

Aquaculture Rehabilitation and Implementation of Better Management Practices in Tsunami affected Aceh, Indonesia: Challenges and Opportunities

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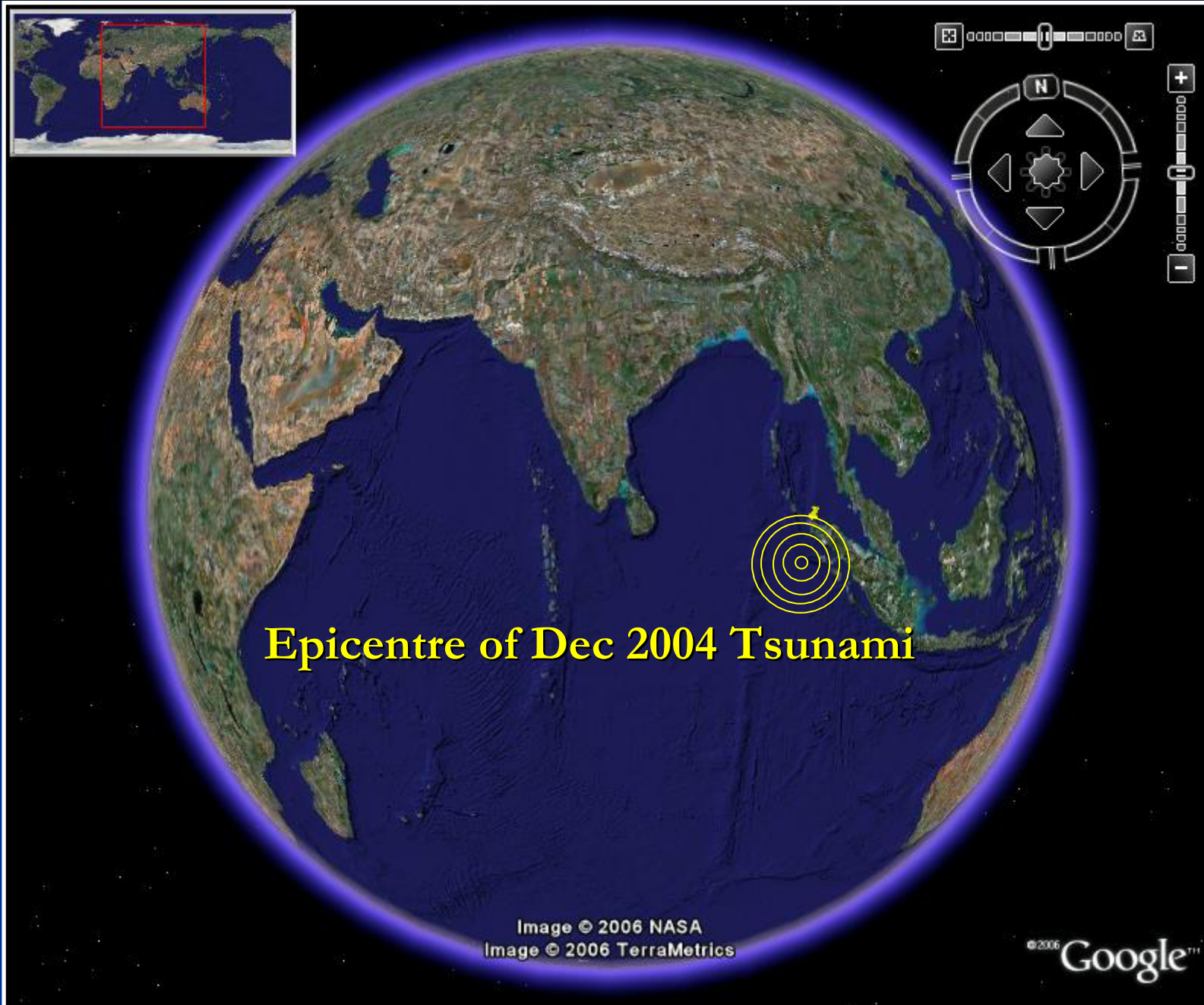
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Aceh: Worst Hit by 2004 Tsunami

- More than 175,000 people dead and lost.
- > 600,000 people lost home.
- Coastal infrastructure highly damaged.
- Nearly 1 million people went out of job.
- Loss of more than 10 Billion US\$
- Efforts by More than 300 Agencies (NGOs, GOs etc)
- 8 Billion US\$ Commitment from Donors





Epicentre of Dec 2004 Tsunami

Image © 2006 NASA
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Peace in Aceh

- Internal Political Conflict and blood shed for last 30 years.
- Helsinki Peace Agreement between Govt. of Indonesia and Aceh Rebels (GAM) on 16th August 2005.
- Aceh General Elections held on 11 December 2006.



Aquaculture in Aceh, Indonesia

- 47,000 ha brackish water farms
- Cage culture in Nias and Simuelue islands
- > 100,000 people depend on aquaculture livelihood
- Contributes to 4% of provincial GDP.
- Annual 56 Million US\$ farm gate business.
- Traditional farming system (low input – low output)
- Polyculture of *P. monodon* and milk fish (*Chanos chanos*).
- Also Grouper nursing, Crab cage culture.



Damage to aquaculture by Tsunami

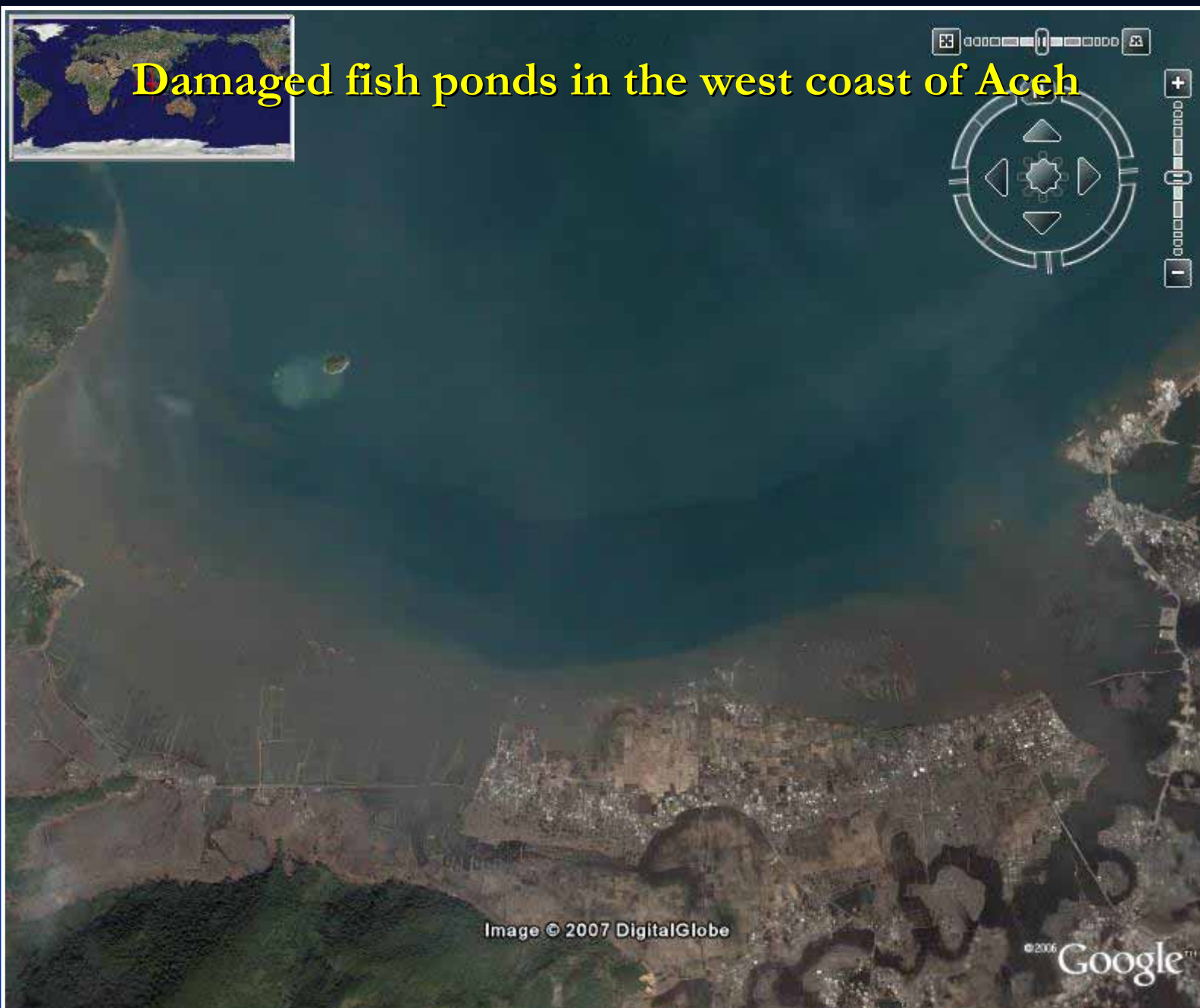
- 20,000 ha of 47,000 ha tambaks (fish/shrimp ponds) damaged in Aceh
- 193 of 223 shrimp hatcheries damaged
- Fish cages in Simulue and Nias Islands vanished.
- Government and private infrastructure including research and development centre (LOKA, Ujung Bate) damaged
- >50,000 people in aquaculture production and supply chain lost their livelihoods



Damaged fish ponds near Banda Aceh



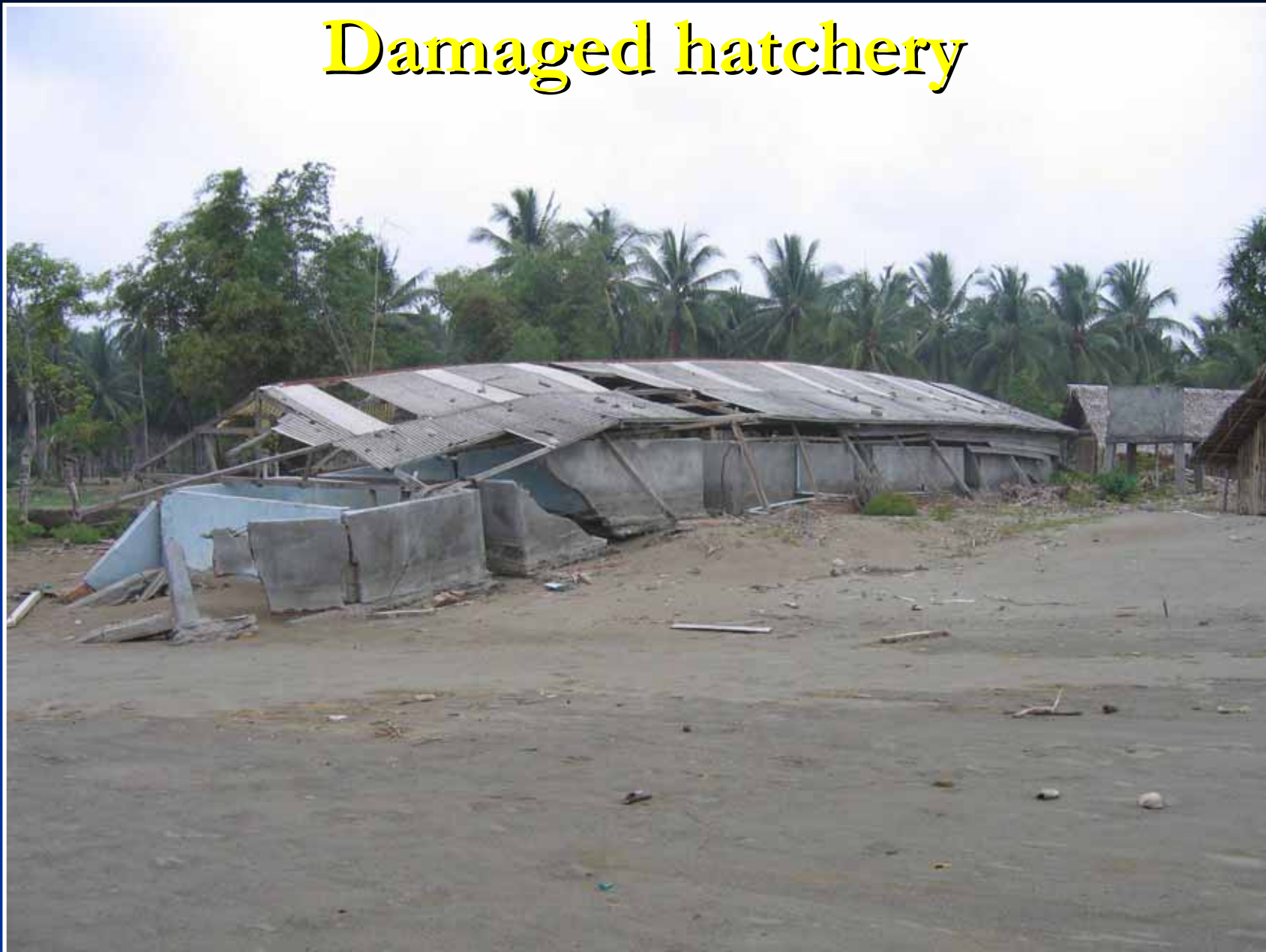
Damaged fish ponds in the west coast of Aceh



Damaged farm



Damaged hatchery



Damaged Govt. Research Facility



Aquaculture Rehabilitation Efforts

	Pre-tsunami	Tsunami damage	Rehabilitation completed / ongoing	Progress (%)
Farms	47,000 ha	20,000 ha	5,696 ha	28.5%
Shrimp hatcheries	223	193	46	23%



Donors / Agencies participating in aquaculture rehabilitation in Aceh

Donors / Agencies	Farm (ha)	Hatchery
BRR (Govt. of Indonesia)	2362	-
ADB	1338	7
FAO	797	10
UNDP	582	10
French Red Cross / BBAP	266	-
GTZ, Germany	218	-
Terre Des Hommes - Netherlands	76	13
World Relief	57	-
Aquaculture Without Frontiers	-	3
ACIAR / AusAid *	-	1*
Govt. of Singapore / SUPM Ladong	-	1
JICS, Japan	-	1
Total	5696	46



* ACIAR/AusAid rehabilitates laboratories and fin fish hatcheries of BBAP Ujung Batee

Aquaculture Rehabilitation Guidelines

- In line with the International Principles for Shrimp Farming (FAO/NACA/World Bank/WWF/UNEP - 2006).



Participatory approach



Farm Reconstruction



Agro-Input Distribution



Hatchery Rehabilitation



Farmer trainings



Workshops and Coordination Meetings



Information and Communication Centre

- Established at BBAP, Ujung Batee as a support to improve communication and effectively exchange information.
- V-sat Internet connection



Pilot Projects on BMP Promotion



Agencies and Project Period

- Next 3 Years
- WWF/NACA : 2006-2007
- IFC : 2007-2009
- FAO : 2007-2010
- ACIAR : 2006-2009

Plans

- Capacity Building in Government Agencies.
- Dissemination of BMPs through Extension Materials.
- On-farm Demonstration of BMPs.
- Facilitation of Farmer Groups for Cluster Management.
- Development of Farmer Service Centres
- Improvement of Shrimp Seed Quality through Hatchery Certification Initiatives.
- Link to Micro-credit
- Private Partnership to establish processing plants in Aceh.
- Promotion of Aceh Shrimp Brand in International Market.

Constraints and Challenges

- Slow Recovery from Tsunami Damage and Public Trauma
 - Focus on Shelter, Water, Food and Sanitation.
- Sense of High level of Insecurity in People due to History of Political Conflict.
- Grant Mood: People Opting for Quick Money.
- Traditional Mind-Set of Farmers : Hurdle for Quick Adaptation by farmers.
- Lack of Technical Capacity in local Man-Power : Hurdle for Efficient Extension.
- Lack of Investment and Extension support by Private Companies.
- Complex Farm Design and Lay-outs – many small-scale farms.
- Possible influx of *P. vannamei* with new diseases and increased risks for small farmers.

Opportunities and Way Forward

- Opportunities in Shrimp Brood-stock Development
- Sharing Regional Experiences from India and other countries in Bay of Bengal region
- Cooperation for Regional Networking of farmer groups
- Alliance in Marketing Initiatives

Thank you



Traditional Earthquake Resistant House in Aceh