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Coral Restoration and Conservation in Serangan Island, Denpasar City, Bali, Indonesia: Turning Coral Miners into Conservation Advocates

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THE PROBLEM

- Reclamation of Serangan Island (1994 – 1997): expanded the island's size from 101 ha to 481 ha for tourism development, which did not materialize
- It caused degradation of marine benthic and coral reef ecosystems (75 % of the seagrass beds and 50 % of mangroves disappeared)
- Decline of fish catch and fisher income
- Fishers turned to destructive fishing practices including coral mining





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ADDRESSING THE PROBLEM

- Through exposure to environmental conservation programs, a group of young people in Serangan island became aware of the need to promote ecosystem recovery in the island, and founded in 2003 the **Karya Segara Organization**
- Karya Segara requested and received support for coral transplantation from the Environmental Impact Management Agency (Bapedalda) of Bali Province (later called Environmental Agency of Bali Province).
- The initiative developed as one of the pilot projects of the Bali ICM Demonstration Project, a joint program between Bali Province and PEMSEA, to demonstrate integrated approaches in addressing priority local issues/ needs and empowering the community



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SOLUTIONS

- Karya Segara received further support for coral transplantation from the Ministry of Marine Affairs and Fisheries and other partners
- The group has since then been able to build a network of partners to sustain their conservation program, and develop ecotourism services in collaboration with tourism entrepreneurs



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KEY STEPS UNDERTAKEN

1. Empower the community through various awareness campaigns and educational forums, with the support of local champions/motivators

Activities provided information on:

- The ecological processes of the ecosystem
- the negative effects that result from harmful human activities on the coral reefs; and
- The functions of the coral reef ecosystem and the importance of conservation efforts



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KEY STEPS UNDERTAKEN

2. Develop the community organization and the skills of its members

- Physical facilities : office buildings and office resources supported by traditional villages, local government, and grants from various parties
- Supported by government agencies, NGOs, university, and the private sector
- A number of training programs aimed to develop skills of the members of the group :
 - (a) life skills training
 - (b) training on environment-friendly fishing and ornamental fish handling; and
 - (c) training on coral reef restoration



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Coral reef transplantation program in Serangan Island done by Karya Segara Group



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KEY STEPS UNDERTAKEN

3. Strengthen the community economically through development of alternative sources of income

- **Short-term:** 1) development of market access for fish catch that used eco-friendly methods, transplanted soft corals, and artificial live rock for tropical aquariums; and (2) provision of employment to members of the organization who had skills for underwater works and construction.
- **Medium-term:** Building networks with local governments in and outside of Bali, and with the private sector to support rehabilitation of coral reefs in different areas throughout Indonesia
- **Long-term:** Developing ecotourism services in the rehabilitated area.



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Transplanted coral



Sea Horse culture



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Green Island: integrated eco-tourism in Serangan Island

Sea horse releasing, coral transplantation, snorkeling and training centre
on marine conservation



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KEY STEPS UNDERTAKEN

4. Engage and mobilize support from various levels of government and stakeholders in an integrated manner

- Integration of support among different levels in government and among stakeholders
- The Denpasar Government, Bali Provincial Government and MoMAF facilitated several social safety net assistance programs during the program implementation.
- Collaborative programs among government, NGOs, universities, and the private sector were implemented in harmony and in support of each other. NGOs and academics also helped the community in the overall implementation of the program.



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RESULTS

- **A proactive community organization**
 - The Karya Segara Group has become an active force in conservation in Bali
 - Restored 2 hectares of degraded coral reef area in Serangan Island
 - Supports coral restoration in other areas in Indonesia
- **A sustainable business opportunity**
 - Developed ecotourism services in collaboration with tourism entrepreneurs, receiving around 800-900 tourists per month



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RESULTS

- A place to learn and share good practices in community conservation



Study visit from various groups to learn about marine conservation practices



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RESULTS

- **National recognition**

Received the 'Kalpataru Award' for environmental management from the President of Indonesia in 2011 and several awards given by the government



The Jakarta Post

Saturday, November 07 2015, 07:16 AM

Enter Query



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Bali Daily



Edition: Saturday, May 05 2012

Wayan Patut : Conserving Serangan's underwater treasures

BY ON 2012-05-05



Wayan Patut: BD/Zul Trio Anggono

Marine life on the small Serangan Island has degraded since the massive reclamation project run by the Bali...

IN BRIEF

- ✓ Bali International Triathlon
- ✓ Health training for commercial sex workers
- ✓ Aussie teen dies in snorkeling accident

SIGHTSEEING



A fun afternoon pedaling

Following the colorful rain of confetti and continual flow of sparkling white wine on Thursday night, The Jakarta Post's 29th anniversary and launch of the Bali Daily celebrations took a healthier turn on Friday afternoon, when dozens of participants pedaled their bicycle during a rally through the streets of Kuta.

Mr. Wayan Patut, Kalpataru Award holder, given by President Yudhoyono, 2011



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RESULTS

Most importantly....

- **The members of the organization have been transformed from being destroyers of the environment into active conservation advocates**



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LESSONS LEARNED

Behavior change among the people of Serangan Island (from being destroyers of the environment to saviors of the sea) was facilitated by:

- Nurturing and enabling the willingness to change which started among the youth
- Ensuring the availability of a support network through an integrated system that promotes harmony and collaboration among various stakeholders;
- Integrating ecological, social, and economic aspects in developing the community environmental management program; and
- Empowering the communities in sustainable environmental management by developing decent alternative livelihoods for the local people.



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THANK YOU VERY MUCH
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