



*This Project is executed by the Mohamed bin Zayed Species Conservation Fund,
with financing from the GEF, implementation support by UNEP
and technical support from the CMS Dugong MoU Secretariat.*

Progress of the *Dugong & Seagrass Conservation Project*

the 3rd Executive Project Steering Committee meeting

21-23 November, 2017

Trang, Thailand

presented by:

Ahmad Sofiullah (the Ministry of Marine Affairs and Fisheries)

Cassandra Tania (WWF Indonesia)

Where we work?

4 SITES:

1. Bintan
2. Kotawaringin Barat (KOBAR)
3. Tolitoli
4. Alor



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



Baseline in 2016

- Dugongs: limited information; Seagrass: limited conservation efforts
- Communities: low awareness & participation towards dugong & Seagrass conservation
- Incentives: incentives not available
- Policies: Dugong NPOA not available

Progress by 2017

- Dugongs: dugong distribution maps & Seagrass: some conservation efforts have been done
- Communities: increased awareness and participation
- Incentives: incentives being designed
- Policies: Dugong NPOA finalised

Targets for 2018

- Dugongs & Seagrass: propose inclusion of dugong and seagrass into local MPA
- Communities: community act as steward for dugong & seagrass conservation
- Incentives: incentives schemes implemented
- Policies: Dugong NPOA legalized

Dugong Distribution Map



Seagrass Distribution Map



Results from dugong research

- **Research objectives:**
 - To record and map dugong existence, distribution and threats
- **Methods applied :** UNEP-CMS Questionnaire survey, visual method by boat, aerial survey (using drones), feeding trail tracking and passive acoustic
- **Status of dugong population** (still unknown/unconfirmed)
- **Dugong hotspots:** Bintan, Alor, Tolitoli, Kotawaringin Barat and Sangihe
At least 60 events on sightings, strandings, live-capture, and entanglements of at least 65 individuals have been recorded since 2015
- **Threats & responses:**
(1) Entanglements in gill net; (2) Live-capture/ killing; (3) Habitat degradation (loss of seagrass meadow) → Raising awareness on it through social media & public discussions
- **3 key dugong research results from the Project**
(1) Maps of dugong distributions based on sightings, strandings, and other events; (2) UNEP-CMS questionnaire survey in Akvo FLOW format (3) database of dugong and seagrass distribution in Indonesia (on-going)
- **Database & data sharing:**
At this moment, preliminary study results are hosted by LIPI and dugong stranding data is hosted under Whale Stranding Indonesia (<http://whalestrandingindonesia.com/>)
- **Next Research:** Identifying dugong hotspot in Indonesia using UNEP-CMS questionnaire survey.
- **Research Needs**
(1) Dugong-seagrass interaction, (2) Dugong's role in carbon cycle. It will be addressed through doctoral studies



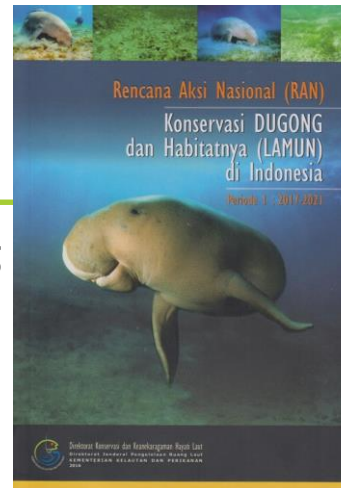
Results from seagrass research

- **Research objectives:**
To record and map seagrass species, distribution, abundance and status
- **Methods applied** Modified Seagrass Watch method
- **Status of seagrass habitats:**
 - Bintan: 0.5 good, 0.5 in moderate
 - Alor: 0.2 is good, 0.8 in moderate
 - Tolitoli: 0.7 good and 0.3 in moderate
 - Kobar: 0.25 good, 0.5 in moderate and 0.25 in bad
- **Threats & Responses**
Land conversion in Bintan, domestic waste in Tolitoli, destructive fishing in seagrass area and freshwater run-off from nearby river in Kobar. → raising awareness on it through social media & public discussions, provide alternative fishing gear to fishers.
- **3 most important research results:** (1) Maps of seagrass status and distributions (2) Current seagrass condition in each site. (3) Current seagrass condition in each site will be assessed by regular monitoring (at least once in 6 months)
- **Database & Data Sharing:**
LIPI is appointed as data trustee for seagrass. Once every year LIPI will launch the status of seagrass beds in Indonesia.
- **Next research :**
Seagrass monitoring in 3 sites (Alor, Tolitoli and Kobar) and seagrass species and distribution monitoring in LIPI monitoring stations.
- **Research needs:** Impact of dugong grazing on seagrass biomass productivity, contribution of dugong's grazing to blue carbon storage and carrying capacity need of seagraass habitat to maintain dugong population. Research will be conducted by post doctoral students



Policy responses

- **The most important policy needs of dugong & seagrass conservation identified is the absence of national plan of action;**
Indonesia has already had a national plan of action for period 2017-2021.
- **Key policy gaps to effective dugong & seagrass conservation identified by 2017 is on how to encourage stakeholders in implementing the actions**
- **Information generated by the Project's seagrass and dugong research has been used to inform decision-making process of the MPA establishment and coastal zoning plan**
- **The National Dugong Conservation Committee (NDCC) will be ensured to remain sustain after the end of the project:**
 - Regular Meeting
- **Policy needs of dugong/ seagrass conservation that have not been addressed:**
 - Revision of Law no 5/1990 → on progress



Support from TOP policy maker

Community-based stewardship of dugongs and their seagrass habitats (1)

- **Existing community work in sites:**
 - Bintan: Pokmaswas Gunung Kijang, Berakit (dugong hotspot), Pengudang (dugong hotspot) & Teluk Bakau
 - Alor: Fishermen group in Kabola (dugong hotspot), Pokmaswas & village-owned business entity in Pante Deree, Pokmaswas in Munaseli (dugong hotspot), local customary groups in Blangmerang (Baranusa)
 - Tolitoli: Pokmaswas in Santigi, Malala & Ogotua (dugong hotspot)
 - Kobar: Pokmaswas & Village-owned business entity in Kubu, Sungai Bakau, Teluk Bogam (dugong hotspot) and Keraya
- **Threats within the Project sites that the Project is trying to address**
 - Use of (destructive) fishing methods resulting in bycatch and seagrass bed degradation
 - (Massive) tourism
- **Common community needs :**
 - To develop alternative livelihood and provide capacity building for social enterprise
 - To stop destructive fishing by supporting law enforcement and providing fishing gear replacement



Community-based stewardship of dugongs and their seagrass habitats (2)



- **3 key results from the Project that address the most common threats and community needs:**
 - Operational MPA in Alor and designated MPA in Kobar that covers dugong critical habitat.
 - Active Pokmaswas that will assist authorities to patrol its region, report any illegal fishing activities and monitor dugong and seagrass.
 - Operational BUMDes that will ensure the sustainability of conservation effort.
- **Type of community-based management structures developed by the Project so far and number of communities involved across all sites**

Local community groups: 2 groups in Alor (Kabola); 1 customary kingdom in Alor (Baranusa); village owned business entitiy (BUMDes): 1 in Alor (Pante Deree), 4 in Kobar (Kubu, Sungai Bakau, Teluk Bogam and Keraya)
- **Type of community-based monitoring structures developed by the Project so far and number across all sites**

Community surveillance group (Pokmaswas): 2 groups in Alor (Kabola and Munaseli), 5 groups in Kobar (Kubu (2 groups), Sungai Bakau, Teluk Bogam and Keraya), 1 group (Malala) in Tolitoli
- **Estimated share of women involved in management/ monitoring of the project sites;**

In Kabola (Alor) there are 8 women involved out of 30 community group members. In Kubu (Kobar), there is a women group for fishery product processing and marketing called “Putri Mandiri”. Women involvement is still low in the project.
- **How sustainability of community-based monitoring and management structures is insured**

BUMDes is a business entity which can run by itself once it has capital and a business model. Pokmaswas as a surveillance group. In Kobar, Pokmaswas will be put under BUMDes scheme and becomes part of BUMDes. Profit from BUMDes will be used for Pokmaswas operational. In Alor, the area is already a part of MPA which has its own authority, Pokmaswas will be adopted by the authority as part as management scheme.

Community-based stewardship of dugongs and their seagrass habitats (3)

- **2 Types of incentive models (Alor and Kobar plan to conduct feasibility studies in November)**
- Women involvement is still low in the project with the majority of community involved are men.
- **Use of bad fishing gear/ practices gill nets across the Project sites in 2015 and status of these in 2017**

In Alor, there is indication of the usage of trawl, bomb, potassium, tuba (plant-based-poison for fishes made from tuba tree root) can still be found – **but precise data has not been gathered – on progress.** In Kobar, Minister Regulation PERMEN – KP No.2 Tahun 2015 has banned the use of trawls and seine nets. The water of Kobar has been reduced by the use of destructive fishing gears which come from Java and abroad (Thailand), but local people still use that fishing gear. The district government policy of Kobar gives the final period for using that fishing gear until the end of 2017 and by 2018 it will be fully forbidden.

- **Community-related work of the Dugong and Seagrass Conservation Project until 2018 and 3 key deliverables**
 - Pokmaswas are declared, operation and perform monitoring and surveillance activity.
 - Community groups and/or BUMDes have business plan and run their business as part of incentive.
 - Community groups can work on their program based on the code of conduct/ local based law, as well as established Indonesia authority law, in order to keep the dugong and sea grass sustainable



Education & Awareness



3 Key target audiences;

- (1) General public; (2) Students and academics; (3) Government staffs; (4) Local community in four sites

3 most influential results

1. Awareness level survey shows that less than 10% of Indonesian citizens (n = 616) from 19 provinces are fully aware of the connections between dugong and seagrass
2. At least 1,600 people follow the Facebook fanpage of DSCP Indonesia since November 2016
3. At least 1000 people, mainly in Java, have been exposed to the activities of DSCP Indonesia and general information on dugong and seagrass in Indonesia through workshops and public discussion (including socialization done by MMAF in Bangka, Mentawai and Bantul).

Effectiveness and sustainability of education & awareness activities

- The education and awareness activities of DSCP Indonesia will be supported by the spokesperson/ ambassador of the project (Arifin Putra). It is hoped that Arifin will continue raising awareness on dugong and seagrass after the project ends.
- MMAF, LIPI, WWF and IPB will continue the awareness program despite project ends in 2018

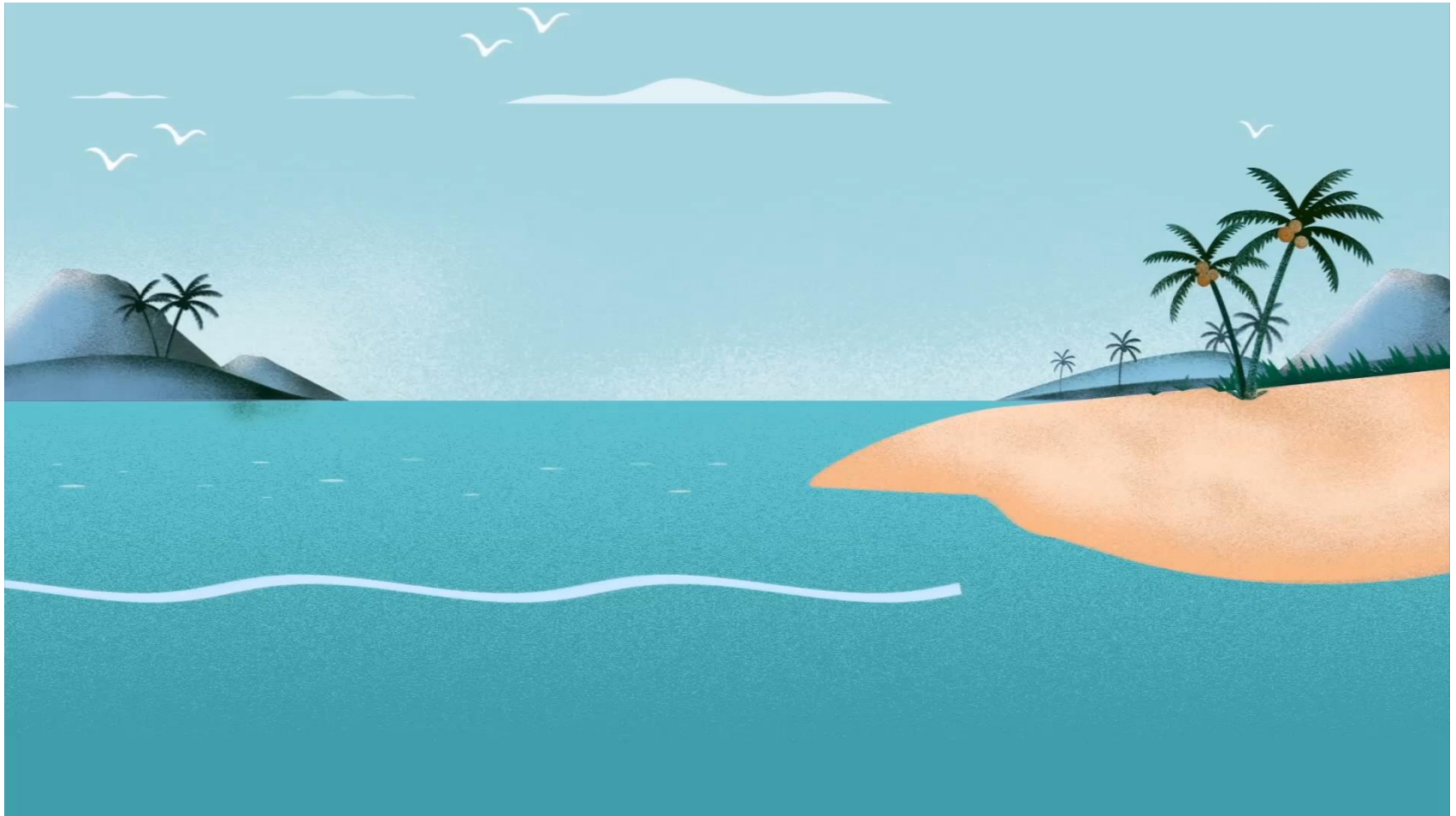
Education and awareness work of the Dugong and Seagrass Conservation Project until 2018 and 2 key deliverables

- Carrying out public discussion in universities with deliverables such as (1) education materials (e.g. infographics on dugongs and seagrass, presentation slides on dugong and seagrass, and DSCP Indonesia factsheet) and (2) dugong stranding response video
- Operating Facebook fanpage of DSCP Indonesia to share education materials

2 Education and awareness needs of dugong/ seagrass conservation that have not been addressed by the Project in your country, so far. Will the Project address these by 2018? If not, what is the plan on addressing these needs

- (1) Media trips to document the activities of DSCP Indonesia in each of its four pilot sites; and (2) public discussion and showcase booth in Deep and Extreme Indonesia Fair 2018

Sample Communication Material /Stranded Dugong SOP Video



	Year 2016	Year 2017
1. Total area of seagrass (key areas for dugongs) under improved conservation management	3,000 ha 1 regional site (IUCN cat. VI)	995,338 ha (direct + indirect) 5 regional sites (IUCN cat. II, III and VI)
2. METT scores in targeted protected areas (MPAs, LMMAs, others) in national programmes	Total: 42	Total: 149 Average: 37
3. Use of gill nets (beach seines), fixed fish traps and other damaging methods) by fishermen (which result in incidental dugong mortality) reduced	Unknown	+ 60 events on sightings, strandings, live-capture, and entanglements +65 individuals have been recorded since 2015 2 dugong captivity cases reported to DSCP team- Indonesia and released
4. Community engagement in management (CBM) for dugong conservation in selected priority target areas (LMMAs, other seagrass protection zones, co-management of MPAs)	Some community engagement in management existed in 1 site (Bintan)	Operational MPA in Alor and designated MPA in Kobar that covers dugong critical habitat B community-based structures across 2 regional sites 2
5. Number of community-based conservation/monitoring systems established and functioning for dugong and seagrass) in priority target areas	Some community involvement in monitoring existed in 1 regional site (Bintan) Low/ no women participation	8 Community surveillance group (Pokmaswas) in 3 regional sites 2 potential companies to integrate dugongs/ seagrass in their CSR policies in Bintan 2-3% women involvement
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)	Some incentives existed in 1 regional site (Bintan)	12 local sites within 4 regional sites, which are new to the Partners; Ecological and socio-economic studies of the 4 sites. Lessons learned from Bintan’s experience documented
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 information about dugongs limited conservation efforts towards seagrass	Maps of dugong distributions based on sightings, strandings, and other events; UNEP-CMS questionnaire survey in Akvo FLOW format (3) database of dugong and seagrass distribution in Indonesia Draft guidelines on research of carbon budget in seagrass; Standardized method for dugong and seagrass research and monitoring Awareness needs assessment of Indonesian citizens (616 respondents from 19 provinces) Facebook fanpage of DSCP Indonesia since Nov 2016, + 1,600 virtual followers; +2000 people reached directly by the Project through awareness raising, workshops and trainings in sites and nation-wide
8. Progress on implementation of national and regional Strategies/ Action Plans for dugong and seagrass conservation	National plan of action for period 2017-2021	Updated/ new National Plan of Action (NPA) National Dugong Conservation Committee (NDCC) formally established, responsible for the implementation of NPA
9. Incorporation of dugong protection and dugong/ seagrass conservation in other sectors (e.g. fisheries,	No policy gap analysis	Recommendations on integration of dugong/ seagrass in MPA establishment

Indonesia lessons learned



What went well and why?

- National Dugong Conservation Committee (NDCC) has been established. NDCC will be the forum for all relevant stakeholders to collaborate and contribute to dugong and seagrass conservation.
- NDCC will be the entity to ensure the implementation of Dugong National Plan of Action in Indonesia until 2021.
- Support from TOP Policy maker

What went wrong and why?

- Time management for implementing DSCP activities. DSCP Indonesia is a big team consists of at least 4 institutions with different management systems and priorities. Sometimes, some activities are not run on time due to administrative constraints.

How can we do better?

- MMAF will act as a reminder for each implementing partner to ensure activity is carried out as planned.

Next steps

ID1:

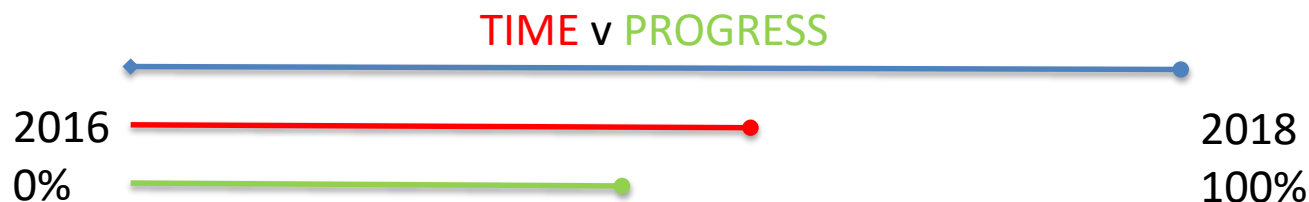
- Legalize Dugong and Seagrass NPOA (Jan-18)
- Facilitate NDCC meetings (ongoing)
- Facilitate second dugong and seagrass national symposium (Aug-18)

ID2:

- Conduct awareness campaign with assigned dugong ambassador (Nov-17 – Apr-18)
- Facilitate training and survey for UNEP-CMS questionnaire (starting next year)
- Participate and hold a talkshow in Deep Extreme (national event) as highlight for campaign (Apr-18)
- Facilitate awareness level survey after campaign (Aug-18)
- Update dugong and seagrass maps and database (ongoing)

ID3:

- Implement incentive and tools for sustainable fisheries (starting next year)
- Develop and disseminate guidelines on the protection of dugong to fishers & tourism operator (Apr-18)
- Develop lesson learned from Alor, Tolitoli & Kobar (by Sep-18)



Terima kasih (a.k.a *thank you!*)

