

<u>GOAL</u>	<u>STRATEGY</u>	<u>RECOMMENDED ACTION</u>	<u>SITES</u>	<u>EXPECTED DURATION</u>	<u>ESTIMATED COSTS</u>	<u>POSSIBLE IMPLEMENTERS</u>
1. Reduce mortality from fisheries bycatch by at least one-third (~150 nesting females per year) in ten years	<i>1.1. Reduce bycatch in areas already identified as high-bycatch</i>	1.1.1. Continued assessments of leatherback (and sea turtle) bycatch at ports throughout the three countries using port-based surveys as well as on-board observers (when possible).	Ecuador: Santa Rosa, Manta; Peru: Salaverry, San Jose, Mancora, Pisco, Ilo); Chile: Coquimbo, Lebu)	10 years	TOTAL COSTS: \$200-\$300K; Port-based surveys, \$10,000 per year=\$100,000 TOTAL; Observers: \$20,000 per port per year=\$100,000-200,000 TOTAL (for 5-10 ports, TBD)	Ecuador: Equilibrio Azul, INP; Peru: ProDelphinus, IMARPE; Chile: Pacifico Lau, IFOP
		1.1.2. Expanding the radio communication program between conservation groups and fishermen to enhance reporting, safe handling and release of leatherbacks caught in fishing gear, and avoidance of leatherback bycatch when possible	Ecuador, Peru, Chile: one new port each	3 years	\$15,000 per port=\$45,000 per year, \$115,000 TOTAL	Ecuador: Equilibrio Azul; Peru: ProDelphinus; Chile: Pacifico Laud
		1.1.3. Testing and evaluating mitigation measures to reduce leatherback bycatch, including radio communications and gear configurations	Ecuador: Santa Rosa; Peru: Salaverry, San Jose, Pisco, Ilo); Chile: Coquimbo)	5 years	TOTAL COSTS: \$100,000 for mitigation testing in the field (workshops included in 1.1.5)	Ecuador: Equilibrio Azul; Peru: ProDelphinus, IMARPE; Chile: Pacifico Laud; IFOP
		1.1.4. Providing training and equipment to ensure safe handling and release of leatherbacks caught in fishing gear	Ecuador: Santa Rosa, Manta; Peru: Chimbote, Salaverry, San Jose, Mancora, Pisco); Chile: Coquimbo, Lebu)	5 years	TOTAL COSTS: \$100,000 for equipment, depending on number of participating fishermen (workshops included in 1.1.5)	Ecuador: Equilibrio Azul; Peru: ProDelphinus, IMARPE; Chile: Pacifico Laud; IFOP
		1.1.5. Workshops to increase awareness, build capacity, and exchange techniques and experiences between conservation groups and local fishing communities (combined with above)	Ecuador: Santa Rosa, Manta; Peru: Salaverry, San Jose, Pisco, Ilo); Chile: Arica, Iquique, Antofogasta, Caldera, Coquimbo)	5 years	TOTAL COSTS: \$30,000 for workshops in multiple ports in each countries	Ecuador: Equilibrio Azul; Peru: ProDelphinus, IMARPE; Chile: Pacifico Laud; IFOP
	<i>1.2. Identify other areas as high-bycatch and/or important for leatherback survival</i>	1.2.1. Expand port-based bycatch assessments of leatherbacks (and other sea turtles) conducted in Ecuador, Peru, and Chile to all countries throughout the region, particularly those known to host leatherback nesting and/or feeding areas; Increase monitoring of leatherback bycatch (via on-board observer coverage and radio communication) throughout the region.	Mexico, Nicaragua, Costa Rica, Panama, Colombia; surveys in at least 3 ports in each country	5 years	TOTAL COSTS: \$200,000-\$300,000 (ports TBD)	Mexico: Conanp, Kutzari; Costa Rica: Pretoma, WIDECAS-Costa Rica, Leatherback Trust, WWF-CR; Panama: Smithsonian Tropical Research Institute, Fundacion Agua y Tierra; Colombia: WWF-Colombia
		1.2.2. Deploy satellite transmitters on leatherbacks caught in fishing gear to elucidate habitat use in feeding areas and to estimate post-release mortality rates	Ecuador, Peru, Chile	5 years	\$400,000-\$600,000 (up to 30 transmitters, satellite time, equipment, travel) TOTAL	Regional: NOAA; Ecuador: Equilibrio Azul; Peru: ProDelphinus, IMARPE; Chile: Pacifico Laud, IFOP
		1.2.3. Analysis of distributions of hatchling/juvenile leatherbacks with respect to ocean currents	Regional, but focused on nesting beaches	3 years	\$30,000-\$50,000	NOAA, Stanford University
		1.2.4. Analysis of distributions of jellyfish, leatherbacks, and fisheries activities in the Humboldt Current system	Ecuador, Peru, Chile	3 years	\$10,000	IMARPE, NOAA
	<i>1.3. Reduce consumption of leatherbacks taken as bycatch</i>	1.3.1. Pilot study to assess the magnitude of the impact as well as the motivations for consumption at fishing ports in Peru to inform development of approaches that might reduce this practice	Tumbes, Salaverry, Chimbote, San Jose, Pisco	3 years	\$20,000 per year = \$60,000 TOTAL	ProDelphinus, Planeta Oceano, IMARPE, ecOceanica
		1.3.2. Introduce measures to reduce retention in at least two ports, based on results of pilot study	TBD based on above	years 3-5	TBD	ProDelphinus, Planeta Oceano, IMARPE, ecOceanica

2) Protect nesting beaches (at least 90% of in situ nests) and increase hatchling production (at least 50% hatching success in relocated nests)

2.1. Reduce egg consumption	2.1.1. Promote economic alternatives in local communities	Mexico, Nicaragua, Costa Rica, Panama	10 years	\$25,000 per year / per country = \$1M TOTAL	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE and others; Panama: Fundacion Agua y Tierra	
	2.1.2. Increase the presence and participation of authorities on nesting beaches	Mexico, Nicaragua, Costa Rica, Panama	5 years	\$25,000 per year per country = \$375,000 TOTAL	Mexico: Conanp; Nicaragua: FFI; Costa Rica: MINAE and others; Panama: ANAM, ARAP, Fundacion Agua y Tierra	
	2.1.3. Adopt outreach campaigns to reduce egg and turtle consumption	Mexico, Nicaragua, Costa Rica, Panama	5 years	\$50,000 per year (regional) = \$250,000 TOTAL	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE and others; Panama: Fundacion Agua y Tierra	
	2.2. Establish, increase, or maintain presence of monitoring teams on beaches that currently have insufficient or non-existent monitoring and protection	2.2.1. Assess current status and priorities for monitoring for secondary beaches through workshops and rapid assessments	Mexico, Nicaragua, Costa Rica, Panama	3 years	\$25,000 TOTAL for workshops in all countries	Oceanic Society-SWOT; Costa Rica: Leatherback Trust, Pretoma, WIDECAS-CR; Panama: Fundacion Agua y Tierra, Smithsonian Tropical Research Institute
		2.2.2. Aerial surveys to identify undocumented nesting sites in the region	Nicaragua, Panama, regional	2 years	\$25,000 minimum for Panama; \$150,000 for region	Nicaragua: FFI; Panama: Fundacion Agua y Tierra
		2.2.3. Maintain/augment monitoring teams on all index beaches and install teams on at least 8 additional secondary beaches (majority of nesting in region)	Mexico, Nicaragua, Costa Rica, Panama	10 years	TOTAL COSTS (10 years) = \$3M; Mexico: \$20K per beach = \$140,000; Nicaragua: \$20K per beach = \$60,000; Costa Rica: \$20k per beach = \$100,000.	Oceanic Society-SWOT; Costa Rica: Leatherback Trust, Pretoma, WIDECAS-CR; Panama: Fundacion Agua y Tierra, Smithsonian Tropical Research Institute
		TOTAL=\$2.3M; Consolidation of open land (Costa Rica): \$2M; Park Administration (Costa Rica): \$15,000/year=\$150,000 TOTAL; Promotion: \$5000 per country, \$150,000 TOTAL				
	2.3. Consolidate and preserve nesting habitats	2.3.1. Consolidate and promote greater awareness of protected areas	Mexico, Nicaragua, Costa Rica	10 years	\$150,000 TOTAL	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE, Leatherback Trust
		2.3.2. Undertake or implement zoning plans for leatherback nesting areas; Minimize the impact of coastal development	Mexico, Nicaragua, Costa Rica	10 years	\$20,000 per index beach = \$100,000 TOTAL	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE, Leatherback Trust
	2.4. Maintain favorable environmental conditions for hatching success	2.4.1. Relocate nests from unfavorable areas to areas that promote higher hatching success	Mexico, Nicaragua, Costa Rica; other sites TBD	10 years	included in 2.2.3.	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE, Leatherback Trust
2.4.2. Implement methods to maintain favorable temperatures for relocated nests		Mexico, Nicaragua, Costa Rica; other sites TBD	10 years	\$25,000 per country=\$750,000 TOTAL	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE, Leatherback Trust	
2.4.3. Implement mitigation and adaptation measures in response to climate change impacts		Mexico, Nicaragua, Costa Rica; other sites TBD	10 years	\$10,000 per country = \$300,000 TOTAL	Mexico: Conanp; Nicaragua: MARENA, FFI; Costa Rica: MINAE, Leatherback Trust	

3) Promote and strengthen coordination of activities and implementation of policy action at a regional level

3.1. Strengthen regional coordination of activities to maintain population-level priorities	3.1.1. Develop national networks and a regional network to facilitate information exchange and harmonize activities	REGIONAL	10 years	\$10,000 per year = \$100,000 TOTAL	National: existing sea turtle networks; Regional: existing leatherback working group
---	---	----------	----------	-------------------------------------	--

	3.1.2. Standardize data collection protocols and develop regional databases with common standards for bycatch and nesting beach assessments	REGIONAL	2 years	\$30,000 TOTAL (database construction and maintenance)	Existing working group, Oceanic Society-SWOT; IAC, IATTC, CPPS, WWF
	3.1.3. Synthesize existing information from regional nesting sites and generate a catalog of primary (> 20 nesting females per year) and secondary beaches (> 5 nesting females per year), including annual abundance and degree of protection	REGIONAL	2 years	\$15,000 TOTAL	Existing working group, Oceanic Society-SWOT, IAC Existing working group, Oceanic Society-SWOT; Mexico: Conanp; Guatemala: ARCAS; El Salvador: Ministry of Env, VivaAzul; Nicaragua: FFI; Costa Rica: Leatherback Trust; Panama: Smithsonian Tropical Research Institute, Fundacion Agua y Tierra;
	3.1.4. Create regional monitoring system of hatching success and influential environmental factors (e.g. beach and nest temperatures, beach dynamics)	REGIONAL	3 years	\$30,000-\$50,000 TOTAL (depending on equipment needed, personnel to collect data, etc.)	
	3.1.5. Construct new demographic model for EP leatherbacks to determine quantified targets for levels of bycatch reduction, nesting beach protection/hatchling production, etc. necessary for population stabilization and recovery under different scenarios	REGIONAL	2 years	\$20,000 TOTAL	Existing working group, Oceanic Society-SWOT, NOAA
3.2. Facilitate identification and protection of important areas for leatherbacks and bycatch reduction	3.2.1. Conduct and synthesize regional assessment of fisheries that interact with leatherbacks using rapid bycatch assessments, and working through existing regional instruments.	REGIONAL	5 years	\$15,000 per year=\$55,000 TOTAL (In addition to rapid bycatch assessments 1.1.5 AND 1.2.1)	IAC, IATTC, OSPESCA, Oceanic Society-SWOT, WWF
	3.2.2. Identification of important areas for leatherbacks toward which to focus recommendations for regional action through international policy instruments; Enhance protection efforts in existing protected areas	REGIONAL	10 years	\$20-40K per year for protected area enhancements = \$200-400k TOTAL	Existing working group, IAC, IATTC, CPPS, Conanp, MINAE
3.3. Create alliances between international and national fisheries through RFMOs	3.3.1. Strengthen agreements between IAC Parties and international fisheries through existing MOU between IATTC and IAC (and others)	REGIONAL	5 years		0 IAC, IATTC, OSPESCA, CPPS
	3.3.2. Enhance observer coverage and reporting of leatherback bycatch that is accessible to decision-makers, environment/fisheries ministers, and researchers	REGIONAL	10 years		0 IAC, IATTC, OSPESCA
	3.3.3. Identify a focal point person in each country involved with the fisheries sector who can liaise with existing policy instruments	REGIONAL	2 years		0 IAC
3.4. Improve compliance with existing resolutions on leatherbacks and bycatch reduction	3.4.1. Use the existing leatherback and bycatch resolutions to urge IAC Parties to enhance efforts to protect leatherbacks on nesting beaches and implement practices for safe handling and release of leatherbacks caught in fishing gear	REGIONAL	5 years	\$5-10K TOTAL	IAC
	3.4.2. Create a working group of the IAC dedicated to evaluating compliance of Parties to existing resolutions	REGIONAL	1 year		0 IAC

	3.4.3. Use existing instruments and processes to urge Parties/Signatories to regularly provide information on abundance, trends, bycatch rates, and threats impacts	REGIONAL	10 years		0 IAC, IATTC, CPPS
3.5. <i>Coordinate an information campaign targeting decision-makers, environment and fisheries ministers at the national and RFMO scales</i>	3.5.1. Generate a concept paper describing the current status of leatherbacks, threats, and possible solutions that could be implemented by national and regional authorities	REGIONAL	2 years		0 IAC, existing working group
	3.5.2. Meet with ambassadors and government ministers to discuss the current conservation status of leatherbacks in the region	Washington, DC; country capitals	2 years		0 IAC, existing working group
	3.5.3. Engage ministers and decision-makers to discuss current conservation status and possible solutions through existing international agreements and instruments	Regional	2 years	\$2,000-\$3,000	IAC, existing working group