



Ecosystem-Based Adaptation for *Intha* People in Myanmar

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Myanmar



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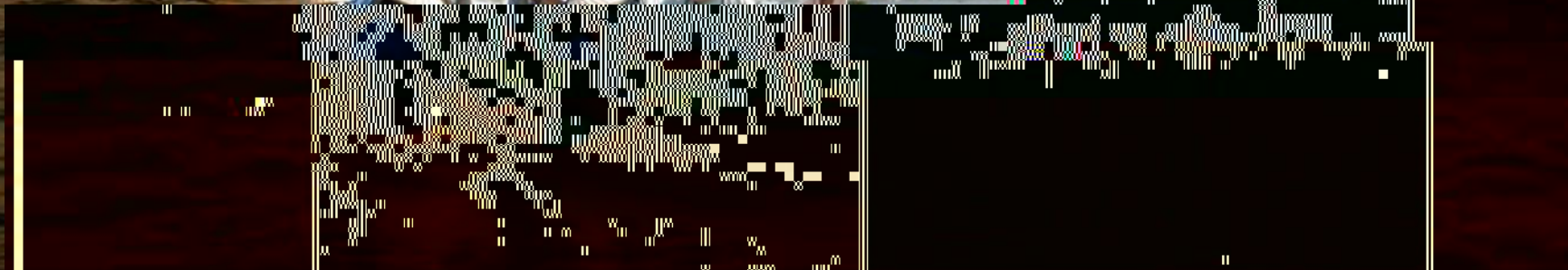
● Inle Lake is

- Second largest freshwater lake in Myanmar
- Located in Southern Shan State
- Depth ranging from 2m-6m
- Water Area 130-150 Square Kilometers
- Catchment area is about 3600 Sq-kilometers
- Altitudes about 900m above sea level
- Included in Protected Area System PAS of Myanmar
- Lists of UNESCO World Heritage Site
- Asean Cultural Heritage Site
- Potential RAMSAR (Conservation on Wetland Association) site
- Important Bird Area (IBA)





Inlay Lake is one of the famous tourist attraction places of Myanmar



We can See Fancy Goldfishes in Inlay lake



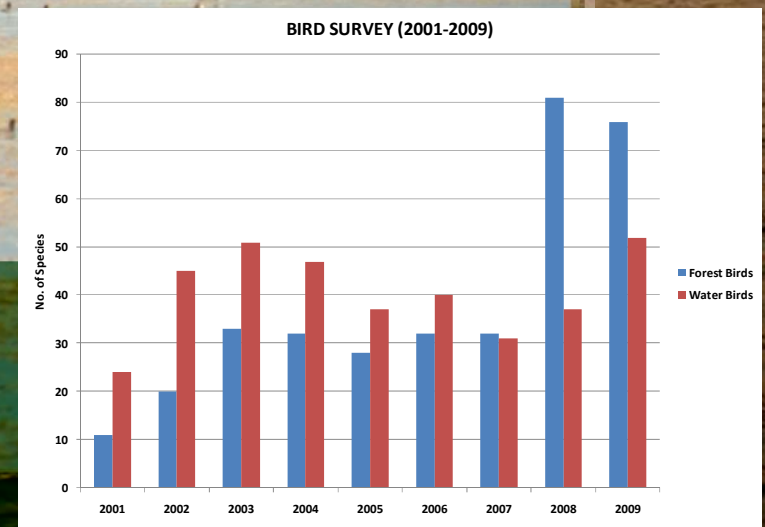
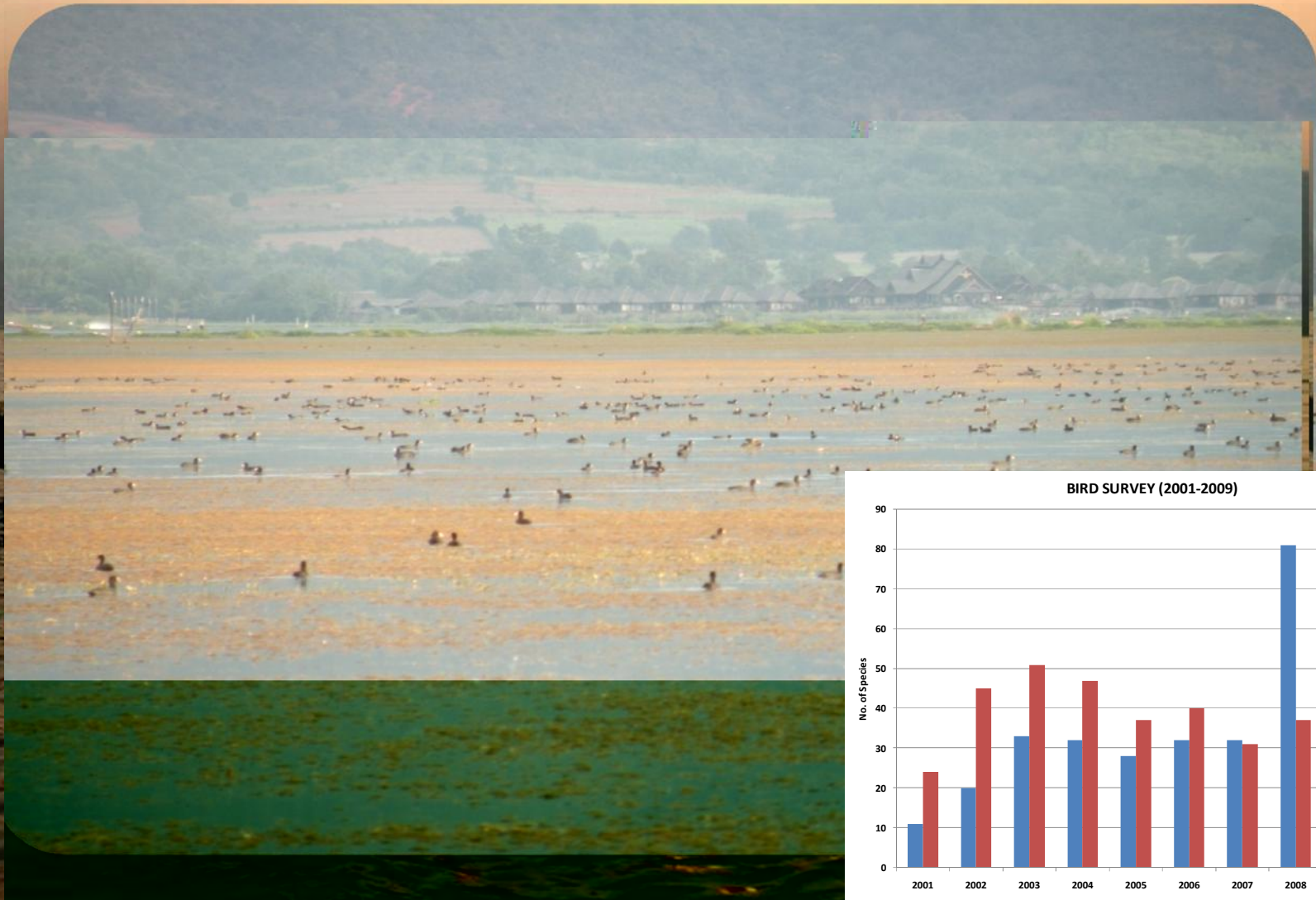


Habitat of IUCN Red-listed Species



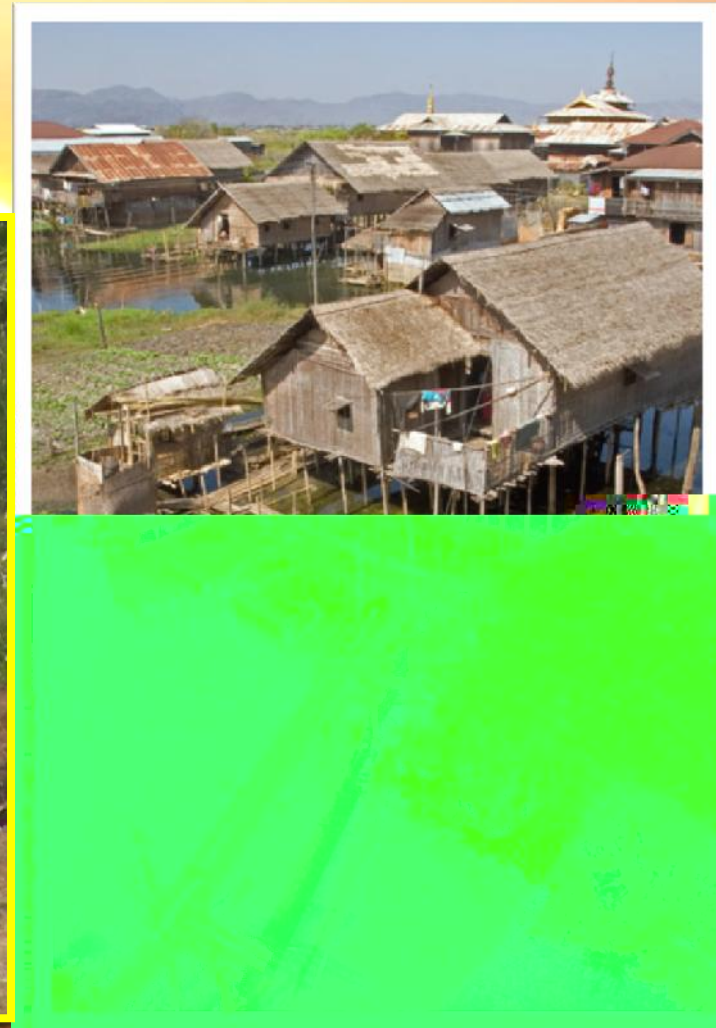


Inlay Lake is the Home of the Water-birds



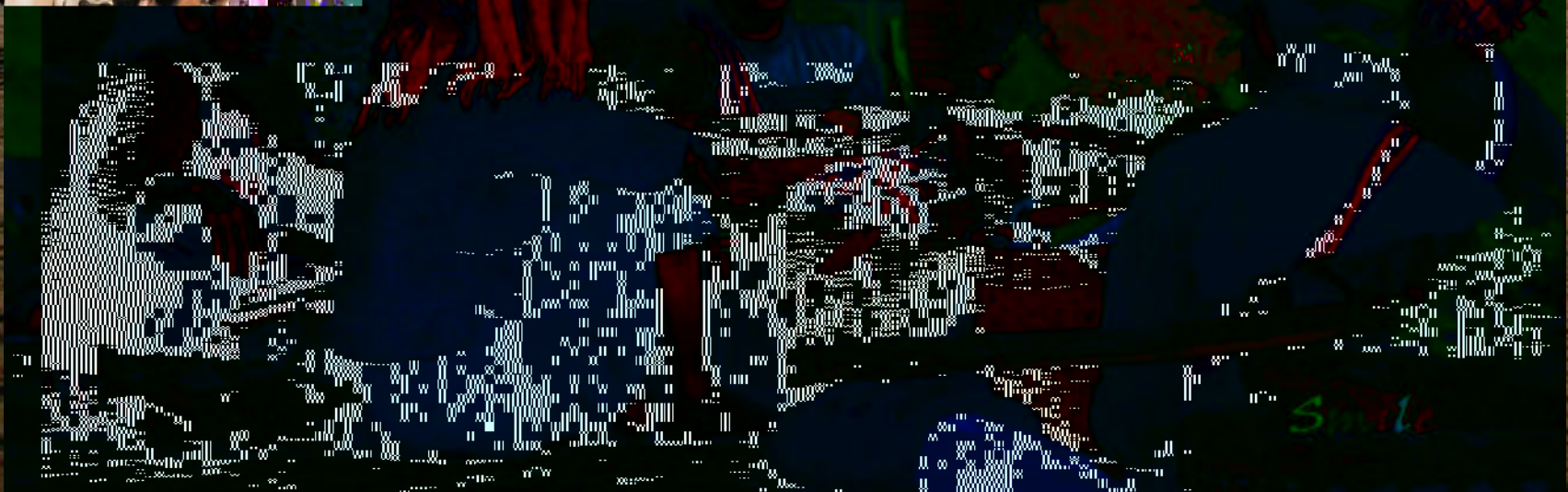


Humans and Animals Live Harmony in Inle lake





Intha People in Inle Lake





Intha People Has its Unique Culture





Floating Agriculture is Major Source of Income for Intha





Fishing is an Important Livelihood for Intha People





Phaungtawu Pagoda Festival in Inle Lake





Now Inlay Lake is facing with Climate Change Problems



07.03.2009



2010 April

Shrinkage of Water Area





Shallow Water in the Waterway





Health Problems

Sr.	Types of Sample	May, 1995 (Floating Garden Season)			Jan, 1996 (Floating Garden Villages)			Jan, 1996 (No Floating Garden Villages)		
		No. of Samples	Pollutant Samples	%	No. of Samples	Pollutant Samples	%	No. of Samples	Pollutant Samples	%
1.	Blood	120	29	24.3	501	38	7.6	321	17	5.3
2.	Water	7	4	57.1	7	4	57.1	7	1	14.3
3.	Weed	3	1	33.3	3	1	33.3	3	1	33.3
4.	Silt	3	3	100	3	3	100	3	3	100
5.	Vegetable	5	1	20	5	1	20	-	-	-

Remark: Numbers in *Blue* = no floating garden village

Threaten on Native Species due to Changes of Ecosystem



● *Cyprinus Intha*



Occurrence of Invasive Species



Causes of Climate Change





Shifting Cultivation in Watershed Area





High Fuel-wood Consumption



ကေတူး(အင်းလေး)



Soil Deteriorating in Hilly Region





Chemical fertilizers and Industrial waste



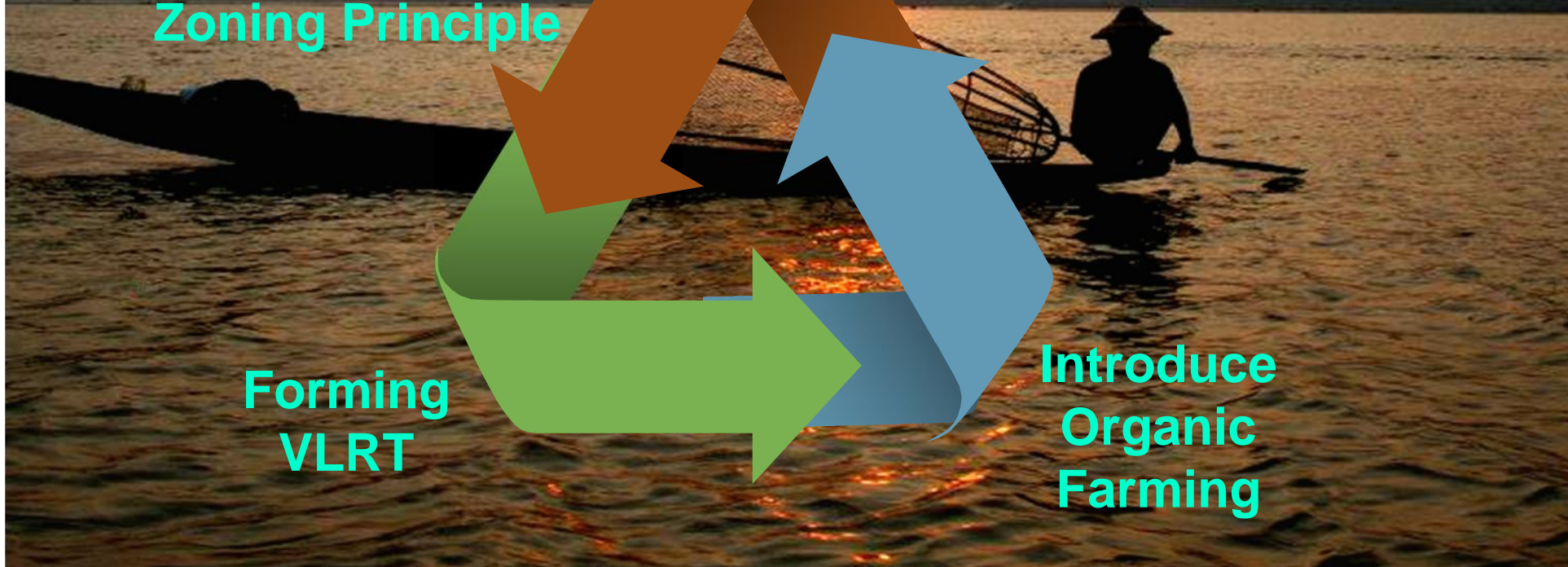


*Integrated multi-stakeholder ecosystem framework
for Inle Lake (Myanmar) based on Zoning
principles with Integration of Eco-restoration and
Agro-farming Practices)*

Implement
Zoning Principle

Forming
VLRT

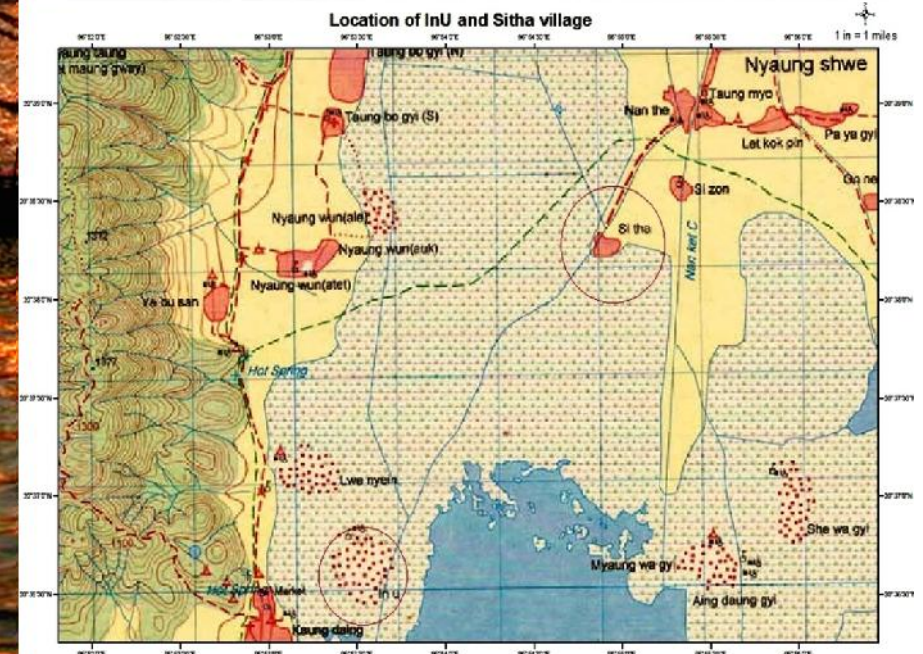
Introduce
Organic
Farming



Participatory Mapping for Intha to formulate Zoning Plan

- Take assessment of villagers' needs
- Formulate their ideas to conserve lake environment
- Sketch on the proposed zones in the map
- Discuss briefly advantages and disadvantages of proposed zone
- Decide draft plan of zoning area and plan
- Propose VLRT team-members and their duties
- Laid down plan for way forwards

Map of 2 Project Sites



● Demarcation of Zoning Principle

- The proposed zoning area was demarcated in the 50,000 scale UTM map and covered Sitha and In-U villages.

○ Mapping of the Zone

- The zoning Map indicated the following zones allowing different degree of activities:

- Core Conservation Zone Strict bio-diversity conservation
- Buffer Zone Limited activities allowed
- Sustainable Use Zone Sustainable resources use (fishing, agro-farming)
- General use Zone
- Village Use Zone



Forming Two Village Lake Restoration Team VLRT



● Participation of *Intha* People

- Designed an action plan
- Designing environment friendly waste management
- Plant harvesting to clean up parts of the lake and the waterways
- Patrolling for poaching and illegal extraction of resources
- Conducting environmental education activities





● Introduce Organic Farming for *Intha* People





Main Impacts for *Intha* People



Increased Sense of Ownership of Local People

- The main issue of the Inle lake is the scarcity of natural resources due to mismanagement.
- All of the natural resources has been also threatened by the pressure of high population.
- Zoning plan can create proper conservation of lake area and maintain natural resources for sustainable production.
- Zoning plan will be maintained lake eco-system and ensured to food security of the people.
- Introducing zoning plan is not only useful to maintain lake eco-system but also for the villagers to protect their neighboring area from encroachment of other people.

Improved Teamwork to participate

- Traditionally they are grouped for dealing of their social ceremony like donation period.
- There has been no official demarcation in the area to make fishing in previous time.
- There are a lot of intruders of fishermen and bird-hunters in their area.
- They are eager to maintain their land for long-term use of resources.
- The villagers were active to participate in conserving their surrounding area.
- Now they have a chance to manage their land with sufficient group of people.
- They also have experiences to conserve their natural environment with VLRT group.

Initiated to healthy food Production

- They traditionally know that the using of chemical fertilizer is the best method to increase tomato production.
- Now they know that organic farming is the best way to create healthy food for their long-lives.
- Some of them now try to produce eco-food for their daily consumption.
- It is the best initiative for healthy environment.



Thank you

