

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p><b>Fifth Meeting of the Population and Conservation Status Working Group</b></p> <p><i>Florianópolis, Brazil, 9 - 10 May 2019</i></p> <p><b>ACAP Priority Populations Reporting Template Draft Implementation</b></p> <p><b><i>Kathryn P. Huyvaert</i></b></p>
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## BACKGROUND

At the last meeting of the PaCSWG in Wellington, New Zealand, PaCSWG recognised the importance of identifying priority actions and monitoring progress for each Priority Population. Five of the nine current Priority Populations have action plans and the plan for the Waved Albatross (*Phoebastria irrorata*) is currently undergoing a comprehensive review. Although progress reports on some Priority Populations have been provided to PaCSWG meetings in the past, the reporting has not been consistent and there has been little coordination with SBWG in identifying or reviewing conservation actions for these populations.

A draft reporting template is presented to both Working Groups (**ANNEX 1, PaCSWG Doc 06**) for their input and endorsement to facilitate the review process. As outlined in that document, the intention is to provide an update on progress towards tasks that have been identified as the highest priority for the population. In addition, it is proposed (**PaCSWG Doc 06**) that the template will be embedded in the ACAP database so that it can form part of the annual cycle of AC reporting. With these objectives in mind, this document is a draft implementation of the proposed template using, as a model, the Binational Plan of Action for the Waved Albatross, a species whose Priority Population status was considered at PaCSWG3 (**PaCSWG3 Doc 04**).

The Binational Plan of Action for the Waved Albatross was initially drafted with multiple stakeholders' input in 2007 and 2008 (see **AC4 Doc 50 rev. 4**). A panel of stakeholders reconvened in Guayaquil, Ecuador, in September 2018 to begin a comprehensive review and revision of the original plan (see **AC11 Inf 02** for report and **ANNEX 1** for table of actions). Here, the reporting template is applied to four actions or sets of actions that were classified as 'High priority' in both 2008 and in the review process in 2018. The four actions represent specific activities from each of four broader organizational categories within the Plan of Action. These activity levels are detailed by "Action #" in the template.

**ACAP Priority Population: WAVED ALBATROSS - ESPAÑOLA**

**Population coordinator (responsible for collating report): KP Huyvaert**

**ACAP Parties or Range States responsible for breeding sites: ECUADOR**

**ACAP Parties, Range States and management bodies responsible for at-sea range: PERU, ECUADOR, AND IATTC (INTERNATIONAL WATERS)**

<p><b>Action #:</b>  <b>1. INTERACTIONS WITH FISHERIES → 1.1 Determine and prioritize which fisheries require further research to determine their levels of interaction with the Waved Albatross → Revised activities: Quantify levels of bycatch in the gillnet, artisanal seine, and bottom spinel fisheries</b></p>
<p>Is the action at breeding sites or at sea? <i>At sea</i></p>
<p>Action already identified in existing Action/Management Plan for the species/population/breeding site? (Reference to document text/page/table) – <i>Existing Plan for first two layers; identification of specific fisheries emerged in Plan revision process</i></p>
<p>Is this: Priority research, conservation action, education, policy, other? – <i>Priority research</i></p>
<p>What needs to be done? <i>Quantify levels of bycatch in the gillnet, artisanal seine, and bottom spinel fisheries; first step is to request ACAP assistance in accessing data from ICCAT and others</i></p>
<p>Timeframe – <i>Action 1.1 timeframe was 2008-2011; Revised activities timeframe was identified as ‘immediate’.</i></p>
<p>Have any actions been taken since the last report (date)? –  <i>Since Priority Population designation (April 2016) – No, except to revise Plan.  Since initial Plan (2008-present) 1.1 – yes – information has been gathered on direct interactions with fisheries; information on fisher numbers and art types has been gathered.</i></p>
<p>Who by? – <i>Multiple agencies and NGOs.</i></p>
<p>Was this action effective? – <i>No.</i></p>
<p>If not, why not? <i>Information gathering only.</i></p>
<p>What remains to be done? <i>Data need to be collated, synthesized, and a priority scheme (part 2 of the action) implemented.</i></p>
<p>How will this be achieved? <i>An individual/party/stakeholder with the relevant expertise needs to commit to the prioritization.</i></p>
<p>Compiled by/contributors to this action: <i>Compiled by KP Huyvaert; multiple contributors at the revision workshop.</i></p>
<p>Overall progress for this action: <i>satisfactory or not satisfactory? - Somewhat satisfactory.</i></p>

<p><b>Action #:</b>  <b>2. THREATS ON LAND → 2.2. and 2.3. Develop a monitoring plan for changes in vegetation on Isla Española (2.2) and Isla de La Plata (2.3) → Revised activities: 2.2.a. Analyze data from small-scale experiment; 2.2.b. Determine optimal nesting conditions; and 2.2.c. Develop the vegetation management plan. 2.3.a. Perform a formal baseline botanical study and 2.3.b. Develop an integrated management plan.</b></p>
<p>Is the action at breeding sites or at sea? <i>Breeding sites</i></p>
<p>Action already identified in existing Action/Management Plan for the species/population/breeding site? (Reference to document text/page/table) – Yes, AC4 Doc 50 rev. 4 Table, Actions 2.2 and 2.3</p>
<p>Is this: Priority research, conservation action, education, policy, other? – <i>Long-term monitoring</i></p>
<p>What needs to be done? 2.2 – <i>Baseline data have been collected and a small-scale experiment conducted; from these, the following actions need to be taken: a) analyze the data from the 5ha experiment; b) determine optimal nesting conditions, if possible; and c) develop the vegetation management plan.</i> 2.3 – <i>Some baseline data on distribution of vegetation are thought to exist for La Plata; the following actions need to be taken: a) perform a formal baseline botanical study (which species, extent on the island, etc.); and b) develop an integrated management plan for La Plata in the event that it could be used to establish a rescue site for the species.</i></p>
<p>Timeframe – <i>Immediate (within one year of September 2018) – 2.2a and 2.2c; No timeframe delimited for 2.2b or 2.3a and 2.3b.</i></p>
<p>Have any actions been taken since the last report (date)?  <i>Since Priority Population designation (April 2016) – No.</i>  <i>Since initial Plan (2008-present) – 2.2 – Baseline data and the small-scale experiment have been conducted; 2.3 – some, informal data have been collected on La Plata.</i></p>
<p>Who by? 2.2 – <i>Charles Darwin Foundation, Galapagos National Park Directorate, University researchers;</i> 2.3 – <i>Ministry of the Environment, Machalilla National Park, Equilibrio Azul; NGO and University collaborators.</i></p>
<p>Was this action effective? – <i>Unclear.</i></p>
<p>If not, why not? – <i>Awaiting results of the vegetation experiment.</i></p>
<p>What remains to be done? – <i>Analyze data and synthesize baseline data. Formalize vegetation management plans.</i></p>
<p>How will this be achieved? – <i>Commitment by relevant stakeholder(s).</i></p>
<p>Compiled by/contributors to this action – <i>Compiled by KP Huyvaert; multiple contributors at the revision workshop.</i></p>
<p>Overall progress for this action: satisfactory or not satisfactory? – <i>Somewhat satisfactory.</i></p>

<p><b>Action #:</b></p> <p><b>3. POPULATION MONITORING → 3.1. Develop and establish a population monitoring program for the Waved Albatross on Española → Revised actions: 3.1.a. Continue with vital rate (demographic) data collection (Medium priority); 3.1.b. Conduct a whole-island survey to estimate population size (High priority); 3.1.c. Determine optimal frequency for population size estimates (Low priority).</b></p>
<p>Is the action at breeding sites or at sea? <i>Breeding sites</i></p>
<p>Action already identified in existing Action/Management Plan for the species/population/breeding site? – Yes, AC4 Doc 50 rev. 4, Table, Action 3.1.</p>
<p>Is this: Priority research, conservation action, education, policy, other? Long-term monitoring and priority research.</p>
<p>What needs to be done? <i>3.1.a. Secure funds and continue with vital rate (demographic) data collection; 3.1.b. Design and conduct the whole-island survey to estimate population size; and 3.1.c. Use estimations of variation around estimates to determine optimal frequency for whole-island surveys.</i></p>
<p>Timeframe – <i>Immediate (within one year of September 2018) – 3.1a is ongoing. Anticipate 3.1.b and 3.1.c to be completed in the next three years.</i></p>
<p>Have any actions been taken since the last report (date)?  <i>Since Priority Population designation (April 2016) – Yes. 3.1.a. Continued mark-recapture data collection at both Punta Cevallos and Punta Suárez. 3.1.b. Planning has begun for survey in 2019 or 2020.</i>  <i>Since initial Plan (2008-present) – 3.1.a. Mark-recapture protocol developed and implemented at second major site, Punta Suárez, and ongoing monitoring at Punta Cevallos. 3.1.b. Population size estimate conducted for coastal regions of island in 2011 to be applied to design of whole-island survey. 3.1.c. No actions taken.</i></p>
<p>Who by?  <i>3.1.a. –University collaborators, Charles Darwin Foundation, and Galapagos National Park Directorate.</i>  <i>3.1.b. – University collaborators, NGOs, Galapagos National Park Directorate.</i></p>
<p>Was this action effective?  <i>3.1.a. – yes, effectively documenting changes in vital rates.</i>  <i>3.1.b. – yes, effectively documenting changes in population size and generating conservation action needs (i.e., whole-island survey).</i></p>
<p>If not, why not?  <i>3.1.c. – Relevant data not yet in hand.</i></p>
<p>What remains to be done?  <i>3.1.a. – Publish PA Street manuscript on vital rate dynamics.</i>  <i>3.1.b. – Publish PA Street manuscript on population size changes and survey design; Perform a whole-island survey; analyze data and report findings.</i>  <i>3.1.c. – Evaluate whole-island survey process for repeatability. Determine optimal frequency.</i></p>
<p>How will this be achieved? – <i>Continued commitment by relevant stakeholders.</i></p>
<p>Compiled by/contributors to this action – <i>Compiled by KP Huyvaert; multiple contributors at the revision workshop.</i></p>

Overall progress for this action: satisfactory or not satisfactory? – *Somewhat satisfactory.*

**Action #:**

**4. RESEARCH to INFORM CONSERVATION → 4.4 Continue and expand studies on the distribution and behavior at sea of the Waved Albatross → Revised activities: 4.3. Continue and expand upon studies on the at sea distribution, behavior, and overlap with fisheries [Very high priority] for different stage classes (e.g., breeders during the non-breeding season [High priority], juveniles [Medium priority]) of the Waved Albatross.**

Is the action at breeding sites or at sea? – *Both.*

Action already identified in existing Action/Management Plan for the species/population/breeding site? *Yes, AC4 Doc 50 rev. 4, Table, Action 4.4.*

Is this: Priority research, conservation action, education, policy, other? – *Priority research.*

What needs to be done? – *Highest priority is to collate data on at sea distribution of birds and to integrate those data with all available information on fisheries effort in both time and space. Secondly, secure funding and conduct study to examine overlap between fisheries and breeding adults during the non-reproductive season.*

Timeframe – *Immediate (within one year of September 2018) – Secure funding for a data collation workshop; secure funding for field-based study on breeders during the non-breeding season. Longer term - conduct study in next 1-3 years. Juveniles are lower priority, perhaps in the next 5 years.*

Have any actions been taken since the last report (date)?  
*Since Priority Population designation (April 2016) – Yes. Quality of existing geolocator data for breeders during the non-breeding season have been evaluated extensively and found to have important issues, motivating a new study.*  
*Since initial Plan (2008-present) – Yes. Study on the distribution of breeders in space and time from three breeding sites, Punta Cevallos, Punta Suárez, and La Plata has been conducted.*

Who by? – *University collaborators, Fundacion Charles Darwin, NGOs.*

Was this action effective? – *Somewhat – effectively demonstrated the need to secure funding to repeat the study. Highlighted the existence of previously unknown position/distributional data motivating a workshop to collate all of these data and to critically evaluate the overlap of the species with fisheries.*

If not, why not? – *The major limitation is support for equipment for sufficiently large sample sizes to evaluate the potential for overlap of breeders during the nonbreeding season when they are recovering condition and preparing for the next breeding attempt.*

What remains to be done? – *Collate existing data on both distribution at sea and information on fisheries effort in space and time. Conduct a second study on the distribution of breeders during the non-breeding season.*

How will this be achieved? – *Continued commitment by relevant stakeholders; securing sufficient funding.*

Compiled by/contributors to this action - *Compiled by KP Huyvaert; multiple contributors at the revision workshop.*

Overall progress for this action: satisfactory or not satisfactory? – *Somewhat satisfactory.*

### TOPICS FOR DISCUSSION

The trial implementation of the reporting template for Priority Populations, reported here, highlighted several areas for discussion that are provided as recommendations:

- 1) Database reporting - Consider refining some of the questions on the template to facilitate database reporting in the future. The template was effective for reporting on High Priority actions in a management plan or Plan of Action but several items may be too broad for effective reporting. For example, the item “What needs to be done?” could result in lengthy, open-ended responses; providing guidelines such as “What are the next three steps that need to be done towards this activity?” may facilitate more consistent and complete reporting.
- 2) Reporting guidelines – Consider developing a “Reporting Protocol” that provides guidelines and expectations for reporting. Items in such a protocol could include identifying a responsible party or parties for compiling the report, practices for maintaining effective communication among compilers and contributors, expectations on the frequency of reporting, and guidance on best practices for using objective language.
- 3) Plans of Action – Consider developing a set of best practices for successful development of management plans/Plans of Action. Applying the template to the Binational Plan of Action for the Waved Albatross was useful in revealing elements of the Plan that could be revised to better define activities and actions for which there are objective metrics. In turn, better defining the objectives of a Plan, the actions needed to reach those objectives, and the metrics for reporting on progress will make for more effective conservation.

# ANNEX 1. Actions reviewed in Guayaquil, Ecuador, September 2018

PaCSWG5 Inf 21  
Agenda Item 8.1 & 8.2

MEASURES 2008	UPDATED MEASURES (draft)	CHANGES and/or DATA GAPS	ACTIVITIES (previous or new)	PRIORITY	RESPONSIBLES	NOTES	INDICATOR (immediatly)	LONG TERM
<b>1. Interactions with Fisheries</b>								
1.1 Determine and prioritize which fisheries require further research to determine their interaction levels with Waved Albatross.		Obtain information or improve information on fisheries, fishing effort, number of vessels, fishermen, fishing gear (Ecuador)	Peru: Quantify amount of Waved Albatross bycatch in the perico/dorado surface spinel fishery	Medium	Commitment: IMARPE-PRODUCE. Others: NGOs	Nigel: effort in each fishery may help shape the priorities but those data do not exist, have not been synthesized yet	ACAP request for access to work data in sets (ICCAT, etc.)	
		The level of albatross bycatch in the "surface spinel fishery" targeting dorados is still not adequately quantified	Peru: Quantify levels of Waved Albatross bycatch in the gillnet fisheries (pelagic curtain, coastal curtain and curtain for large pelagic), and know operational circumstances in which the catches occur	High	Commitment: IMARPE-PRODUCE. Others: NGOs			
			Peru: Quantify the levels of incidental capture of Waved Albatross in the fishing with artisanal seine, and know operational circumstances in which the catches occur	High/medium	Commitment: IMARPE-PRODUCE. Others: NGOs			
			Continental Ecuador: Quantify levels of Waved Albatross bycatch in the bottom spinel fishery	High	MAP (Min. Aquaculture and Fisheries), INP, NGOs, Universities			
			Galapagos: Quantify levels of Waved Albatross bycatch in fisheries - <b>didn't specify the fisheries</b> International Waters: Evaluate the existing data on incidental catch of the fisheries that overlap with the Waved Albatross distribution area	Low  Medium/low	DPNG, MAP, Charles Darwin  INP, MAP			
1.2 1.2 Develop an "observers program" for fisheries and improve the quality of the current ones		Obstacles: Electronic monitoring: refine, feasibility. Observer protocol (training in birds, the fishing institute will standardize the information sheets for observers, they have 5 for industrial, longliners 15)	Improve the observer program collection of information at landing sites, incorporating information on Waved Albatross bycatch, and use of identification booklets	Medium	IMARPE, PRODUCE, Prodelphinus			
			Develop alternative methods to obtain information of incidental capture of Waved Albatross: -work with fishermen for the information report through the use of log on board; - Continue experimenting with the use of cameras for electronic monitoring and evaluate the feasibility of their implementation in the artisanal fleet	Medium	IMARPE, PRODUCE, Prodelphinus			
		Continue with the program: pto lopes puerto de la plata	Incorporate the albatross registry into existing observer programs	High	IMARPE, INP			
			incorporate bird data into existing programs (eg, mammals)	HIGH	IMARPE, ProDelphinus, PRODUCE, INP			
1.3 Continue studies of artisanal fisheries, their seasonality, equipment, effort, methods and fishing areas, target species and bycatch, including non-target species and other fauna.		Impact of piracy on hake fishing (fishing effort)	Continue studies of artisanal fisheries.	Low	IMARPE, INP	pirates - might change effort in fishery  got rid of activity to engage govt agencies; instead, what we need is a pipeline to get these data when needed for a targeted, particular question; process is MAE (rep of ACAP) connect with INP, for example		
		Criteria to clasify fisheries						

MEASURES 2008	UPDATED MEASURES (draft)	CHANGES and/or DATA GAPS	ACTIVITIES (previous or new)	PRIORITY	RESPONSIBLES	NOTES	INDICATOR (immediatly)	LONG TERM
1.4 Coordinate with the Inter-American Tropical Tuna Commission and the Secretariat of the Galapagos Agreement to continue and improve monitoring in these fisheries and reduce bycatch		no progress has been made	(identify a point of contact to have access to this data)	MEDIUM	MAE --> ACAP --> CIAT; RREE--> ACAP -->CIAT	Check with Marco about this channel of communication; BirdLife may have written a report about this, let's find out		
			Through the focal points or national commissioners, request the Inter-American Tropical Tuna Commission data on incidental catches, fishing areas with possible overlap with albatross distribution areas. Identify a point of contact to have access to this data (Birdlife) --> so it was during the workshop but I modified it, to see what you think.	high	MAE -->ACAP --> CIATT RREE-->ACAP-->CIATT			
						Find out the published results		
1.5 In the case of finding by-catch, determine the best mitigation measures and ways to ensure that such mitigation is implemented		ACAP: Implement the best practices	Incorporate into current regulations the criteria and definition of best practices into mitigation measures for ACAP seabird bycatch, both in Ecuador and Peru, into current regulations.	HIGH	PRODUCE, SRP, MAE			
		Regulate bycatch	Regulate the Waved Albatross bycatch during fishing operations --> this was not included during the workshop but I think it is necessary, if you agree we can leave it or we can consult with other people	Medium/High	PRODUCE, SRP, MAE			
		Enforcement of mitigation measures in longline fishing						
1.6 Continue with studies to identify the ports where fishermen deliberately capture waved albatrosses.		No research yet						
		Arrival of foreign vessels, they are not asked for information about bycatch (there has been some advance but it should be replicated)	Continue studies and / or expand research on the intentional capture of Waved Albatross for human consumption to see its range in other locations in Peru	High	Prodelphinus, PRODUCE (regarding the compliance with the capture prohibition)			
		Continue studies of fishing for human consuption	Contact SRP (Ecuador)	Medium	SRP			
1.7 Integrate studies on the socio-economic and cultural environment of the fishing communities.		Financial education, saving concept	Provide financial education to fishermen			Provide financial education to fishermen - separate or not?		
		How to regulate or eliminate intermediaries	Strengthening the fishing sector (unite, improve)	MEDIUM	MAP, MAE, fishermen	How? Cooperatives that might help strengthen the price of their catch; or financial capacity building		
1.8 Consider economic alternatives for the fishing community		fishing tourism: marketing, training adaptation of boats	Implement alternative economic activities		MAP, MAE		MAP, MAE	
			Implement alternative economic activities	LOW - because it's	MAP, MAE, fishermen	What happened with the comparative economic analysis?		
1.9 Provide information to fishermen to make it clear that plastic and metal bands and electronic devices implanted in								
1.10 Promote education and training of the fishing sector and coastal communities, including working with fishing guilds, and the development and distribution of informative material.			COMBINE THESE TWO OBJECTIVES; develop an educational module of the albatross to incorporate into the training programs in the fishing sector and coastal communities; Elisa text: Develop an educational module on Galapagos albatrosses to incorporate it into existing education or dissemination programs, aimed at the fishing sector and coastal communities	HIGH	MAP, MAE, DIGEIM, SERFOR, PRODUCE, IMARPE, Colab: NGOs, Universities	should be long term, consistent		
						Should be continuous		
2. Land Threats								
2.1 Eradicate introduced predators in Isla de La Plata to improve conditions for the population of Waved Albatross that breeds on the Island.		Eradicate introduced species in Isla de la plata	maintain a rodent control program and implement an insect program	HIGH	MAE, Equilibrio Azul, Colab: NGOs, Universities			



MEASURES 2008	UPDATED MEASURES (draft)	CHANGES and/or DATA GAPS	ACTIVITIES (previous or new)	PRIORITY	RESPONSIBLES	NOTES	INDICATOR (immediatly)	LONG TERM
<b>NEW</b>			<b>Implement a program to control introduced insects → this was with the previous activity</b>	<b>Medium?</b>	<b>MAE, Equilibrio Azul</b> <b>Colaboration:NGO, Universities</b>			
<b>2.2 Develop a monitoring plan for vegetation change in la Isla Española.</b>		gaps: consequences of the program started by James Gibbs and Wacho Tapia	1) analyze data of the 5 hectare experiment; 2) determine nesting optimal conditions; 3) vegetation management plan	1) MEDIUM, 2) HIGH, 3) MEDIUM	1) FCD, DPNG, CSU, SUNY-ESF; 2) ABC, CSU, 3) DPNG, FCD, ABC, CSU	Hannah's point re: new study wrt vegeta	technical report to AC9; vegetation management plan	
<b>2.3 Desvelop a monitoring program for the changes in vegetation in isla de La Plata.</b>		Changes: Espanola, effects of population (distribution, etc) analyze MAE and PNM visitor data for la Plata and DPNG for Espanola. They are already developing the program, they are closing the trails at the time the Albatross are present, they will continue to monitor the effects.	1) Conduct a baseline botanical study; 2) a comprehensive plan in case La Plata is needed to 'rescue'	1) HIGH, 2) HIGH	MAE, Equilibrio Azul, Colab: NGOs, Universities			
<b>2.4 Monitor yearly and seasonaly the mosquito population in Isla Española.</b>		gaps: identify the species in the samples; La Plata?	<b>1. Identify mosquito species in existing samples and monitor their populations on Isla Española. 2. 2. Start studies to identify mosquito species and population monitoring in Isla la Plata</b>	1) LOW, 2) LOW	FCD, CSU, MAE, Equilibrio Azul, Colab: NGOs, Universities		technical report	decide if we continue or not and the frequency
<b>2.5 Re-examine tourism in Isla de La Plata.</b>		changes: Española, effects on the population (distribution, etc.); analyse Min. Ambiente and PNM visitor information for La Plata and DPNG for Espanola;	<b>Continue and evaluate the development of tourism in Isla La Plata and isla espanola</b>	LOW	MAE	evaluate the Visitors Management Plan in La Plata, elaborate, and continue monitoring the Plan; gaps: re-evaluation and update of the PNM Plan (started but need NGO to help finish it up)	results; technical report (Espanola: we are waiting)	manuscripts, re-evaluate tourism management plan
<b>3. Population Tracking</b>	<b>3. Population Monitoring</b>	<b>Monitoring</b>						
<b>3.1 Establish and develop a monitoring program for Waved Albatross in Isla Española.</b>	<b>3.1 Continue with the annual demographic monitoring program to estimate vital rates of the Waved Albatross population in Isla Española.</b>	gaps: Punta Suarez data analyzes; analyze the probability of loosing two bands and evaluate the cost of using microchips in Cevallos; Changes: size of population in the whole island;	3.1.a. continue vital rates  3.1.b. Count in the whole island  3.1.b. Determine the ideal count frequency (e.g. ACAP PACSWG)	3.1.a.MEDIUM  3.1.b. HIGH  LOW	CSU, FCD, DPNG, Colab: Universities, NGOs CSU, FCD, DPNG, Colab: Universities, NGOs  ACAP , CSU		papers submitted (Street et al *2); proposal for count in the whole island	a cont.
<b>New</b>	<b>3.2 Perform a periodic count to estimate the size of the Galapagos albatross population of the Isla Espanola</b>							
<b>New</b>	<b>3.3 Establish and develop a demographic monitoring program to estimate vital rates of the Waved Albatross population on Isla Española.</b>							
<b>3.2 Perform a periodic monitoring of the Waved Albatross population in Isla de la Plata</b>	<b>3.4 Perform a periodic count to estimate the size of the Waved Albatross population on Isla de la Plata.</b>	changes: 'monitor annually during the two seasons to estimate vital rates'; gaps: microchip, synthesis of existing data; DIVIDE INTO TWO OBJECTIVES	a) start vital rates program; b) develop a program to monitor population size	a) HIGH, b) HIGH	MAE, Equilibrio Azul, Aves y Conservacion, ABC, CSU, FCD, Colab: Universities, NGOs	\$14 each microchip; ask Equilibrio Azul re: reporte - no report, no money; Park and NGOs	technical report for AC9 of the synthesis; a monitoring plan	consistent monitoring
<b>4. Studies on the biology of the Waved Albatross</b>	<b>4. Research to inform conservation</b>							
<b>4.1 Determine if the nesting habitat of the Waved Albatross on Isla Española is limited.</b>	Omit, see 2.2 and 2.3	gaps: La Plata; changes: which is the ideal nesting habitat?	OMIT; see 2.2 and 2.3				James Gibbs report	proposal and new study?
<b>4.2 Determine if the Galápagos turtles have an impact on reproductive success of the Waved Albatross In Española.</b>	<b>4.1 Determine the overlap extent and reproductive success among the Waved Albatross, turtles and rhe Opuntia cacti in Isla Española.</b>	gaps: reproductive success information; changes: overlapping among the three species	indirect impacts → turtles → plants → albatross	LOW  LOW	SUNY-ESF, DPNG, CSU, Colab: NGOs, Universities  SUNY-ESF, DPNG, CSU, Colab: NGOs, Universities	change to distribution across the entire island	James Gibbs report; PLoS One 2014 paper	

MEASURES 2008	UPDATED MEASURES (draft)	CHANGES and/or DATA GAPS	ACTIVITIES (previous or new)	PRIORITY	RESPONSIBLES	NOTES	INDICATOR (immediatly)	LONG TERM
4.3 Start Waved Albatross' diet studies in reproductive and feeding areas	4.2 Start Waved Albatross' diet studies in reproductive and feeding areas	gaps: correlation between all calamari species and their isotops leves; birds of La Plata	correlation  studies in La Plata	LOW  HIGH	FCD  MAE, Equilibrio Azul, Aves y Conservacion, ABC, CSU, FCD, Colab: Universities, NGOs	interesting - April and May is a time when things are changing along the coast; Clarke - squid beak ID; tie back to conservation;	work proposal	
4.4 Continue and expand studies on the distribution and behavior at sea of Waved Albatross	4.3 Continue and expand studies on the distribution and behavior and overlap with at sea fisheries of individuals at different phases/stages? of the Waved Albatross	Gaps: non-reproductive juveniles, during non-breeding season, and overlap with fisheries; Changes: overlap	juveniles during non-reproductive season Overlap	MEDIUM(b/c of time frame) MEDIUM/HIGH HIGH	ABC, CSU CSU, ABC, IMARPE ProDelphinus, HIS/Nigel, CSU, IMARPE	MEET WITH LA PLATA TO JOIN ALL METHODS; bpts have GPS on them these days, issue is accessing the data; Gio has a bunch of GPS points of WVALs; do the study with fishing groups-GPS's; INP access on board	proposals for one or more of these studies; workshop	published papers; consider conservation actions
4.5 Assess the Waved Albatross' toxic chemicals exposure	4.4 Assess the contamination of toxic chemicals and its effects on the Waved Albatross population	change to 'contamination and its population effects' instead of 'exposure'	afterwards	MEDIUM	FCD, CSU, DPNG	eggs? ; heavy metals, chemicals, petroleum	samples, results, technical report	published papers and action plan depending on results
4.6 Identify and monitor the occurrence of infectious diseases and parasites of the Waved Albatross between years with different climatic conditions.	4.5 Identify and monitor the occurrence of infectious diseases and parasites of the Waved Albatross between years with different climatic conditions.	afterwards; to do in La Plata; coordination and collaboration in samples; 'ACAP better practices' with necropsys	a) Española - afterwards; b) La Plata - implement	a) HIGH; b) HIGH	FCD, CSU, DPNG, MAE, Equilibrio Azul, Aves y Conservacion; Colab: Universities, ACAP (Marcela Uhart)	methods workshop with La Plata folks	analyses results; research proposal by La Plata	published paper; meeting of people involved
4.7 Conduct a population viability analysis for the Isla Española Waved Albatross population.	4.6 Conduct a population viability analysis or integrated population model (IPM) for the Isla Española Waved Albatross population.	measurement change (change in model to IPM)	do it	HIGH	CSU, ABC, UCSC	UCSC - check out their new program - case study?	technical report for AC9	published paper