



*This Project is executed by the Mohamed bin Zayed Species Conservation Fund,
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Progress of the Dugong & Seagrass Conservation Project in Vanuatu

3rd Executive Project Steering Committee meeting

21-23 November, 2017

Trang, Thailand

Past, present and future of dugong and seagrass conservation in Vanuatu

Baseline in 2015

- Dugongs: only data from questionnaire and aerial survey in 1988
- Seagrass: scattered information from small number of studies mostly from limited sites. No national assessment of grasses in Vanuatu.
- Communities: community-based monitoring/ management structures exists but not integrating dugongs
- Incentives: No incentives, no public subsidies for community-based conservation for dugongs or seagrass.
- Policies: Dugong MoU signed in 2010. Vanuatu party to SPREP Pacific Islands Marine Species Programme 2013-2017. Dugongs protected under the fisheries act

Progress by 2017

- Dugongs: maps and data on distribution, threats, occurrence thorough out Vanuatu
- Seagrass: maps and data on distribution throughout Vanuatu. Data on composition, distribution and abundance for 1 site
- Policies: Dugong hotspots and data used in to identify special and unique marine areas. Guidelines for tourism operators to be incorporated into minimum
- Communities: 530 community members interviewed throughout Vanuatu and given educational materials. 62 (11.7%) of respondents were women. 1 community participating in monitoring seagrass in a dugong hotspot

Targets for 2018

- Dugongs: Abundance of dugongs estimated from aerial surveys with UAV in 4 hotspot areas.
- Seagrass: Maps and data on composition, distribution and abundance for at least 4 sites
- Policies: National plan of action for dugongs and their seagrass habitat
- Communities: 4 communities participating in monitoring and management of seagrass in dugong hotspots with dugong and seagrass conservation measure incorporated into management plans for community conservation areas.

The Vanuatu project partners



The Vanuatu
Environmental Science
society

Implementing partner



The Vanuatu
Fisheries
Department

Project Partner



The Department of
Environmental
protection and
Conservation

Project Partner

Results from dugong and seagrass research



Research questions addressed:

- What is the distribution of dugongs and seagrass in Vanuatu?
- What are the threats to dugongs and seagrasses in Vanuatu?
- Where are the hotspots?

Method: CMS dugong catch / by catch questionnaire

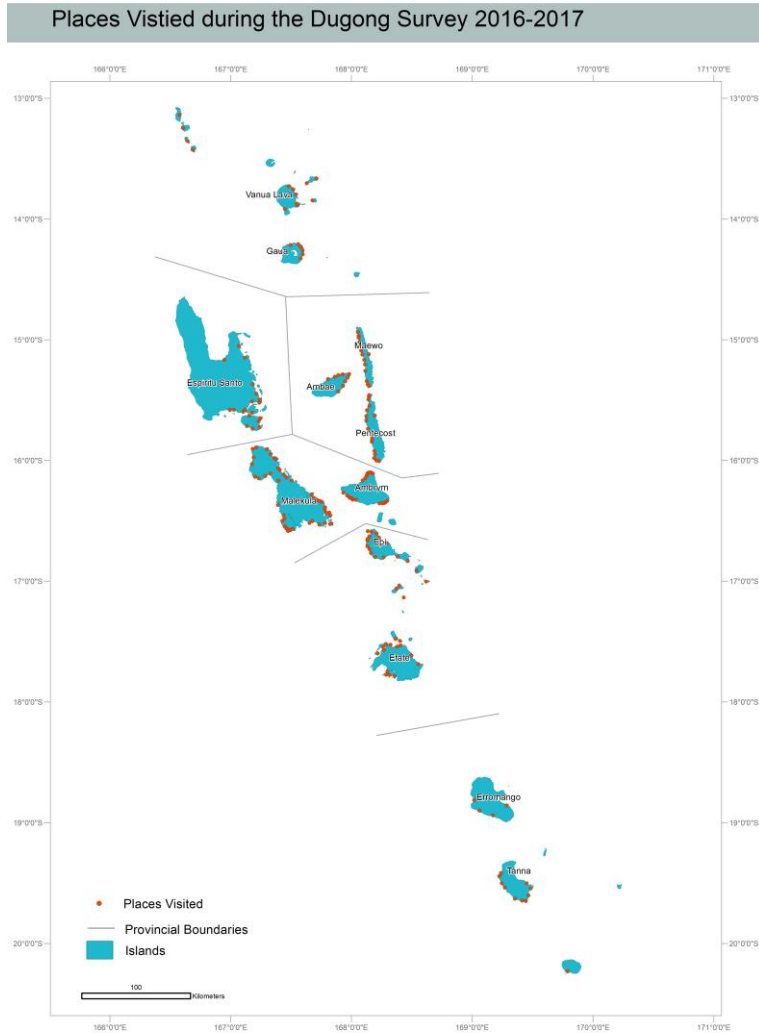
Sites: 193 sites were visited on 32 islands in all 6 provinces during the survey. 83,934 hectares is the total number of hectares of seagrass areas, dugong areas and fishing areas that were identified by fishers and community members during the survey.

Status: Status of dugong population Vanuatu in 2015 was unknown and it is still unknown today.

Sightings:

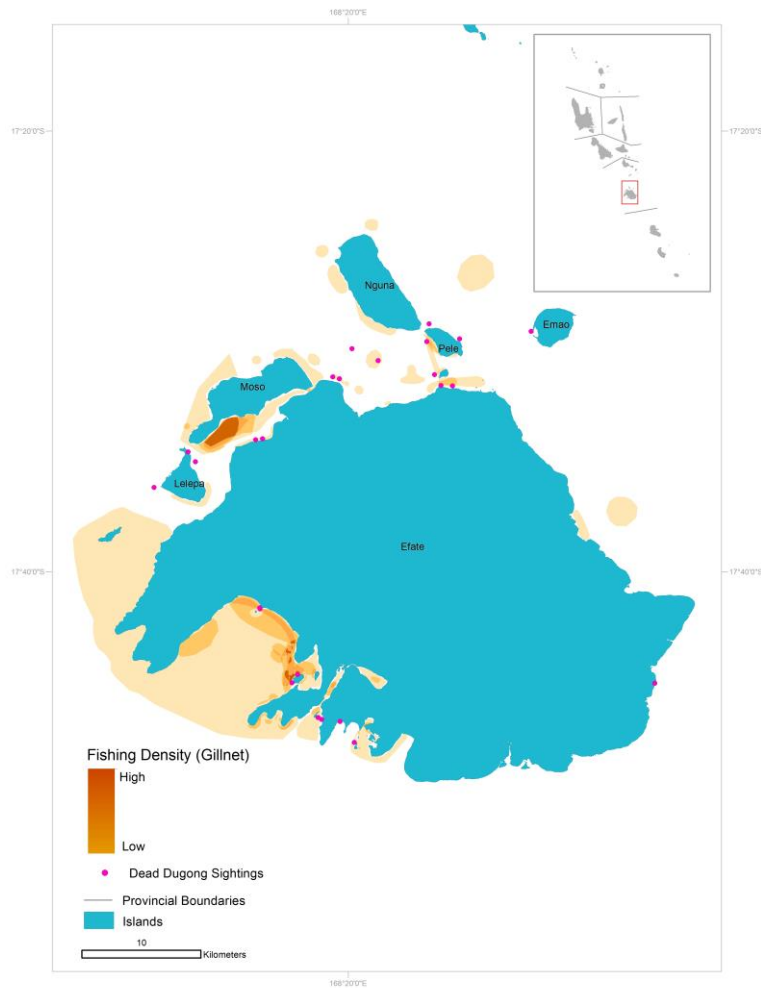
- 1433 sightings of dugongs were recorded during the survey. 895 of them were from 2015-2017 (852 live, 18 dead, 25 not specified).
- Of the 116 dead dugong sightings recorded, in 44 the cause was unknown, 28 killed in nets, 13 were stranded on shore and 12 were hunted (4 were hunted in the last 10 years).
- Our awareness campaign will address these threats.

CMS Standardised Dugong catch /by catch questionnaire

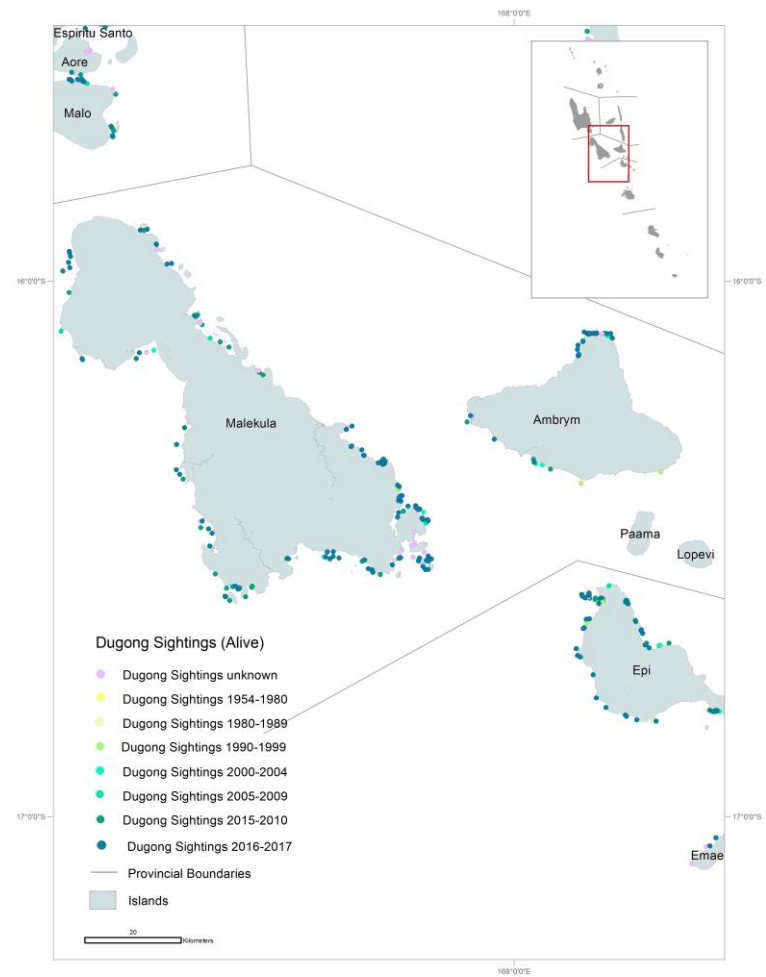


Maps of dugong sightings

Gillnet Fishing Pressure and Dead Dugong Sightings in Efate



Dugong Sightings in Malampa Province



Results from dugong and seagrass research (2)



Seagrass monitoring:

- Composition, abundance of seagrass in one dugong hotspot areas assessed using Seagrass Watch methodology.

Key Results:

- 69 maps have been produced and a database of responses to the questionnaire.
- VESS holds the data and will produce a report by end of 2107.
- **Dugong Hotspots:** 19 Dugong hotspots have been identified from the results of the survey and prioritised. Eight were considered of high priority, seven medium priority and five of low priority.

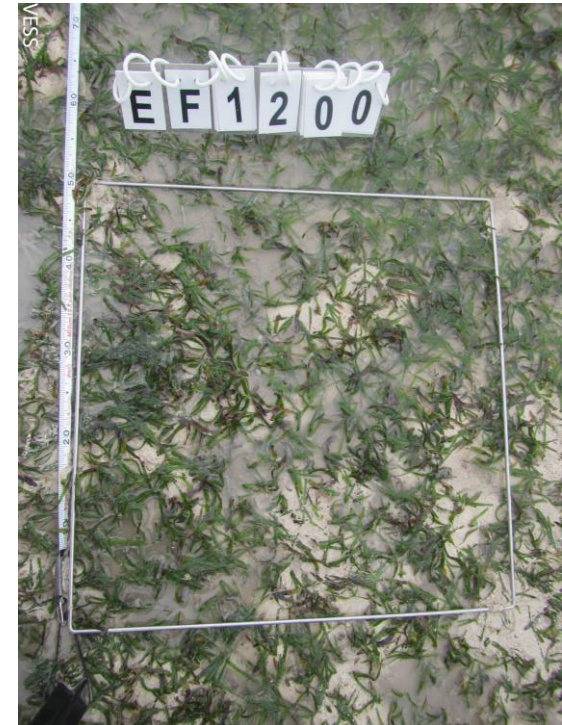
Research work to be carried out in 2018:

- Seagrass assessments and aerial survey to assess the abundance of dugongs in 4 hotspot areas.

Research needs

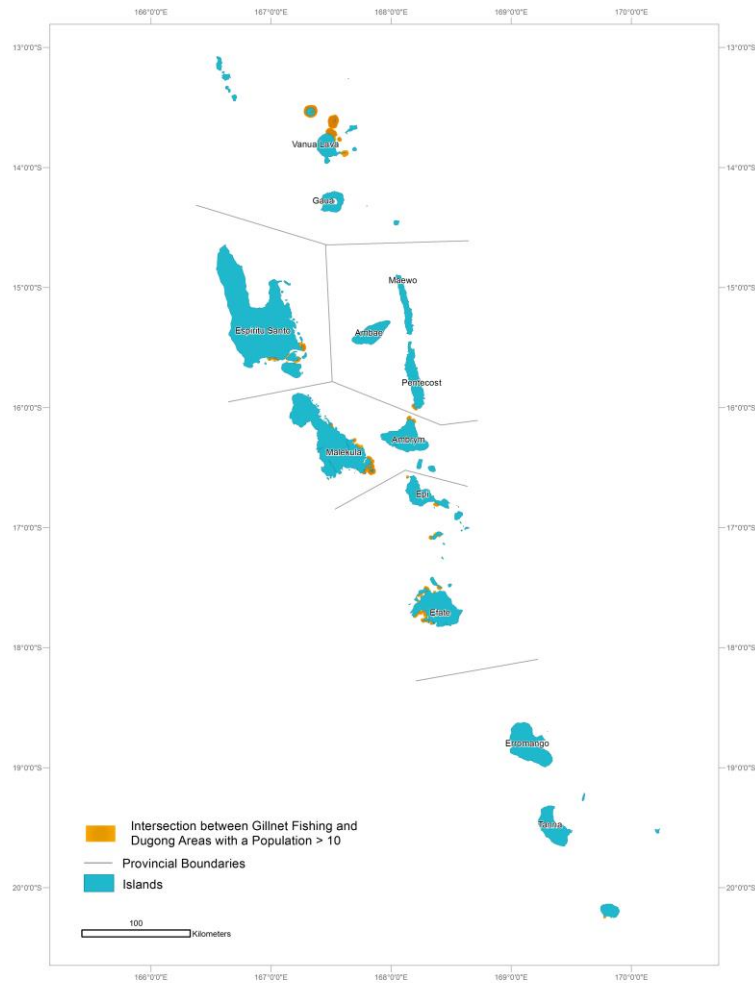
- Only have funds to conduct aerial surveys and seagrass assessments in 4 areas. Therefore it is hard to make a national assessment of dugong status in Vanuatu. Plan to apply for additional funding to survey more hotspots.
- Is ocean acidification affecting our seagrass beds or can it mitigate the effects on our coral reefs? There is a possibility of some donation of equipment to add OA monitoring to the seagrass monitoring protocols in this project.

Training Workshop on Seagrass Watch techniques for Seagrass monitoring and assessments

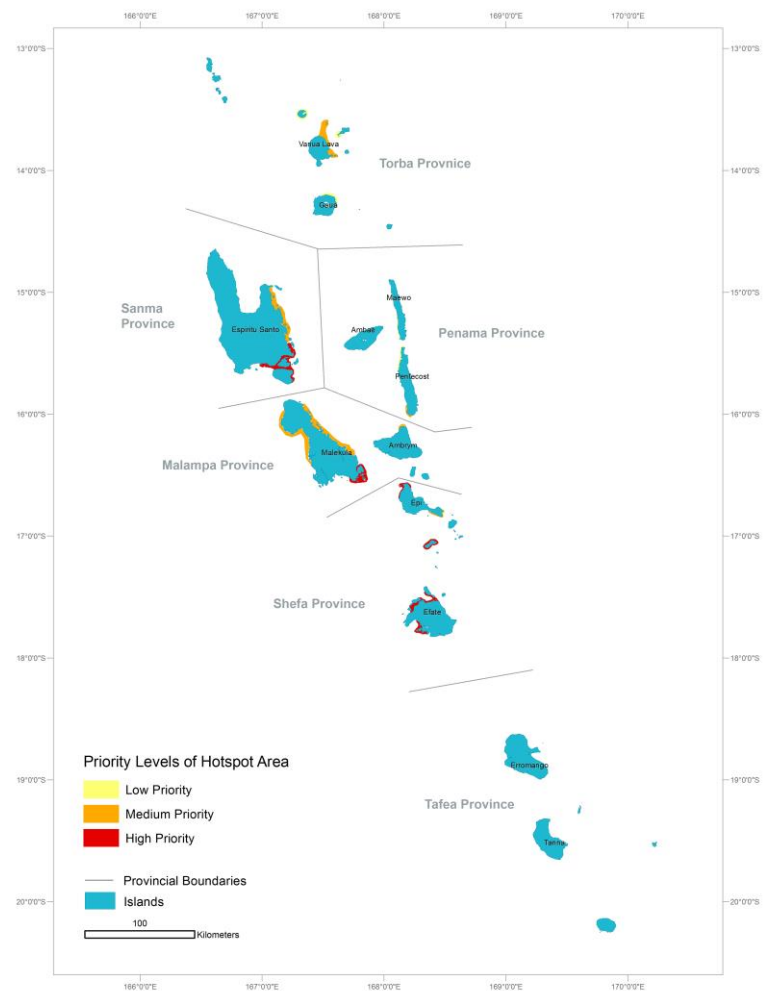


Hot areas

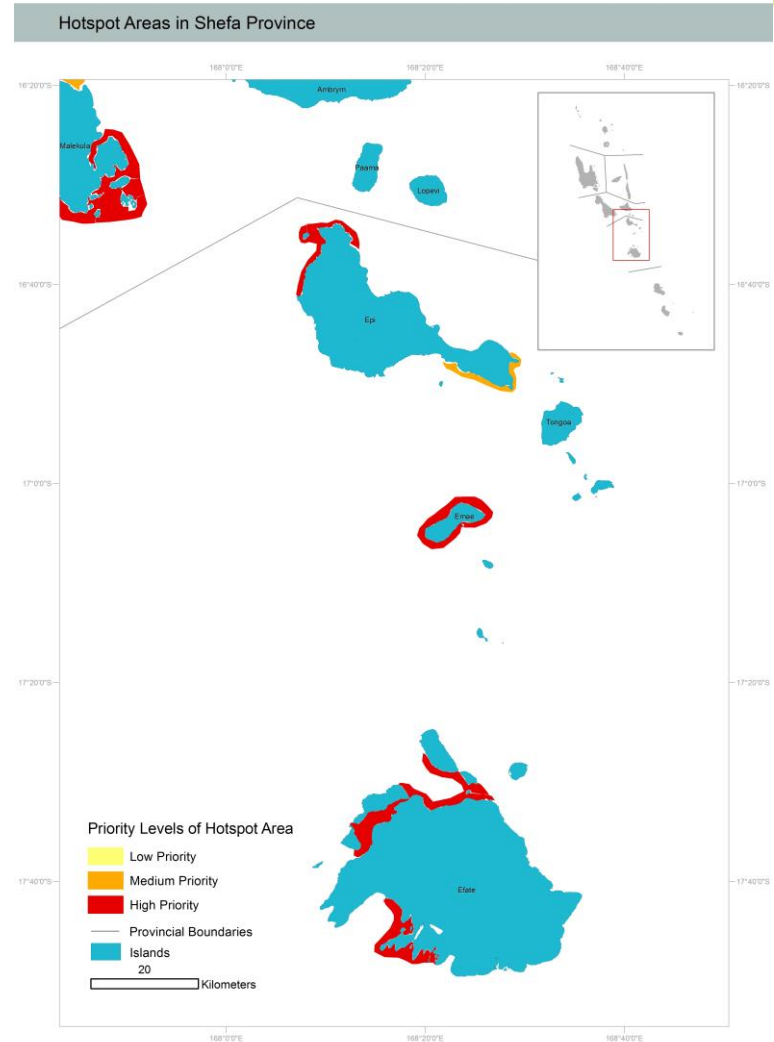
Areas with a Large Dugong Population and Gillnet Fishing in Vanuatu



Hotspot Areas in Vanuatu



Maps produced to establish the Dugong hotspot areas – provincial maps



Project policy response to dugong & seagrass conservation needs in Vanuatu



- Policy needs in 2015: a lack of information on which to base policy decisions; No national Plan of action for dugongs.
- Data and maps generated by the project are being used in the process of identifying Special and Unique marine areas in Vanuatu under the Oceans Policy with view to create a network of marine reserves in Vanuatu by 2020
- Draft guidelines for tourists and code of conduct for tourism operators have been written and will be incorporated into the Department of Tourism's minimum standards for the tourism sector.
- The National Facilitating Committee developed under the Project has been valuable for exchange of information not only for the project but other matters as well. VESS is happy to host similar meetings beyond the end of this project.
- In 2018 a National plan of action for dugongs and their seagrass habitat will be written.
- Current Needs: There is significant coastal development in some of the dugong hotpots. There is a need of capacity building to incorporate the importance of dugong and seagrass into EIAs and assistance with monitoring of conditions set in EIA in these area. There are currently no plans to address this issue.

Community-based stewardship of dugongs and their seagrass habitats



Working with the communities in dugong hotspots is scheduled for 2018 so has not begun in earnest yet. There is no incentive component to our projects in Vanuatu.

- Malakula, Epi and Efate islands known as as areas where significant populations of dugongs occur before 2015 and confirmed to be dugong hotspots. Additional hotspots have also been identified which were not know to have significant dugong populations before such as Emae island.
- 2 most common threats within the project sites that the project will try to address are by-catch/ accidental catch and inappropriate tourism.
- The project aim is for communities to incorporate dugong and seagrass conservation measures into the management plans of Community Conservation Areas in at least 50% of the high priority hotspots.

Community-based stewardship of dugongs and their seagrass habitats



- 62 women (11.7%) gave responses to the questionnaire.
- Sighting, mortality and use of gillnets has been recorded through the CMS Dugong By-catch questionnaire. 223 out of 530 respondents reported they use gillnets when fishing. Just over half (54%) leave the nets unattended.
- Educational materials were given out at all the survey sites.
- Need identified: Education about dugong friendly fishing techniques and good tourism practices and alternatives to trying to tame or catch a dugong for tourism.

Fishing gear



Education & Awareness about dugongs and seagrass



- Target Audiences: Communities throughout Vanuatu, Tourism sector, Policy decision makers in government.

Progress so far

- Video about dugongs and community attitude to dugong conservation.
- 2500 dugong/ seagrass posters developed and distributed
- 1350 booklets about dugongs and seagrass distributed.
- Educational materials available via website.
- Dugong exhibition in the National Archive building with 323 visitors. Middle page spread in daily newspaper. Facebook Page postings.
- Article in CMS COP12 meeting magazine.
- 120 eco-bags with dugong conservation message given out or sold. 200 dugongs stickers given out or sold.
- Guidelines for tourist and a code of conduct for tourism operators to be incorporated into the Department of Tourism's minimum standards programme.
- In 2018 will finalise dugong workshop materials and be conducting workshops in at least 4 hotspots.
- Only have funds to deliver awareness workshops in 4 islands. Plan to apply for additional funding to go to more hotspots.

Educational materials



Dugong Exhibition



Project indicator	Year 2015	Year 2017
1. Total area of seagrass (key areas for dugongs) under improved conservation management	unknown	839,342 ha, incl. 2,913 ha gazetted protected areas. This is the total size of seagrass areas, dugong areas and fishing areas, identified by fishers and community members during the questionnaire survey conducted throughout Vanuatu – 193 sites were visited on 32 islands.
2. METT scores in targeted protected areas (MPAs, LMMAs, others) in national programmes		Total: 104
3. Use of gill nets (beach seines), fixed fish traps and other damaging methods) by fishermen (which result in incidental dugong mortality) reduced	Unknown	Sighting, mortality and use of gillnets recorded through the delivery of the CMS Dugong By-catch questionnaire. 223 out of 530 respondents reported they use gillnets when fishing.
4. Community engagement in management (CBM) for dugong conservation in selected priority target areas (LMMAs, other seagrass protection zones, co-management of MPAs)	Communities apply traditional management/ monitoring of marine resources but not integrating dugongs/ seagrass	Awareness raising of community members about dugongs & seagrass importance and conservation measure that can be taken.
5. Number of community-based conservation/ monitoring systems established and functioning for dugong and seagrass) in priority target areas	Communities apply traditional management/ monitoring of marine resources but not integrating dugongs/ seagrass	Awareness raising of community members about dugongs & seagrass importance and conservation measure that can be taken.
6. Number and uptake of incentive mechanisms (ie. market-based, social, cultural, religious) and management tools linking sustainable fishing practices and adoption of best practice (see also Indicator 3)	0 incentives/ management tools (not planned)	0 incentives (not planned)

Project indicator	Year 2015	Year 2017
7. Availability and uptake of conservation management information (digital maps of dugong and seagrass distribution & status; ecosystem services valuation data; pilot studies – e.g. assessment of Blue Carbon potential)	Limited/ outdated information	Maps of Dugong and seagrass distribution and threat from gillnet fishing for whole of Vanuatu, based on local community knowledge from 530 surveys using the CMS Dugong By-catch questionnaire Video about dugongs and community attitude to dugong conservation. 2500 dugong/ seagrass posters and 1350 booklets about dugongs and seagrass distributed and available via website. Dugong exhibition in the National Archive with 332 visitors. Middle page spread in daily newspaper. Facebook Page postings.
8. Progress on implementation of national and regional Strategies/ Action Plans for dugong and seagrass conservation	No national action plan/ strategy for dugong and seagrass conservation SPREP marine conservation programme, covering Vanuatu and integrating dugongs conservation	Data integrated in regional plans - Vanuatu contributed to the draft of the Dugong section of the SPREP Marine Species Action Plan 2018-2022.
9. Incorporation of dugong protection and dugong/ seagrass conservation in other sectors (e.g. fisheries, coastal zone management & regulations)	Dugongs are protected but no sectoral integration of dugong safeguards exist	Dugong hotspots and data used in the process of identifying Special and Unique marine areas in Vanuatu under the Oceans Policy with view to create a network of marine reserves in Vanuatu by 2020 under the National Ocean Policy. Draft guidelines for tourists and code of conduct for tourism operators written and to be incorporated into the Department of tourism’s minimum standards for the tourism sector.

Vanuatu lessons learned



What went well and why?

- We have obtained a lot of information about dugongs and seagrass and the threats they face in Vanuatu using the CMD dugong catch by catch questionnaire
- We have managed to obtain additional funding to expand our activities

What went wrong and why?

- It has taken much longer than anticipated to process that data as we are not very experienced in data management.
- The additional funding took longer than expected to be confirmed which had a knock on effect of the timing of some of the activities.

How can we do better?

- We have fixed some glitches in the database that goes with the questionnaire and created a manual on how to create the maps in arcGIS which we will make available to anyone else who wants to analyse their data in the same way

Next steps



- Finalise awareness workshop materials
- Conduct awareness workshops in at least 4 dugong hotspots
- Incorporate dugong and seagrass conservation actions into the management plans for community conservation areas in at least 50% of the high priority hotspots.
- Write national plan of action for dugongs and their seagrass habitat
- Conduct aerial surveys with UAV in at least 4 hotspot areas (additional activity with CEPF funding)
- Seagrass assessments using Seagrass Watch protocols in at least 4 hotspot areas (additional activity with CEPF funding)

