role migratory species play in supporting marine ecological functions and how we can safeguard continued migrations are key questions for those of us committed to sharing our planet with other life forms. The recognition that national borders are irrelevant for transboundary species, raises important questions of linking marine reserves, creating corridors or “swimways” and otherwise improving ocean management. Science also informs new conservation tools needed to reverse these tragic population declines. Areas of safe passage, changes to fishing equipment, no take zones in nursery areas, seasonal protection for spawning aggregations—these conservation tools emerged from research that provided a greater understanding of the needs of species, and the threats facing them.

The MigraMar scientific network enhances our knowledge of these amazing migratory species. Their research informs and enhances recommendations to conserve key areas and reduce the cavalcade of unrelenting hooks, nets, lines, and trawlers that threaten species' lives every single day and night. MigraMar's science can help fellow species secure safe passage for their migrations and rebuild healthy populations. The ocean is our life support system. The MigraMar network's scientific research helps us learn about the migratory species that are such a bellweather for our marine environment, so that we can do what we can to save them—and thereby save ourselves.

Dr. Sylvia A. Earle
Oceanographer
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1. MigraMar

1.1. Who Are We?

Given their transboundary nature and wide ranging movements, marine migratory species are subject to a myriad of human-induced pressures, including fishing, habitat destruction and climate change, that cannot be mitigated by the unilateral action of one state or agency.

The clear need for transboundary solutions, led a group of scientists to collaborate to better understand migratory routes and species behavior in the Eastern Pacific, particularly spatial migration patterns between Ecuador, Colombia, Panama, and Costa Rica. Coming together as individual researchers the group developed standardized procedures and technologies, shared research techniques and data, and provided technical recommendations to governments and international decision-making bodies to support conservation measures of key migrating species such as scalloped hammerheads, leatherback turtles, and silky sharks. In 2006, these researchers, recognizing the need for ongoing collaboration, founded MigraMar—Spanish for “sea migration.”

Since that time, MigraMar has served as a collaborative platform for researchers from multiple institutions who embrace a shared global vision: ***Marine migratory species thrive in safe and healthy oceans.*** Our research, as individuals and in joint ventures, has focused on understanding migratory routes, key habitats, and the areas of greatest mortality where human fishing and development activities in open water spatially overlaps with migratory paths and nursery areas. By sharing our tools and technologies, we have built a shared platform of over 100 acoustic receivers that help numerous scientists tag and track migratory species. This research has led to over a dozen scientific articles published, a concerted effort by MigraMar scientists to inform and support the work of national park and fishery agencies and recommendations provided to regional and international organizations to better safeguard migratory species.

Over the past decade we have disseminated our research findings and analyses to improve the conservation environment for migratory marine animals in the Eastern Pacific, and have expanded the scope of the network by incorporating scientists from Mexico. As the influence of the MigraMar network has grown, we envision the impactful role we will play going forward:

The MigraMar network conducts the scientific research needed to better understand and safeguard healthy populations of marine migratory species in the Eastern Pacific.

1.2. MigraMar Members

Sixteen founding members¹ have been the core of the MigraMar network since 2006. This Strategic Plan provided an opportunity to consider how to further expand our network while ensuring that the key cultural attributes that have generated successful

¹ See Annex 1

collaborations and a strong regard for intellectual property rights are respected and advanced. We will begin expanding our membership in 2016 to include new members, who, like the founders:

- a) Carry out research and/or conservation programs on marine migratory species in the Eastern Pacific;
- b) Support the MigraMar mission, uphold our values and enthusiastically collaborate with other members;
- c) Fully comply with all required research permits, national laws and scientific ethics in research projects; and
- d) Commit to collaborate with others and fully credit colleagues and MigraMar to ensure appropriate recognition for the ideas generated and research undertaken.

We believe that our history of meaningful exchanges and high levels of trust will continue into the future given our strong commitment to the following five values which will continue to guide us:

- **Respect** – The intellectual property and creative ideas shared by our members is at the heart of our network. We advance our mission by being accountable to each other through collaborative ventures, reciprocity, acknowledgements, attributions, and shared authorship;
- **Excellence** – We incorporate the best available science to provide credible information to decision makers at national and international levels;
- **Integrity** – Our word is our bond. To fulfill our commitments to colleagues and the animals we strive to protect, our high professional standards require members to honor intellectual property rights, meet international animal care protocols, and secure all required permits.
- **Transparency** – We share our scientific and financial procedures in a timely fashion to advance our mission.
- **Education** – We are deeply committed to building capacity among our own members, with regional partners, and with future generations of scientists to continue to produce high-quality science for the conservation of migratory species throughout the Eastern Pacific.

Marine species migrate readily throughout our region. To date we have been heavily focused on the Eastern Tropical Pacific, but recognize the need to expand our alliances and increase the engagement and representation from researchers working in all of the Eastern Pacific bordering countries. We will strategically focus on attracting new members from currently non-represented countries, and continue to attract high-level researchers who can help build all of our capacity across the region. Affiliating with MigraMar strengthens the capacity and reputation of scientists in each country, magnifies

opportunities for transboundary collaboration, and generates scientific inputs for all of our countries to better sustain the rich ocean resources that are so important to our coastal and national prosperity.

1.3. Where We Work

The Eastern Pacific is exceptionally rich in biodiversity. Several major oceanic currents like the Alaska, California and Humboldt, create upwellings, gyres, and variations in water density and temperature that foster both high levels of productivity and migrations. Sharks, whales and turtles tend to be species of greatest concern as these species are experiencing marked population declines. Studies have highlighted serious declines in shark populations due to overfishing and finning. Turtle research records show consistently declining populations due to incidental capture in fishing operations, nest predation from poachers and domestic and feral wildlife, coastal development, and climate change impacts including erosion of nesting sites and increased temperatures which impact sea turtle gender and hatching. Other species such as sea lions, Guanay cormorants, and blue-footed boobies are indirectly affected by human overfishing as their own populations suffer declines when they have to travel so much further to find sustenance.

Interestingly, a few species such as orcas are expanding their range, becoming increasingly active ever further South. Whether their expansion is due to climate changes, food web changes or niches opening up for top predators with declines in other predator populations is not yet understood. What is clear is that the diversity is immense and interactions that contribute to bountiful seas are very complex. While the situation is grim for many species, there are still meaningful opportunities to better understand and conserve many migrating species, thereby building greater sustainability into the system and helping all species—including our own—benefit long term from a productive Eastern Pacific.

Within the region, there are several large marine protected areas from Canada to Baja California and then a substantial gap of unprotected waters along Central America before new protected areas begin again in the Eastern Tropical Pacific Seascape (known in the region as CMAR²). This seascape spans the waters of Costa Rica, Panama, Colombia and Ecuador and includes major oceanic island groups such as the Malpelo (Colombia), Cocos Island (Costa Rica) and the Galápagos Archipelago (Ecuador). Moving south into the Humboldt Current there is momentum towards greater protection, but also enormous fishing pressures on the anchovy schools, a critically important food source for humans and marine species.

Many of the migratory species such as Whale sharks, Leatherback turtles, Manta rays, and Hammerhead sharks, attract large amounts of ecotourism dollars to dive sites and island tours. While much still needs to be learned about migratory patterns, MigraMar scientists

² The Spanish-language acronym for the Eastern Tropical Pacific Seascape is CMAR for the Corredor Marino del Pacífico Este Tropical

have established clear links with certain areas—such as Whale shark movements between Darwin Island (Galápagos) and coastal South America on a yearly basis via satellite tags and a database of photo-identifications from research cruises.

The countries that border the Eastern Pacific have committed to protecting migratory species through signed international agreements such as the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). They have endorsed the UN Earth Summit Agenda 21, and the IUCN Red List. Possibly most importantly for the survival of marine species, many countries are advancing the Aichi Biodiversity Targets by protecting 10% of their coastal waters—albeit declarations and actual effective management are still far apart.

Solid marine science is needed to better understand species of concern and develop insightful recommendations for how to: create and expand marine protected areas; reduce human predation on species that require safeguarding; and protect reproductive cycles tied to migrations that we do not yet fully fathom. However, within the Eastern Pacific, there is a major vacuum in the understanding and scientific insights needed to reduce threats, strengthen management practices and build appropriate changes in our policies and actions. The need to fill this gap in the Eastern Pacific has been—and continues to be—the driving force that inspires MigraMar members to collaborate to build regional scientific capacity and better understand the the amazing migratory species that share our waters.

1.4. MigraMar's Accomplishments to Date

The past decade of collaboration has provided a depth of experience in four areas from which to launch this five-year plan. Highlights of our accomplishments include:

1. Develop collaborative research projects across the Eastern Pacific to increase our understanding of the biology and ecology of marine migratory species.

MigraMar has been at the forefront of technology to track migratory species in remote locations and better identify pupping areas, travel patterns and foraging grounds. Our collaborative use of ultrasonic telemetry has led to a shared network of over 100 acoustic receivers that report the presence of over 800 tagged individuals of 25³ species throughout the Eastern Pacific to dozens of scientists. We have used satellite tags on 12 migratory species⁴ to track the animals' movements and establish their distinct migratory routes, where populations aggregate, levels of site fidelity, and whether there are regular

³ Whale sharks, Tiger sharks, Scalloped hammerhead sharks, Smooth hammerhead sharks, Silky sharks, Pelagic thresher sharks, Smalltooth sandtiger sharks, Whitenose sharks, Whitetip reef sharks, Galapagos sharks, Blacktip sharks, Bull sharks, Dusky sharks, Lemon sharks, Silvertip sharks, Dorado, Rainbow Runner, Yellowfin tuna, Skipjack, Wahoo, Green turtles, Hawksbill turtles, Leatherback turtles, Southern ocean sunfish, Giant Manta rays.

⁴ Green, Hawksbill and Leatherback turtles, Southern ocean sunfish, Giant Manta rays, Whale sharks, Tiger sharks, Scalloped hammerheads, Silky sharks, Thresher sharks, Galapagos sharks, and Blacktip sharks.

channels of connectivity between certain regions. This cumulative research has contributed to a substantive body of publications, earning MigraMar a respected place in the science community as an acknowledged group of experts on spatial migration patterns in the Eastern Pacific

2. Improve the status of marine migratory species by safeguarding ecosystems and reducing direct pressures through informing and influencing policies in Eastern Pacific countries.

MigraMar members have primarily used our findings to help managers and policy makers improve their efforts to safeguard marine migratory species in the Eastern Tropical Pacific Seascape. Our members sit on both the Science and the Fisheries Technical Groups for the CMAR Initiative. However, as migratory routes showcased the lengthy and circuitous paths that many species take, we have expanded our research in the wider Eastern Pacific. For example, we have advised the Permanent Commission of the South Pacific (CPPS) for the implementation of the Regional Shark Plan of Action. MigraMar scientists brought to light violations of national and international laws with regard to shark finning of protected species as well as shark massacres in protected areas such as the Malpelo Wildlife Sanctuary in Colombia. We have also provided recommendations on creating and expanding marine protected areas and better regulating fishing fleets and coastal developments to incorporate the needs of open-water migratory species and their home ranges.

MigraMar scientists actively participated in the World Conservation Congress to ensure that Leatherback turtles—a species with over a 95% population decline since 1990⁵—received greater protection. Their worked contributed to the passage of Resolution 4.111 *Conservation of Leatherback Turtles and Hammerhead Sharks in the Eastern Tropical Pacific Marine Corridor*. Similarly, Migramar members actively contributed to the ban on fishing Manta and other ray species in Ecuador and to the listing of *Manta birostris* in Apendix I and II of the CMS. In October of 2016, the CITES CoP17 listed Silky and Thresher Sharks and Mobula Rays in Appendix II thanks to input from MigraMar scientists. This listing puts tight trade controls on these species thus pressuring governments to stop trade or to grant special export permits and limit the “take”.

Global recognition of the importance of these species helped justify the expansion of the Cocos Island Marine Reserve to include the Last Gemelas Seamounts Marine Management Area (Costa Rica) and establish a marine protected area for the Cordillera de Coiba (Panama) in 2015. In 2016, the Darwin and Wolf Marine Sanctuary in the Galápagos (Ecuador) provided new protections, eliminating fishing and other resource extraction. Similarly the Revillagigedo Archipelago (Mexico) was declared a UNESCO World Heritage Site with substantial input from MigraMar scientists. It is now being proposed as a Marine Reserve due to the importance of the shark and manta populations throughout the archipelago. More recently, in 2016, the President of Colombia announced the expansion of the Malpelo Sanctuary from under 7000 km² to 27,000 km², thanks largely to the scientific advice of Colombian MigraMar members.

⁵ The Leatherback Trust, *Saving the World's Most Imperiled Sea Turtles*

3. Build the capacity of research scientists across the Eastern Pacific through training programs, mentoring opportunities, and support for aligned research.

MigraMar scientists have trained and mentored each other through shared research expeditions and worked together to test drive new technologies. We also have provided direct support and coaching to build the capacity of the next generation of researchers by co-supervising students doing active thesis work on migratory species. MigraMar scientists supervised three Latin American students who received PhDs, two students who received MScs and a further two students who received bachelor degrees, all with a marine biology focus. Currently there are eight students working with MigraMar members to advance the capacity of the next generation of marine scientists.

In 2014, MigraMar held an introductory aquatic biotelemetry workshop in Bogota, Colombia for over 30 junior researchers. An advanced data analysis workshop was held in 2016 in La Paz as part of the first MigraMar General Assembly, where 20 MigraMar members and students received training from invited experts. MigraMar members have also provided training in other areas around the world such as in Bali, Indonesia (2015) given transoceanic migrations.

4. Serve as a platform to promote, fund and coordinate these activities.

MigraMar has served as a platform to build connections between scientists from different nations, organize joint ventures, and share technologies and communications opportunities. We set up and maintained a web site, list servers, and organized training programs for our members, all while offering numerous education opportunities to the wider world. Based on our research reputation, MigraMar members have played a major role in developing educational documentaries such as:

2016 *Islas de México*, Canal 11, Mexico
2015 *Underwater Highways*, Water Brothers, TVO Canada
2015 *Last Home of the Giants*, Water Brothers, TVO Canada
2015 *The Sea of Cortez*, Love Nature, Canada
2012 *Galápagos 3-D*, Atlantic Productions, Sky TV, USA
2011 *Tiburones Ballena*, Día a Día, Ecuador
2011 *Realm of the Giants*, Tom Lucas Productions, USA
2011 *Expedición Isla del Coco*, Día a Día, Ecuador
2011 *Un Mundo sin Peces*, Día a Día, Ecuador
2011 *Ecuadorian Premiere of "The End of The Line"*, award winning documentary
2010 *Shark Men*, Season 3, National Geographic TV, USA
2009 *Tortugas Carey*, Día a Día, Ecuador
2008 *Shark Superhighway*, Tom Lucas Productions, National Geographic, USA.
2007 *Malpelo: requins sous haute surveillance*, Channel 5, France
2007 *Manta Rayas Ecuador*, Día a Día, Ecuador

We are heartened by our successes and sobered by how much more must be done. However, we are convinced that these four areas of work continue to be the best ways for MigraMar to make an impactful difference for the species that we study and support.

2. MigraMar 2017-2021

2.1. Opportunities Ahead

Recognition of the importance of protecting watersheds, national park systems, and preserving terrestrial species, emerged as the impoverishment of nature also led to our own impoverishment—of water, of soils, of beauty and spirit. Literally, it is only over the past two decades that governments have begun to apply the same thinking to our oceans. In 2010, through the Aichi Biodiversity Targets⁶, most of the world's governments agreed to protect 10% of marine and coastal areas by 2020 to reverse the overexploitation and ecosystem decline that was so obvious. Many countries, including the majority along the Eastern Pacific, are now making efforts to live up to this ambitious but necessary goal. This is a huge opportunity, not just to help insure that areas of greatest diversity and importance to species' life cycles are declared, but to then ensure they are truly protected. The survival of these species is part of our survival in the life support system that our blue planet provides.

Over the next five years, MigraMar's knowledge of species' home ranges, the role of apex predators and other migratory species on food chains, their migratory routes, and their pupping grounds are all needed to help design and expand marine protected areas in alignment with the Aichi Targets and our countries' need for more sustainable practices. Furthermore, MigraMar scientists can call attention to the need for changing patterns in our resource use, stopping wasteful practices such as shark finning that kills sharks that are worth far more alive than falling to their deaths, butchered for just a few inches of fin. MigraMar is ready to share our data and analyses to help governments and industries develop National Biodiversity Strategies and Action Plans (NBSAPs) to reduce direct pressures on species through better fisheries management, safeguard key ecosystems and in some cases develop specific species level protection policies.⁷

Thanks to the generosity of Helmsley Charitable Trust (helmsleytrust.org), the fiscal sponsorship provided by Pacífico (redpacifico.net), and facilitation provided by Aligning Visions (aligningvisions.com), MigraMar members have gathered on three occasions in 2016 to envision our future and write this 5-year Strategic Plan. This plan opens up the opportunity for MigraMar to grow, flourish, and expand our impact for the species that we have dedicated our scientific lives to understand and conserve.

⁶ Aichi Biodiversity Targets under the Convention on Biological Diversity. Target 11: *By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*

⁷ Specific species conservation targets align with Aichi Target 12: *By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*

2.2. MigraMar's Four Ambitious 2017-2021 Goals

To best enable the MigraMar network to “conduct the scientific research needed to better understand and safeguard healthy populations of marine migratory species in the Eastern Pacific” the members set four ambitious goals to achieve in the five years between January of 2017 and December of 2021.

Goal 1: *By 2022, MigraMar research collaborations will produce the best available science on the spatial ecology of 30 transboundary marine migratory species that are experiencing significant population declines.*

MigraMar scientists are leaders in biotelemetry to remotely monitor the spatial movements of migratory species. We will build on our decade of shared experience to expand shared platforms, encourage standardized procedures, work with Pacífico on a regional research plan, and share technological innovations all to advance our understanding of migratory species, their behaviors, and their conservation needs.

- a) ***Expand our acoustic array from 100 to 150 acoustic receivers by 2019.*** The 100 acoustic receivers currently in use will be maintained and expanded from the current concentration in the Eastern Tropical Pacific. We anticipate a full diagnosis of our current array to identify new sites and revive discontinued receivers. We project an additional 50 receivers to fill gaps in areas where scientists hypothesize significant population activity and/or nurseries by 2019. New sites will focus on coastal nursery grounds, seamounts, and underwater ridges that initial data indicates are highly likely to be critical swimways.⁸

We envision a full array of acoustic receivers that expand from Costa Rica northwards to Guatemala and southern Mexico and from Ecuador southwards into Peru and Chile. Part of this goal will include developing a maintenance plan given the need for new batteries and ongoing maintenance. Finally, the data from each receiver needs to be shared (see MigraBase below), so that scientists throughout the Eastern Pacific can use the receivers to track species of concern.

- b) ***Establish and deploy MigraBase.*** MigraBase is an online repository for data management open to all researchers in the Eastern Pacific. This repository software solution is being developed by the Universidad de San Francisco de Quito. It will serve a similar function as other repositories such as the California Fish Tracking Consortium and Hydraphone Data Repository.

The system allows researchers to see detections from their registered tags, even if they are recorded on third party receivers, thus streamlining the process of detection of connectivity. Data protection processes ensure that researchers can only access tags registered to them or authorized by the tag owner. It also provides

⁸ Data indicates that the Cocos Ridge (see Goal 2) is a highly used swimway between the Galápagos and Cocos archipelagos. Other seamounts may prove equally important.

digital access to managed content. To promote the use of aquatic biotelemetry in Spanish-speaking countries, this database will be open access to all researchers, independently of whether they belong to MigraMar. By 2021 at least ten research teams will be actively accessing MigraBase to strengthen their work and expand our understanding of regional migrations.

- c) ***Develop high-quality research and maps of the spatial ecology of 30 species of concern.*** MigraMar will produce maps that overlay areas of greatest species activity with anthropogenic activities to identify areas of highest direct pressures. Our spatial ecology data can be used to enhance MPA systems and prioritize fisheries management, including changes in fisheries practices—with a focus on the high toll from pelagic long-line fishing—and seasonal fishing bans during periods of high migratory activity. It is also helpful in identifying the expansion of No-Take zones based on top predator movements and spatial use. CMAR has officially requested a more detailed map of migratory routes as part of an effort to identify critical corridors and set firm national objectives for Ecuador, Costa Rica and Colombia for the next Conference of the Parties of the Convention of Biological Diversity (CbD COP13).

As part of our effort to provide the best available data on spatial ecology we will expand the use of satellite and acoustic tracking from 24 to 30 species. Acoustic tracking provides information on where—and for how long—migratory species stay in an area (residency). Alternatively, satellite tracking plots the pathways that the tagged individuals use to get from one area to the next. MigraMar scientists recently had a major breakthrough in the ability to tag and track scalloped hammerhead sharks, greatly enhancing our ability to track these, and other, sharks. Using these new techniques, and learning from exceptional oceanographic research such as the TOPP (Tagging of Pacific Predators) programs, MigraMar scientists will be better able to coordinate with North American research studies and encourage greater use of new technologies and tags to compile needed data on key habitats, swimways, and timing of residency to enhance our findings and recommendations for conservation efforts.

- d) ***Raise and administer \$300,000 for transboundary collaborative research.*** In addition to ongoing grant seeking by all of our individual members for their research, MigraMar seeks to create an incentive for enhanced transboundary collaboration. We will raise funds for a competitive process for innovative and pilot projects that incorporate new areas, species, or technologies that will enhance the leadership of the MigraMar network to advance our mission. Grants will be for transboundary coordinated research between MigraMar scientists with a focus on spatial movements, population trends, key habitat needs for species of concern⁹, and new research in climate change impacts and resiliency models. This

⁹ Species of special concern are those with declining populations such as Hammerhead and Silky sharks, Whale sharks, Green and Leatherback turtles, and Humpback whales. However, there are a number of other species with limited research to date that are of interest as bellweathers of other trends in ecosystem health such as marlins, orcas and boobies.

grant process will also help us immediately incentivize the use of our shared platforms such as the acoustic array and MigraBase. A panel of reviewers made up of internal and invited PhD scientists will be invited by the Board of Directors to review and approve proposals. Grantees will be expected to present their progress and results during Annual Assemblies, contributing to our capacity as a network.

- e) ***Publish 20 new papers to inform the science and policy communities about marine migratory species.*** Raise a fund of \$50,000 to help MigraMar scientists publish their findings. Many journals such as *PLOS One* or *Biological Conservation* have a publication fee which can be a difficult hurdle for PhD students and entry-level scientists. This fund will encourage additional papers and eliminate the disincentive created by publication fees. Among these papers, MigraMar will include a regional analysis of all existing acoustic and satellite tracking data available, encouraging external scientists to collaborate. Thanks to initial support from the Helmsley Charitable Trust we already have a number of papers which will be submitted in 2017.
- f) ***Make MigraMar scientific findings accessible to all levels of audiences.*** The ability to share our findings with other scientists and learn from their findings and technological innovations is critical grow our scientific and technological capability. In the short-term, at least one MigraMar member will present oral or poster sessions at the regional Encuentro Colombiano Sobre Condrictios and the American Elasmobranch Society conferences. Longer term, we plan to have a small fund of \$10,000/year to support MigraMar scientists to take leadership roles in panels at events such as the International Marine Protected Area Congress (IMPAC), Sharks International, International Sea Turtle Society, International Whale Shark Conference and Biologging Symposium. In addition, to support our members in representing MigraMar we will develop an *Annual Update on the Status of Marine Migratory Species in the Eastern Pacific* in written and powerpoint form for all MigraMar members to use in their outreach (see 2.d).

In addition to scientific forums, we provide information about our work and findings to media and educational centers. We are developing an aligned communications strategy to strengthen our online presence through our website and social media. Our website will be updated in late 2016 and redesigned to enable fast and consistent ongoing updates. The focus of the communications strategy is taking our science-based materials and translating them into non-technical and evocative language that explains the fundamental concepts of marine migrations. We believe that our communications can help decision-makers and the general public increase their affinity for marine species and better understand the importance of appropriate conservation policies. Maps of migratory routes, graphic depictions of animal behaviors etc. will be part of this increased effort to explain our work to non-scientists and build support for better fishery management and other needed conservation tools.

Goal 2: *By 2022, MigraMar will be the most respected scientific reference for decision-making bodies on the conservation of marine migratory species in the Eastern Pacific.*

MigraMar scientists will support national, regional and international bodies responsible for advancing national plans and ensuring cross-border conventions and agreements to conserve marine migratory species. We will provide consistent technical advice to decision-making authorities based on the science, and particularly our spatial mapping, generated by our network to support conservation efforts and decision-making in the Eastern Pacific.

For the past decade, MigraMar scientists have gathered an impressive amount of information that has been—and can continue to be used—to support conservation efforts. Data gathered to date indicates the following upcoming priorities:

- a) ***Promote a Cocos-Galápagos Swimway:*** The Cocos Ridge is a 700 km underwater mountain range that directly links the Cocos World Heritage Site (Costa Rica) with the Galápagos Archipelago (Ecuador). It is a proven migration route for many shark and turtle species. There is substantial spatial overlap with industrial level fishing from international vessels. The fishing techniques used by these vessels directly affects the survival of these species and threatens fisheries that are critically important to coastal economies in Costa Rica and Ecuador. Other swimways along seamounts will also be a research priority given that there are strong indications of the importance of an underwater mountain range connecting Coiba (Panama) and Malpelo (Colombia) as well.
- b) ***Support National Biodiversity Strategies and Action Plans (NBSAPs).*** MigraMar members will provide solid science on marine migratory species to assist nations to design their National Biodiversity Strategies and Action Plans. Most of the data collected and published through the work of MigraMar scientists over the past decade has been focused on the Eastern Tropical Pacific Seascape. Our ability to add value and insights is therefore strongest in Colombia, Ecuador, Panama and Costa Rica. However, we are confident that we can help additional Eastern Pacific border countries develop their ability to expand conservation tools for marine species with insights gained from our work to date incorporating marine migratory routes, mangrove nursery areas, and seamount areas in protected areas and changes in fishing practices.
- c) ***Provide the best available science to regional and international bodies who set policies for marine migratory species.*** International commissions and working groups regularly ask for scientific data and advice on species population health and movement patterns.

MigraMar scientists will attend international conferences and meetings to provide input and recommendations on the population health of various species. Our work to get several shark species included in the IUCN Red List of Threatened Species—such as the recent reclassification of the Whale shark from a Vulnerable to an Endangered species, and our support to the listing of Silky sharks under Appendix

II of CITES—remains important for prioritizing species conservation and putting pressure on governments to accommodate these species migratory routes and uphold CITES and other conventions.

MigraMar will ask senior members to be the lead consultants to support working groups and make recommendations for decisions affecting marine migratory species in the following bodies:

- Permanent Commission for the South Pacific (CPPS) of the Food and Agricultural Organization of the United Nations. The Regional Plan of Actions for Sharks—as well as Plans for other species are areas where MigraMar has much to contribute;
- The Eastern Tropical Pacific Seascape (CMAR) Science Committee;
- CBD (Convention on Biological Diversity—particularly the Aichi targets) offering technical advice, hosting side events and briefing the press.
- CMS (Convention on the Conservation of Migratory Species of Wild Animals).
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora);
- IATTC (Inter-American Tropical Tuna Commission); and the
- IUCN (International Union for Conservation of Nature).

- d) ***Develop an Annual Update on the Status of Marine Migratory Species in the Eastern Pacific (see 1.f.).*** MigraMar will write a summary document and create a replicable presentation of the scientific findings on species migrations and populations for the Eastern Pacific on an annual basis. All MigraMar members will be encouraged to use these tools to inform national government agencies and international bodies to build support for effective technical recommendations.

Goal 3: By 2022, MigraMar will involve and coach an additional 15 scientists from Eastern Pacific nations to support significant research on marine migratory species.

Over the past decade, MigraMar has provided training programs, mentoring opportunities and support for aligned research to our own members and to the next generation of scientists in our countries. We recognize that we need to grow as a network and believe we can build our own capacity and that of other scientists through that process.

- a) ***Build new levels of collaboration and embrace 15 scientists from new geographies.*** We will target at least ten scientists in countries with limited marine research in the Eastern Pacific to date (e.g. Guatemala, El Salvador, Honduras, Nicaragua and Southern Mexico) to engage them in MigraMar training activities, collaborative research and outreach events. We will also build increased exchanges and new collaborative research opportunities with at least five scientists from Peru and Chile who are actively engaged in migratory species research. Funding available for transboundary research collaborations (1.d.) will encourage engagement of scientists in new geographies.

As part of this effort we will ***add 2 to 3 new members annually to MigraMar***. We expect to add 2-4 members a year, starting in 2016. By 2020 we aim to have two new members from each of at least three Eastern Pacific countries not currently represented in our Assembly. We will also invest in our own capacity and scientific credibility by inviting renowned PhD researchers and academics from all countries who have ongoing research programs in the Eastern Pacific to join MigraMar as trainers, research collaborators and/or as members. We envisage inviting key scientists at leading institutions who undertake cutting-edge research in our field to become members of MigraMar to strengthen our research scope and reputation and to mentor students.

MigraMar will expand slowly, but steadily, for the foreseeable future to ensure that the values and cultural norms that have made us a successful collaborative continue. Our Principles (Annex 2) lay out the eligibility requirements and process for becoming new members:

- Prospective members carry out research and/or conservation programs on marine migratory species in the Eastern Pacific;
- Prospective members support the MigraMar mission, uphold our values and enthusiastically collaborate with other members;
- Prospective members fully comply with all required research permits, national laws and scientific ethics in their research projects; and
- Prospective members are committed to collaborate with others and fully credit colleagues and MigraMar to ensure appropriate recognition for the ideas and research undertaken.
- Prospective members are individuals—a separate process takes place for organizational members (see III).

b) Build the next generation of leading Latin American marine scientists.

MigraMar will continue to train upcoming marine professionals in biotelemetry and other marine tracking, population and ecological analyses and techniques. Professors within the MigraMar network will engage their top students in migratory species research and encourage their participation in collaborative research projects and workshops with MigraMar.

Goal 4: By 2019, MigraMar will be a staffed and legally incorporated nonprofit advancing our mission.

MigraMar has operated as an all-volunteer network since its inception. Thus, all efforts to collaborate across borders and provide input to international conferences etc. have been almost exclusively funded by our own members and member organizations. The level of effort and the strong belief in the importance of what we were doing inspired us. At the same time, it was not a sustainable model. Asking busy volunteers to manage the website, organize databases, and host training programs worked for short periods of time, but proved unsustainable over a multi-year period. Thus, our network has ebbed and flowed depending upon inspired leaders at different periods in time, but ultimately waned as core institutional functions have proven overwhelming without staffing. Through this

process we recognize that while our network is strong, we must have staff to coordinate activities and advance the ambitious goals listed above.

Thanks to an investment by the Helmsley Charitable Trust and the fiscal sponsorship of Pacífico, our ability to institutionalize has taken a large jump in 2016. Their support has allowed our founding members to meet and plan, develop a clear draft of our bylaws, and create a Steering Committee to move us towards creating our own legal entity. It has also allowed us to reimagine MigraMar as a longer-term staffed platform that actively fundraises for its own operations and advances shared goals with our members. Our members are extremely excited about this evolution. As can be seen in the very detailed work that went into designing our Principles which will be the basis for our Bylaws (Annex 2), we are well along in our efforts to fully institutionalize as an independent staffed network.

Our top priorities include:

- a) ***Hire an Executive Director to advance this Strategic Plan.*** Our most immediate funding need is an Executive Director with the ability to raise the funds required to achieve the goals listed in this strategic plan. This Strategic Plan requires a leader at the helm to coordinate members across multiple countries and pull together protocols and standards to raise our profile and efficiency. The Executive Director will be the lead author of fundraising proposals and will manage the execution of the activities in our work plan through coordinating our members and consultants as needed. As such, this individual will be responsible for both submitting funding proposals and advancing the outcomes detailed in this strategic plan.
- b) ***Develop the organizational capacity of MigraMar.*** With an Executive Director on board will be able to pursue the other critical aspects of growing our institutional capacity as a network.
 - Continue a strong relationship and alignment with Pacífico. Pacífico will continue to serve as our fiscal sponsor and as a major partner in advancing the Regional Research Plan;
 - Choose a first Board of Directors in 2016. The Board will be advisory until we are fully independent and will replace our current steering Committee. We recognize the importance of investing in governance over time and building the strength of an independent and strategic Board of Directors.
 - Register MigraMar as an independent nonprofit. We have begun analyzing the feasibility of registration in different countries and will make a decision about the preferred country in early 2017. We will then begin the formal incorporation process in 2017. We have developed our Principles (Annex 2) which will be adapted by legal counsel in the desired country to become our Bylaws and Articles of Incorporation;
 - Host an annual Assembly for the MigraMar membership. The Assembly, being prototyped in La Paz, Baja California in 2016 will incorporate board elections, new membership applications, capacity-building opportunities and the opportunity to review work plans, work to date and adapt going forward.

3. MigraMar Budget

We set the stage for our ambitious five-year goals by writing this Strategic Plan in 2016 thanks to the fiscal sponsorship of Pacífico and support from the Helmsley Charitable Trust. We also began investing in our capacity to advance these four goals and jumpstart more programs in 2017.

MigraMar Budget 2016 (US\$)

Goals	2016 Activities	Budget 2016
Goal 1: <i>By 2022, MigraMar research collaborations will produce the best available science on the spatial ecology of 30 transboundary marine migratory species that are experiencing significant population declines.</i>	2 research grants to MigraMar scientists on Scalloped hammerhead Sharks	\$ 21,000
	MigraBase under construction with Universidad San Francisco de Quito	\$ 8,000
Goal 2: <i>By 2022, MigraMar will be the most respected scientific reference for decision-making bodies on the conservation of marine migratory species in the Eastern Pacific.</i>	Attend 2 International Conferences	\$ 8,000
	New publications in scientific journals	\$ 10,000
	Communications Strategy and Consultants	\$ 5,000
	Web site upgrade	\$ 3,000
Goal 3: <i>By 2022, MigraMar will involve and coach an additional 15 scientists from Eastern Pacific nations to support significant research on marine migratory species.</i>	Telemetry Workshop in La Paz	\$ 20,000
Goal 4: <i>By 2019, MigraMar will be a staffed and legally incorporated nonprofit advancing our mission.</i>	Strategic Planning Workshops	\$ 20,000
	Salaries for Coordinators	\$ 25,000
	Strategic Plan facilitation	\$ 28,000
Total Budget 2016		\$148,000

We successfully applied this 2016 budget and advanced all four goals. Based on our growth to date and the ambitious plans detailed above, we developed a Work Plan and projected our financial needs for the next five years to complete these goals. Thanks to the fiscal sponsorship of Pacífico our financial administration is in great hands for the foreseeable future as we develop our own independent capacity.

As we linked our work plan activities with budget projections it became obvious that MigraMar will not succeed in achieving these goals unless we are able to hire full-time staff, particularly a visionary Executive Director. The amount of work required to truly bring the best available science on migratory species to bear on policy recommendations and marine protected area design throughout the Eastern Pacific will require major investments, particularly in needed research tags and other equipment and staff.

Five-Year Budget for MigraMar 2017-2021 in US\$

Goals	Key Activities	Budget				
		2017	2018	2019	2020	2021
<i>Goal 1: By 2022, MigraMar research collaborations will produce the best available science on the spatial ecology of 30 transboundary marine migratory species that are experiencing significant population declines.</i>	1.a.b.& c. Acoustic array gap, 20 receivers and satellite spot tags for spatial maps of 30 species	156,750	144,625	146,471	131,340	128,832
	1.d.. Support transboundary research	66,000	66,000	66,000	66,000	66,000
	1e.& f. Make MigraMar findings available to all levels of audiences.	30,000	30,500	40,025	31,576	32,155
<i>Goal 2: By 2022, MigraMar will be the most respected scientific reference for decision-making bodies on the conservation of marine migratory species in the Eastern Pacific.</i>	2.a. Promote Cocos- Galapagos Swimway	12,000	15,600	13,525	16,976	15,155
	2.b. Support NBSAPs	2,000	7,000	7,250	7,513	7,788
	2.c. Provide science input and recommendations to decision making bodies		5,000	5,250	5,513	5,788
<i>Goal 3: By 2022, MigraMar will involve and coach an additional 15 scientists from Eastern Pacific nations to support significant research on marine migratory species.</i>	3.a. Engage 15 scientists from new geographies and add 2-3 new members/year	33,000	40,000	34,000	37,000	41,000
	3.b. Build next generation of marine scientists	8,000	12,000	20,000	20,000	20,000
<i>Goal 4: By 2019, MigraMar will be a staffed and legally incorporated nonprofit advancing our mission.</i>	4.a. Staff with visionary Executive Director	75,000	100,000	105,000	110,250	115,763
	4.b. Develop organizational capacity of MigraMAR	21,000	14,550	15,278	16,041	16,843
10% on total	Overhead	40,875	43,553	45,306	44,248	44,961
Total Budget		\$440,625	\$470,978	\$499,367	\$486,733	\$494,565

Based on the level of activities projected, it will cost between \$450,000 to \$500,000 per year to enable MigraMar to conduct the scientific research needed and build the capacity for this level of research and outreach needed to help conserve marine migratory species in the Eastern Pacific. Our ability to increase our outcomes will accelerate dramatically once we are appropriately staffed to manage these four goals going forward.

Annex 1: MigraMar Founding Members

Founding members of MigraMar participated in the creation of the organization in 2006 and/or worked closely with the organization up until 2016. Their organizational affiliations that have worked to support MigraMar, and are therefore organizational members, are listed. These sixteen members established the structure and strategic plan for MigraMar in 2016 by majority vote. Since that time, this designation is for historical interest only as all members who fully meet their commitments to MigraMar have similar rights within the Assembly in every given year.

	Individual Members	Organizational Members
1	Randall Arauz	Turtle Island Restoration Network and Pretoma
2	Andres Baquero	Equilibrio Azul
3	Sandra Bessudo	Fundación Malpelo
4	Eduardo Espinoza	Parque Nacional Galápagos
5	Héctor M. Guzmán	Smithsonian Tropical Research Institute
6	Alex Hearn	Universidad San Francisco de Quito
7	Mauricio Hoyos	Pelagios Kakunjá
8	James Ketchum	Pelagios Kakunjá
9	Pete Klimley	UC Davis
10	César Peñaherrera	University of Tasmania
11	George Shillinger	The Leatherback Trust
12	Germán Soler	Fundación Malpelo
13	Todd Steiner	Turtle Island Restoration Network
14	Felipe Vallejo	Equilibrio Azul
15	Bryan Wallace	Duke University, Marine Lab
16	Ilena Zanella	Misión Tiburon



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I. Purpose

1) General Purpose

The MigraMar network was created to:

- a) Develop collaborative research projects across the Eastern Pacific to increase our understanding of the biology and ecology of marine migratory species;
- b) Influence policies in Eastern Pacific countries and in regional and global agencies to safeguard marine migratory species;
- c) Build the capacity of research scientists across the Eastern Pacific through training programs, mentoring opportunities, and support for aligned research: and
- d) Serve as a platform to promote, fund and coordinate these activities.

2) Vision

Marine migratory species thrive in safe and healthy oceans.

3) Mission

The MigraMar network conducts the scientific research needed to better understand and safeguard healthy populations of marine migratory species in the Eastern Pacific.

4) Values

MigraMar network members advance our mission by committing to work with:

- **Respect** – The intellectual property and creative ideas shared by our members is at the heart of our network. We advance our mission by being accountable to each other through collaborative ventures, reciprocity, acknowledgements, attributions, and shared authorship;
- **Excellence** – We incorporate the best available science to provide credible information to decision makers at national and international levels;
- **Integrity** – Our word is our bond. To fulfill our commitments to colleagues and the animals we strive to protect, our high professional standards require members to honor intellectual property rights, meet international animal care protocols, and secure all required permits.
- **Transparency** – We share our scientific and financial procedures in a timely fashion to advance our mission.
- **Education** – We are deeply committed to building capacity among our own members, with regional partners, and with future generations of scientists

to continue to produce high-quality science for the conservation of migratory species throughout the Eastern Pacific.

5) Objectives

The MigraMar network was created to:

- a) Develop collaborative research projects across the Eastern Pacific to increase our understanding of the biology and ecology of marine migratory species.
 - Share data and research among MigraMar members;
 - Strengthen the capacity of our members to implement strong field research on marine migratory species by building shared platforms, encouraging standardized procedures, and sharing technological innovations; and
 - Exchange information and research agendas with scientists working on marine migratory species in other areas of the world.
- b) Influence policies in Eastern Pacific countries and in regional and global agencies to safeguard marine migratory species:
 - Provide baseline data and recommendations for marine protected area design and management;
 - Provide recommendations on fishing areas and technologies;
 - Provide input and recommendations on the health and population dynamics of species at international conferences and meetings;
 - Communicate information about migratory species in the Eastern Pacific for all levels of audiences from a website for the general public to scientific publications.
- c) Build the capacity of research scientists across the Eastern Pacific through training programs, mentoring opportunities, and support for aligned research:
 - Provide training and mentoring programs;
 - Engage student members to build the capacity of the next generation;
 - Target scientists in countries with limited experience working in the Eastern Pacific (e.g. Guatemala, El Salvador, Honduras and Nicaragua) to engage them in MigraMar activities and build their capacity; and
 - Share information with Universities and Research Centers doing scientific research on marine migratory species.
- d) Serve as a platform to promote, fund and coordinate these activities:
 - Secure funding in support of MigraMar activities;
 - Maintain staff to manage programs such as our shared database, MigraBase, and ensure MigraMar is represented at key international meetings;
 - Survey and work with members to develop new ideas and programs;

- Advance the reputation and visibility of MigraMar and our members; and
- Monitor, evaluate, and strive to continually adapt and improve MigraMar programs and document our accomplishments.

II. Individual Membership

6) Eligibility for Membership in MigraMar

- Prospective members carry out research and/or conservation programs on marine migratory species in the Eastern Pacific;
- Prospective members support the MigraMar mission, uphold our values and enthusiastically collaborate with other members;
- Prospective members fully comply with all required research permits, national laws and scientific ethics in their research projects; and
- Prospective members are committed to collaborate with others and fully credit colleagues and MigraMar to ensure appropriate recognition for the ideas and research undertaken.
- Prospective members are individuals—a separate process takes place for organizational members (see III).

7) Founding Members

MigraMar founding members participated in the creation of the organization in 2006 and/or worked closely with the network during its first decade.¹⁰ These sixteen members established the structure and strategic plan for MigraMar in 2016 by majority vote. Going forward, this designation is for historical interest only as all members who fully meet their commitments to MigraMar have similar rights within the Assembly.

8) New Members

- Prospective members are proposed, and thereby endorsed by, an existing member;
- A scientist that wants to become a member may write to the Board requesting to join. The Board will ask current members who would be willing to endorse him/her;

¹⁰ Annex 1 is the list of founding members.

- c) Prospective members complete an application form that is distributed to all current members for review;
- d) Prospective members applications are voted on in the yearly annual meeting by the full Assembly (all MigraMar members in person or by email for those not present). Full consensus in a members-only forum is required for membership approval;
- e) There are a limited number of new memberships available every year (as set by the Board) so some prospective members may be approved in a subsequent year;
- f) Student members are endorsed by and supervised directly by a MigraMar member who serves on their committee; and
- g) Prospective members or student members can be invited to meetings and training programs. Student members cannot vote.

9) **Rights of Members**

Members have the right to all the services and benefits provided by the MigraMar network:

- a) Members actively support – and are supported by – a vibrant regional network that advances our understanding and ability to protect marine migratory species in the Eastern Pacific;
- b) Members are listed and have a small bio on the MigraMar website;
- c) Members receive access to the MigraMar intranet for shared calendars, databases, and other resources such as publications, bylaws and membership information;
- d) Members enjoy first rights to materials and products produced by MigraMar such as MigraBase and other shared tools;
- e) Members are invited to test new technologies and products in beta phases;
- f) Members have a right to elect the Board of Directors and be nominated to serve on the Board at the Annual Assembly;
- g) Members have a right to create working groups or ask to join Board approved standing committees;
- h) Members receive discounted registration at MigraMar meetings and workshops that are open to the wider public;

- i) Members are eligible to apply for MigraMar member-only research and travel grants, and equipment use; and
- j) Individual members that represent organizations who want to be affiliated as part of the MigraMar network may nominate their organization for consideration (see III. Organizational Members).

10) Responsibilities of Members

By joining MigraMar, members assume the responsibility to:

- a) Pay an annual fee as established by the Board;
- b) Uphold the MigraMar values and work to advance our mission;
- c) Conduct all research with full legal permits and meet scientific ethical standards including the International Animal Care and Use Committees (IACUC) and other relevant guidelines;
- d) Participate in the MigraMar Annual Assembly or one other MigraMar meeting per year;
- e) Be proactive participants, responding to requests for comment and votes;
- g) Share credit and/or authorship, as appropriate, in all publications that emerge from collaborative ventures to ensure appropriate recognition of MigraMar and individual colleagues;
- h) Consult with existing members working in the same geography, or on similar research questions, to enhance the use of limited funds, avoid duplication of efforts, and leverage greater scientific understanding; and
- i) Send a letter to the MigraMar Board requesting up to a two-year leave-of-absence in the case of sabbaticals or other opportunities wherein a member cannot maintain an active status.

11) Member Dismissal

Members who violate the responsibilities listed above or work in a way inconsistent with MigraMar values and bylaws will be excluded in a decision made by the majority of the Board.¹¹

¹¹ Procedure for dismissal to be detailed in the MigraMar Operations Manual to include the need for confidentiality, right of defender to appeal, and no conflict of interest from Board members voting on the dismissal.

12) Annual Fee

There will be an annual membership fee. The fee must be paid by January 31st every year. The Board will set differentiated annual fees for:

- Members
- Student members
- Organizational members (see III)

Annual Fees will be used to pay for administrative and staff costs (salary, office costs, communication costs and travel), consultancies, studies, shared technologies, workshops, international meeting attendance, the annual assembly and all other activities agreed to by the Assembly.

III. Organizational Members

MigraMar has a number of individual members who represent organizations with shared missions and research agendas. The MigraMar network is committed to building the strength of our sector, providing increased visibility to member organizations, sharing credit and forging cost-efficiencies.

Areas of possible collaboration include, but are not limited to:

- List logos of organizational members on MigraMar materials and our website;
- MigraMar logo incorporated in organizational members' materials and websites;
- Shared booths and representatives at regional and international conferences;
- Shared office space, research facilities and equipment;
- Joint presentations for shared research and recommendations; and/or
- Verbal recognition in speeches and presentations.

13) Eligibility for Organizational Membership

- a) A MigraMar member in good standing, with the power to represent the prospective organization, is willing to serve as the lead representative;
- b) An organization may employ a number of individual MigraMar members, but only one member is named as the lead representative for ensuring appropriate visibility and coordination of the organization within the network. Other organizational employees who are not MigraMar members do not have membership rights;
- c) Organizational members must fully comply with all required research permits, national laws and scientific ethics in their research projects;

- d) Organizational members uphold the MigraMar values and are willing to share and collaborate;
- e) Organizational members collaborate with other MigraMar members and give credit and appropriate recognition for the ideas and research undertaken; and
- f) Organizational members pay a differentiated annual fee as set by the Board.

14) New Organizational Members

- a) An individual MigraMar member must propose that their organization receives membership recognition. They complete an organizational application form that is distributed to all current members to review;
- b) Prospective organizational members applications are voted on in the yearly annual meeting by the full Assembly (all MigraMar members in person or by email for those not present). Full consensus in a members-only forum is required for membership approval; and
- c) There are a limited number of new organizational memberships available every year (as set by the Board) so some prospective organizational members may be approved in a subsequent year.

15) Rights of Organizational Members

MigraMar organizational members will be credited equally in general outreach materials under the auspices of the MigraMar network. Either no organization's logo will be used, or all organizational members' logos will be used.

- a) All organizational members will be listed on the MigraMar website;
- b) For specific projects and events any organizational member has the right to refuse having its name or logo listed on a MigraMar product. When preparing materials for specific projects, MigraMar will provide collaborating partners with a minimum one-week window to opt out of having their logo displayed;
- c) Organizational members access MigraMar benefits solely through their member representative; and
- d) Share tables, booths and other promotional venues with MigraMar with shared budgets and representatives.

16) Responsibilities of Organizational Members

To be visibly affiliated with the MigraMar network, organizational members assume the responsibility to:

- a) Pay an organizational annual fee as established by the Board;
- b) Uphold the MigraMar values;
- c) Conduct all research with full legal permits and meet scientific ethical standards including the International Animal Care and Use Committees (IACUC) and other relevant guidelines;
- d) Provide MigraMar with organizational description and high quality logo;
- e) Promote MigraMar on its website and materials;
- f) Have their representative participate in the MigraMar Annual Assembly or 1 other MigraMar meeting per year; and
- g) Share credit and/or authorship, as appropriate, in all publications that emerge from collaborative ventures to ensure appropriate recognition of MigraMar and individual colleagues.

17) Organizational Member Dismissal

Organizational members who violate the responsibilities listed above or work in a way inconsistent with MigraMar values and bylaws will be excluded in a decision made by the majority of the Board.¹² Additionally, if a MigraMar member who represents the organization leaves the network, the organization will no longer be considered an organizational member unless another member assumes responsibility.

IV. Structure

MigraMar is organized in the following way:

- 1) Membership Assembly
- 2) Board of Directors
- 3) President and officers
- 4) Staff
- 5) Working Groups and Committees

¹² Procedure for dismissal to be detailed in the MigraMar Operations Manual to include the need for confidentiality, right of defender to appeal, and no conflict of interest from Board members voting on the dismissal.

18) Membership Assembly

The Assembly is made up of all current members. The Assembly chooses the Board of Directors and votes on any other policies that the Board delegates. Votes can be taken at the annual meeting, at the Board's discretion, and by email when a responding date is set.

Unless otherwise stipulated in these Principles, decisions are made by the majority of voting members provided a quota of 51% of all members is attained.

The MigraMar annual meeting is convened by the Chair of the Board, and in his/her absence by the Vice Chair and then by the Secretary. The annual meeting will provide an opportunity for all members in a members-only forum to:

- a) Vote for directors to the Board;
- b) Vote to approve new MigraMar members – a consensus vote.
- d) Vote to approve new Organizational members – a consensus vote.

19) Board of Directors

General Powers

The functions and power of the Board of Directors include, but are not limited to, the following:

- a) Define strategic guidelines and approve strategic and operational plans and budgets;
- b) Elect officers from among the elected directors;
- c) Be responsible for due diligence in setting policies for MigraMar and reviewing programs;
- d) Create Standing Committees (advisory to the full Board) or ad-hoc short term committees as needed;
- e) Elect committee chairs for established committees;
- f) Establish the annual fees for MigraMar members, student members and organizational members;
- g) Ensure the overall fiscal health of MigraMar;
- h) Approve fundraising strategies;
- i) Establish bank accounts as necessary for the operation of MigraMar;
- j) Hire and supervise a lead staff member;
- k) Authorize all staff positions;
- l) Approve all contracts over \$20k or whatever level below this the Board wants to review;
- m) Set policies for MigraMar;
- n) Ensure full compliance of MigraMar with the laws in the countries in which it operates and with donor intent; and

- o) Abide by the MigraMar values and ensure disclosure of conflict(s) of interest.

Size and Terms

Board members are elected for three-year terms. No Board member may serve as a director for a period exceeding 10 consecutive years. After a three-year rest period, the person may again be selected for the Board.

The Board of Directors shall have the number of members, no greater than 15 and no less than 3. The Board will decide on the number of board vacancies prior to the annual meeting. The majority of the Board must be made up of MigraMar members in good standing.

Selection

Prospective directors may be nominated by members, promoted by current directors, or self nominate.

Members of the Board of Directors are voted on annually by the full Membership Assembly at the annual meeting (and by email for those not present). During the first year of Board selection, candidates will be elected in 3 classes—those with 1-year terms, 2-year terms and 3-year terms so that elections can be staggered going forward.

A director may be removed, with or without cause, by a majority of directors then in office.

Quorum

A majority of the directors in office immediately before a meeting begins shall constitute a quorum for the transaction of any business properly to come before the Board of Directors. Any one or more members of the Board of Directors thereof may participate in a meeting of such Board or committee by means of a conference telephone or similar communication equipment allowing all persons participating to hear each other at all times. Participation by such means shall constitute presence in person at a meeting. The act of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors.

Any action, required to be taken, between meetings of the Board of Directors may be taken without a meeting, if all members of the Board are given the opportunity to respond by telefax, skype, email or other technology by an effective date. A majority vote within a 50% + 1 quorum, will carry the resolution.

Meetings

The Board of Directors may hold regular meetings in person or virtually. Meetings of the Board of Directors may be held irregularly as needed provided all Board members are fully noticed. A Board meeting to elect officers and welcome newly elected Board members will be scheduled each year at the annual meeting.

Officers

The officers of the Board of Directors shall be Chair, Vice Chair, Secretary and Treasurer and Committee Chairs that the Board of Directors may choose to elect.

- Chair. The Chair shall preside at all meetings of the Board of Directors and the Annual Meeting and shall be responsible for other duties as the Board of Directors may prescribe.
- Vice Chair. The Vice Chair shall act in place of the Chair and be empowered to perform all acts that the Chair is authorized to perform in the event of the Chair's absence or inability to serve. The Vice Chair shall perform the duties usual to such position and such other duties as the Board of Directors may prescribe.
- Secretary. The Secretary shall be the custodian of all papers, books, and records of MigraMar, other than books of account and financial records. The Secretary shall authenticate records of MigraMar as necessary. The Secretary shall perform the duties usual to such position and such other duties as the Board of Directors may prescribe.
- Treasurer. The Treasurer shall furnish, whenever requested by the Board of Directors or the Chair, a statement of the financial condition of MigraMar and shall perform the duties usual to such position and such other duties as the Board of Directors may prescribe.

Standing Committees

The Board of Directors may establish standing committees, to accomplish the goals, recommend policies and advance the programs of MigraMar. Such committees shall have such responsibilities and powers as the Board of Directors shall specify, but committees are advisory and all policy recommendations must be approved by the full Board. An Executive Committee may be created at the Board discretion if there are over nine members of the Board.

The Board will choose the Chair of each committee who may be a Board member or an Assembly member.

The Chair of each committee may nominate additional members to the committee to fulfill its mandate. Additional committee members may, but need not be, members of the Board of Directors or of the MigraMar Assembly.

Committee members may be removed by the Board of Directors—with or without cause. Committee members serve three-year terms, subject to reappointment.

Working groups are more fluid MigraMar structures developed and organized by MigraMar members to coordinate specific research or collaborate on presentations, recommendations etc. Working Groups do not require Board approval unless MigraMar funds are being used.

V. MigraMar Dissolution

MigraMar may be dissolved by a vote of 2/3 of the Assembly members. Any remaining funds and equipment will be distributed equitably between nonprofit organizational members.

Any member of MigraMar may withdraw their membership at their discretion through a letter to the Chair.

VI. Modification of the MigraMar Principles

Any modification of these principles must be approved by at least 2/3 of the members of the Assembly.