



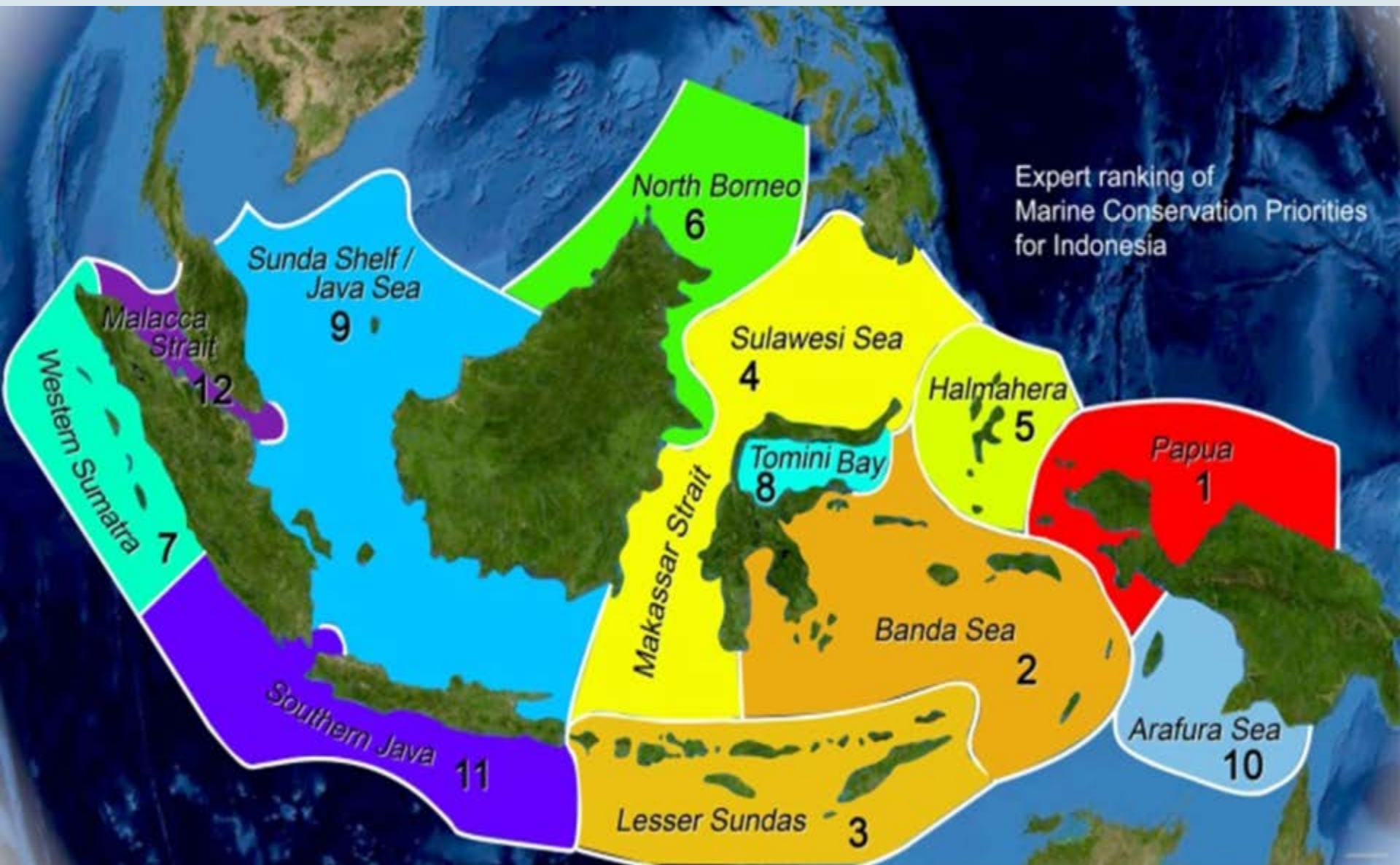
# Nusa Penida : Establishing an MPA Learning Site in Indonesia

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## **Objective :**

*addresses the lack of formalization of natural resource management and inadequate protection of marine biodiversity in Nusa Penida, Nusa Ceningan and Nusa Lembongan islands, Bali, Indonesia, for the benefit of local communities from fisheries and marine tourism*





## Threats

- *Human activities*
- *Climate Change*



# Nusa Penida MPA Design



- Baseline data collection
- Deployed temperature loggers to inform trend of seawater temperature (range 14°C – 31°C), no coral bleaching event in Nusa Penida
- Stakeholders inputs and agreement through series public consultation
- Policies/regulations assesment

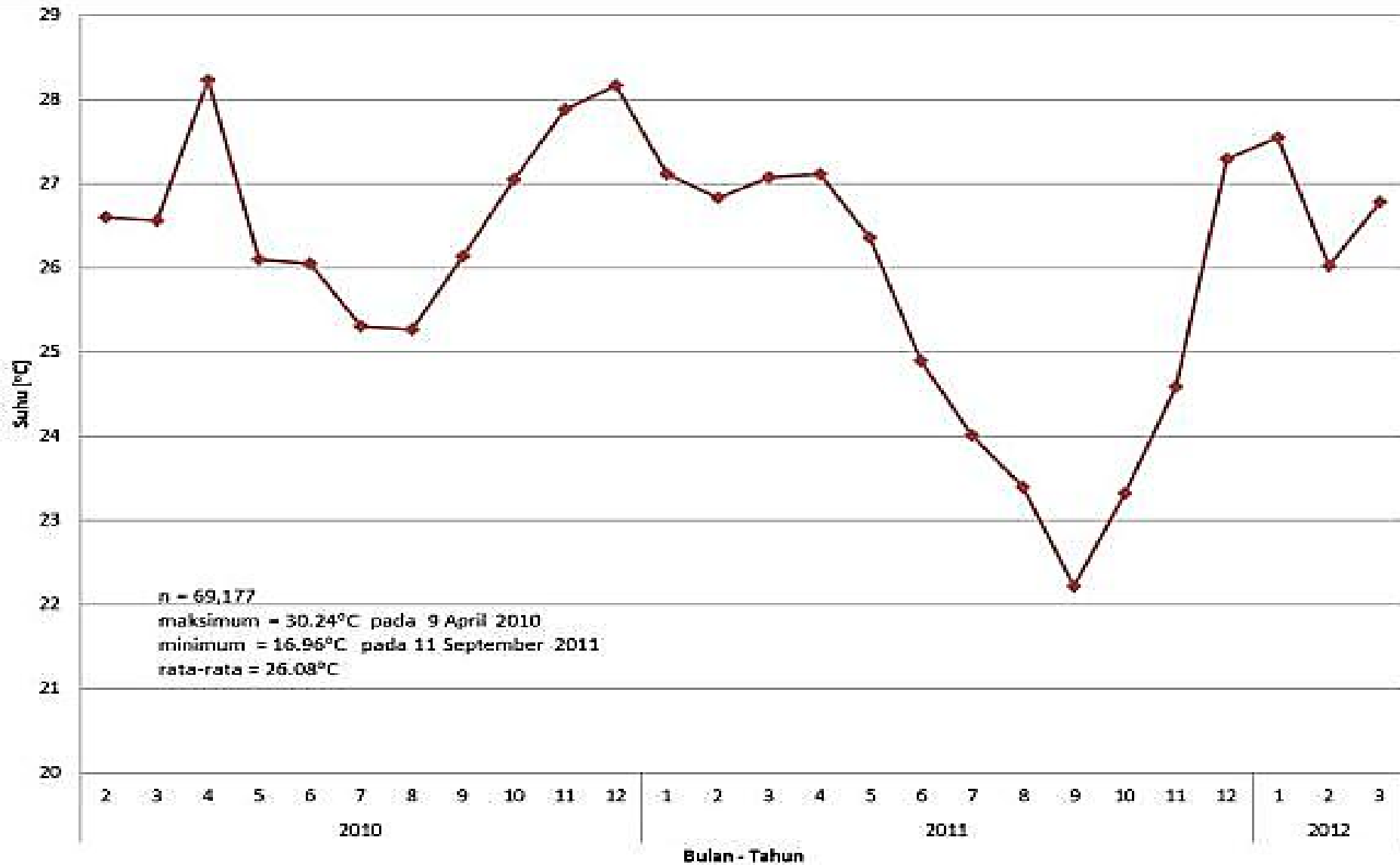


**USAID**  
FROM THE AMERICAN PEOPLE

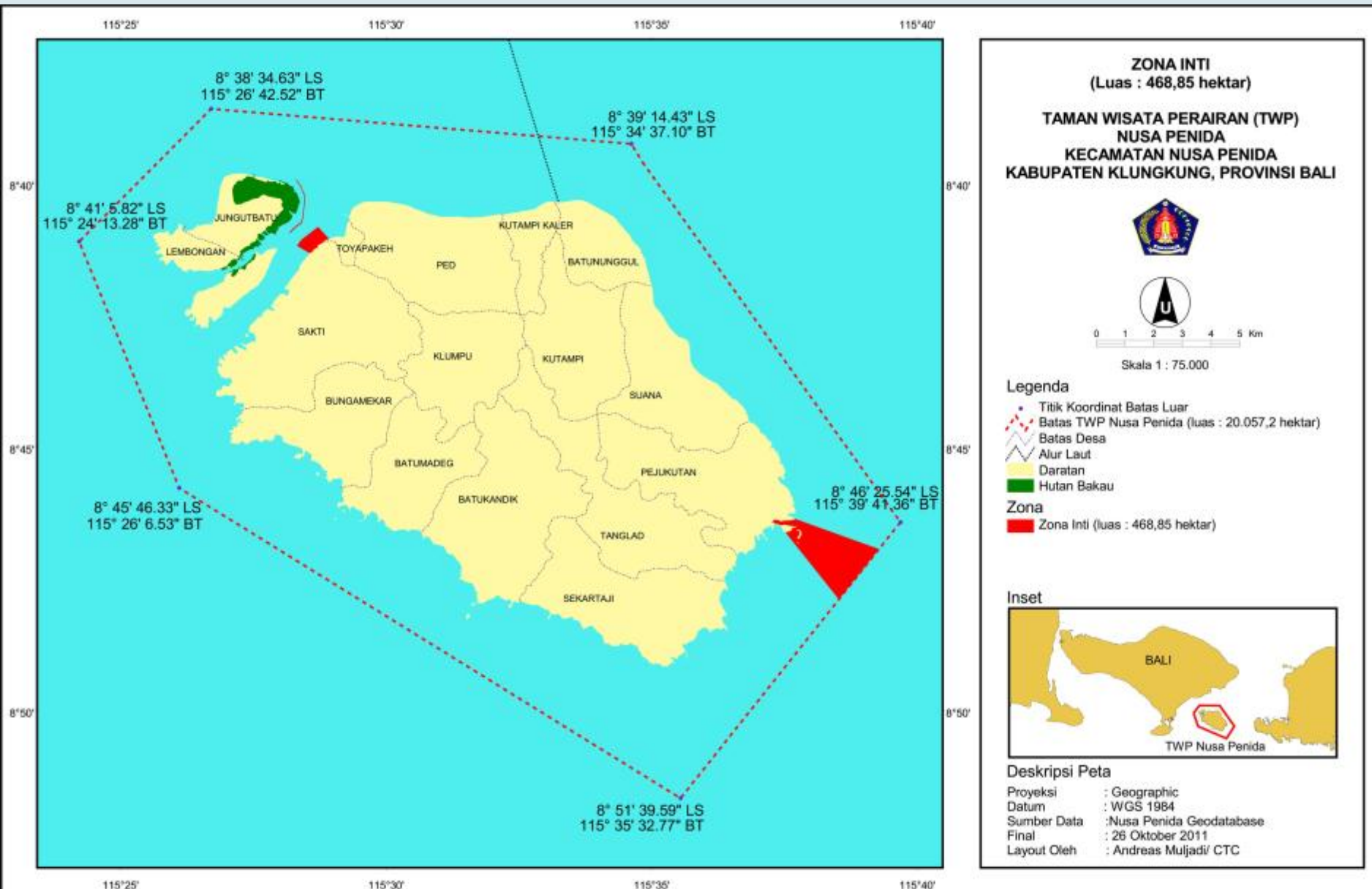






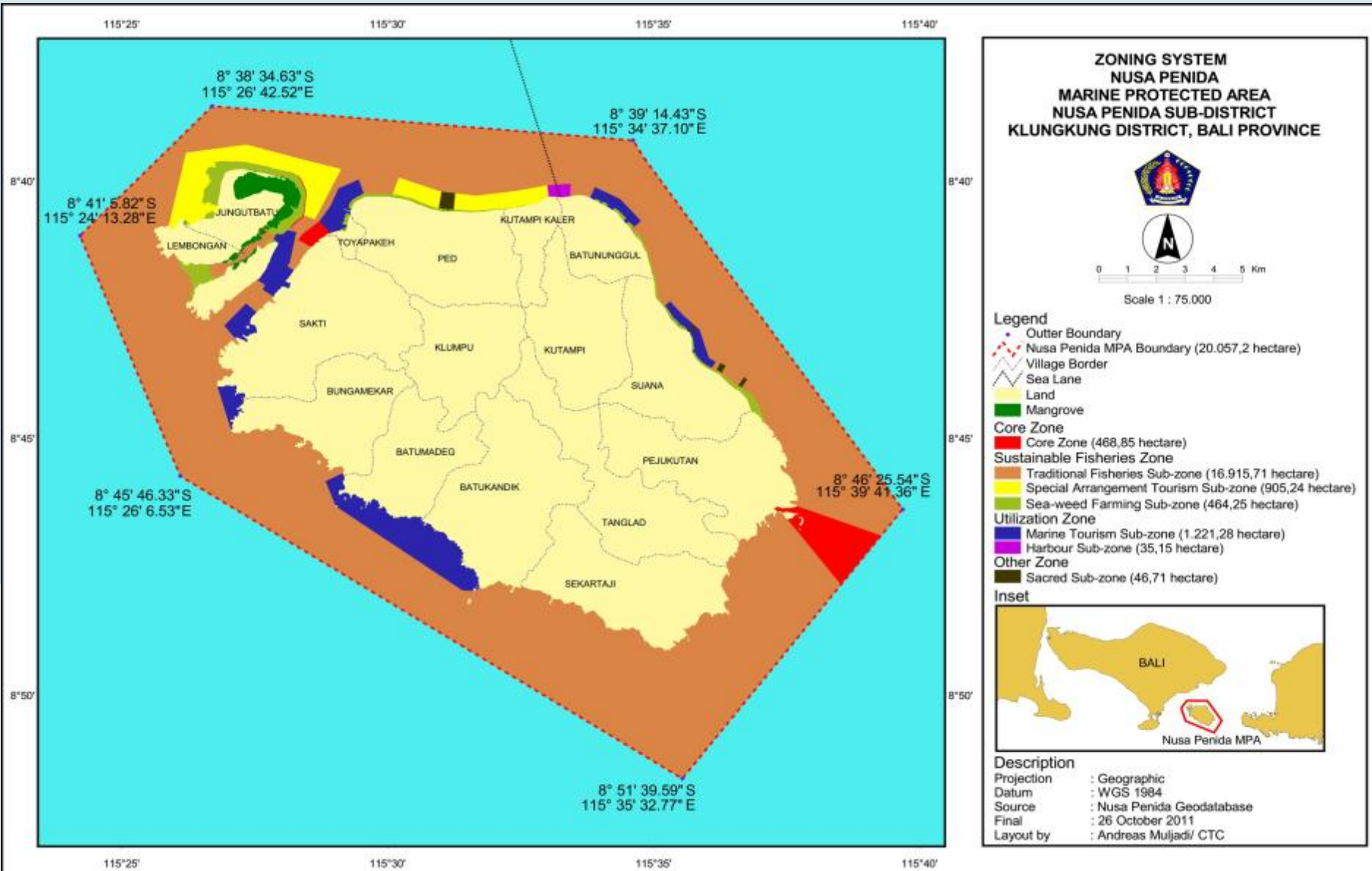


# MPA Design : Representation and Replication



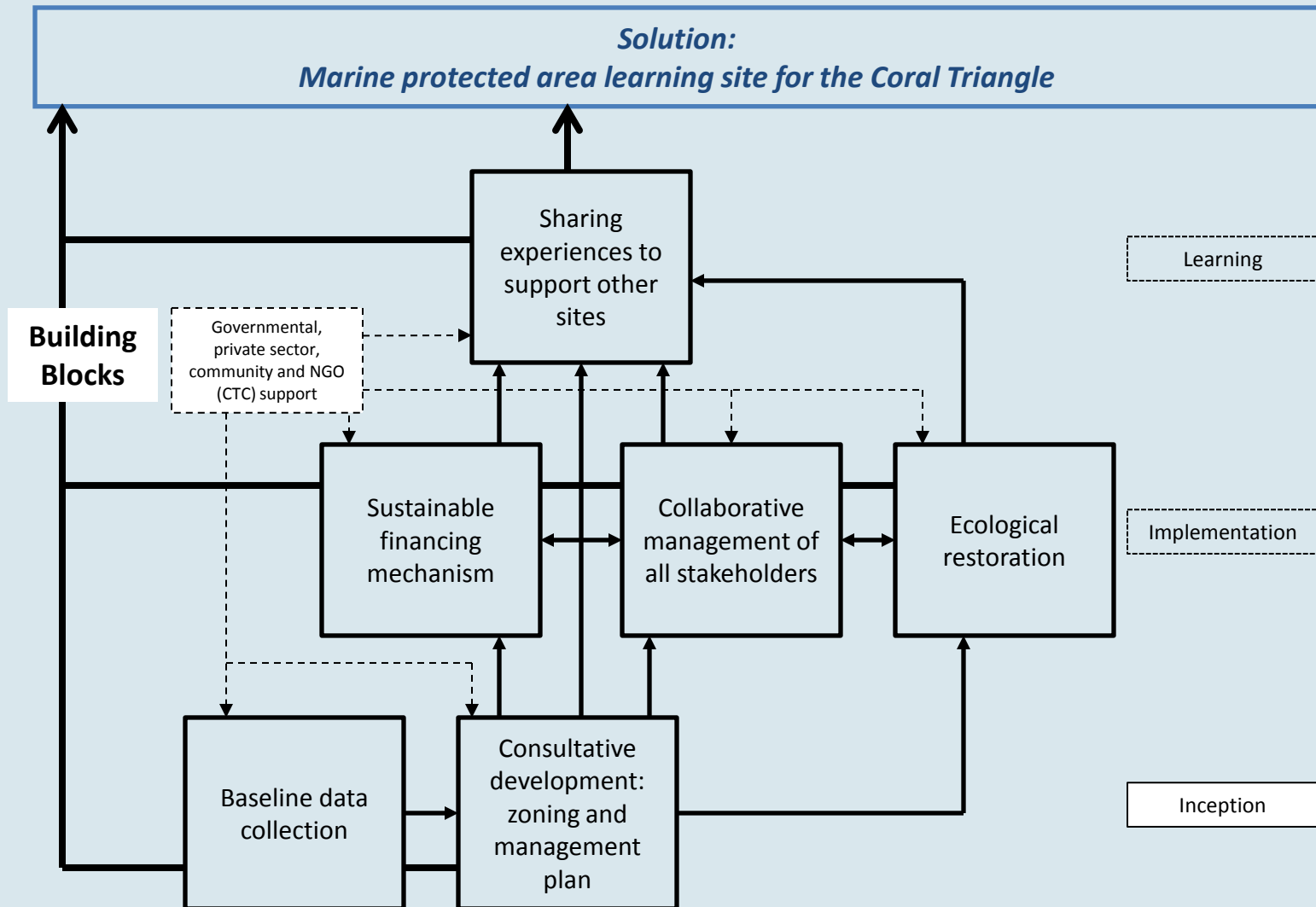


# Nusa Penida Marine Protected Area (MPA), Bali - Indonesia





**BLUE SOLUTIONS**





**BLUE SOLUTIONS**



## **Building Blocks**

### **1) Baseline data collection**

- Scientific data collection ( biophysics and socio-economic)
- Stakeholders inputs from series public consultations

### **2) Consultative development: zoning and management plan**

- Drafting of zoning and management plan from scientific data and stakeholders input analysis.
- Series public consultations for inputs and agreement development







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### 3) Collaborative management of all stakeholders

- Local government and community in management unit
- Joint patrol team, biophysics monitoring and socio-economic monitoring team



### 4) Sustainable financing mechanism

- Apply concept “user must pay” and “sharing program, sharing costs”
- Entrance fee system from marine tourism based on willingness to pay study result





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## 5) Ecological Restoration

- Replanting mangrove
- Coral reef transplantation

## 6) Sharing experiences to support other sites

- Develop and distribute outreach materials, best practices documentation
- Site-base trainings
- Field visit







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*Parks, people, planet: inspiring solutions*  
[www.worldparkscongress.org](http://www.worldparkscongress.org)



**mangrove replanting  
by community**





**BLUE SOLUTIONS**



*Parks, people, planet: inspiring solutions*  
[www.worldparkscongress.org](http://www.worldparkscongress.org)



**Mangrove seeds bank**





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# Mangrove forest in Nusa Penida





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# What the impact ?





**Marine eco-tourism is  
successfully developed  
50 tourists/day**



A fisherman wearing a blue and yellow cap and a dark shirt is holding a large, vibrant red snapper on a boat. The boat is on a body of water with a rocky coastline in the background. The fish is held vertically, showing its full length and bright red color. The fisherman is smiling and looking towards the camera. The boat has a wooden railing and a red container is visible in the foreground.

**Data suggest fishing is  
sustainable in MPA for local  
and external fishermen**

**226 tons/year**



A diver in a black wetsuit and yellow fins is kneeling on a coral reef, writing on a clipboard. A large, silver-colored fish is swimming nearby. The background shows a deep blue ocean with sunlight filtering through the water.

**Coral and Fish remain stable  
from 2008 - 2014**

**HCL percent cover = 60%**  
**Fish biomass = 1007 kg/ha**



A large sunfish (Mola mola) is the central focus of the image, swimming upwards in clear blue water. Its body is dark with lighter, mottled patterns. A small, colorful clownfish is swimming near its head. The background is filled with many small, dark fish swimming in the same direction. The lighting is bright, suggesting a shallow depth.

**flagship species such as Mola mola  
(sunfish) and Manta ray fully protected**

Sunfish always encountered between July – September annually  
Manta ray encountered along the year



**Learning visits circa 30 groups/year  
3 PhD, 5 Masters, 9 bachelors, 50 volunteers**







5 site-base trainings/year with total trainees  
240 participants



**BLUE SOLUTIONS**



# Thank you

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