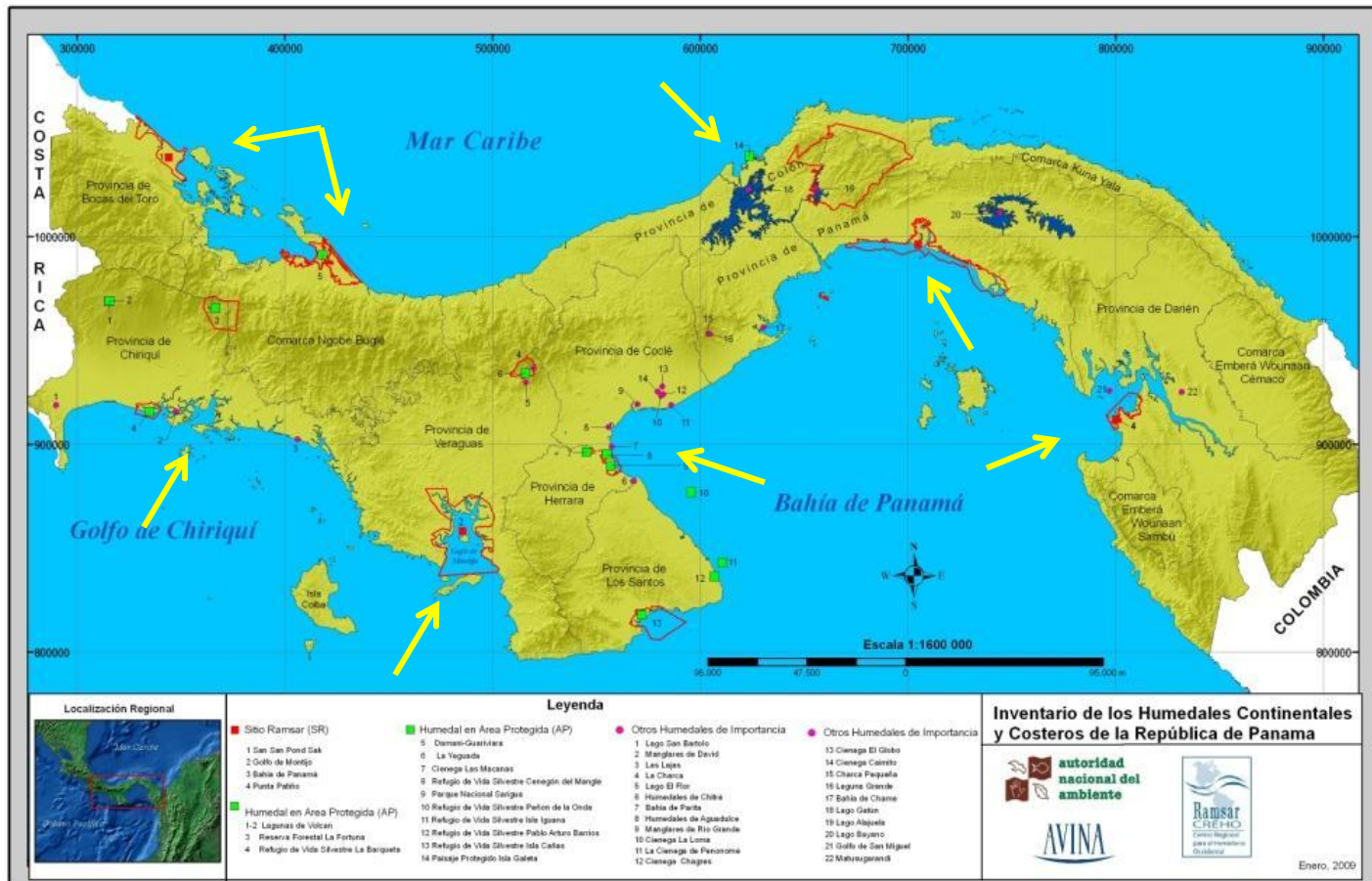


Integration of Adaptation and Mitigation: piloting from Panama and beyond

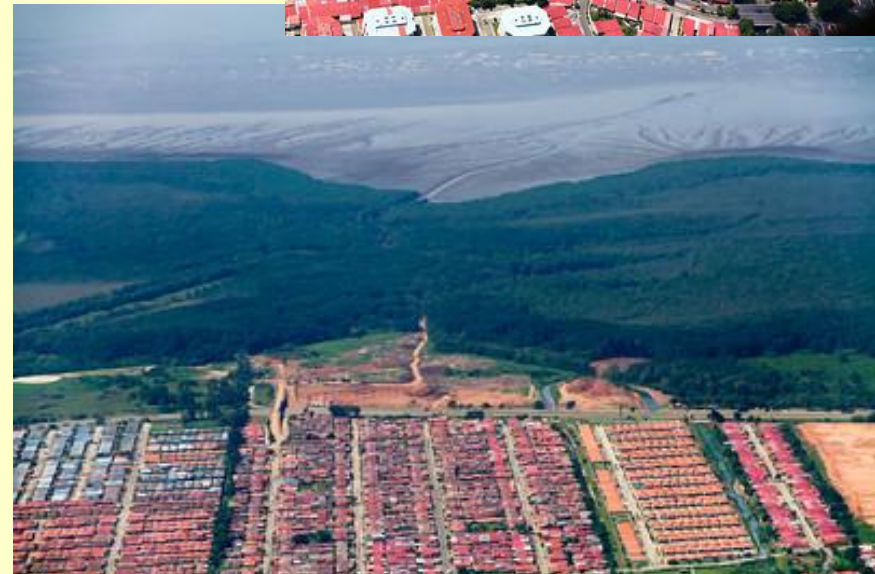
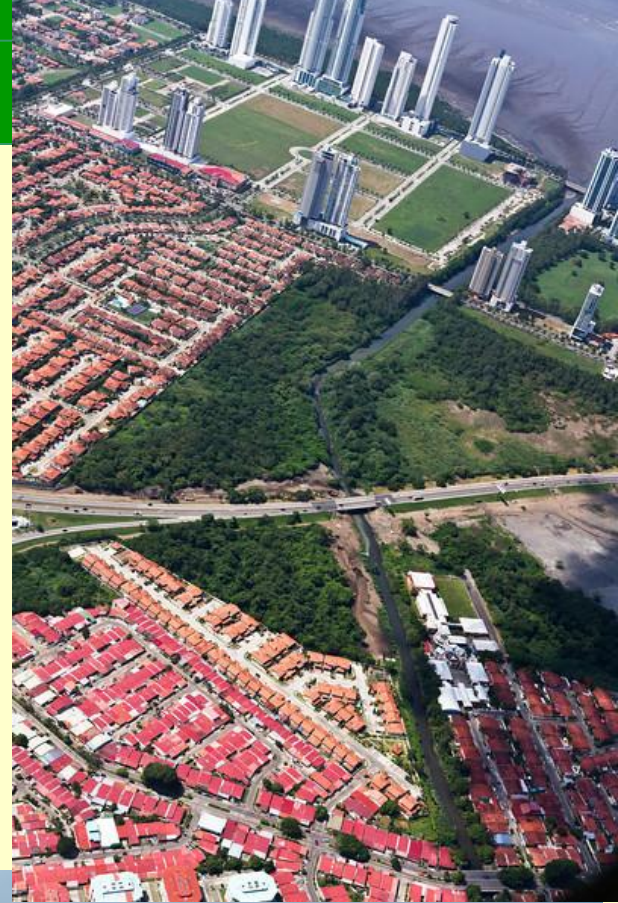


Blue Carbon Policy Meeting, Guayaquil, Ecuador – 10 July 2012

Priority coastal wetlands in Panama



- Approximately 1,700 km² of mangroves in Panama; only about 70,000ha in Protected Areas System
- Approximate rate of loss: 920 ha/yr (ANAM, 2000)



All photos © Panama Audubon Society
/Karl Kauffman

Mitigation processes in Panama –

- Country currently developing UN-REDD National Program
- Pilot country for Common Approach under Forest Carbon Partnership (FCPF) Facility
- UNDP acts as Delivery Partner
- Extensive REDD+ capacity building and consultation activities since 2009 – ongoing consultations with indigenous peoples (administering most forested areas in the country)
- So where do mangroves and coastal ecosystems fit so far?

Coastal ecosystems and mitigation –

- ARAP (aquatic resources authority) is responsible for management of marine and coastal natural resources (including mangroves) OUTSIDE protected area boundaries.
- ANAM (environment authority) is responsible for coordinating and implementing national strategies related to C.C.. And oversees management of mangroves WITHIN protected areas.
- Currently, no explicit consideration of coastal ecosystems in UN-REDD activities
- Opportunity for piloting actions and initiating policy reforms for full incorporation into CC programs

Coastal ecosystems and mitigation –

- UNDP Panama, ANAM, ARAP, TNC, WI currently developing proposal to demonstrate the contribution that mangrove ecosystems make to climate change risk management (looking at both adaptation and mitigation)
- Pilot areas in Gulf of Chiriquí (western Pacific) for restoration activities, mangrove mapping and assessment of ecosystem services (incl. carbon storage)
- Cross-learning with other mangrove sites in Panama, both in and out of Protected Areas system
- As national REDD “matures” mangrove baseline info and piloted measures are fed into process

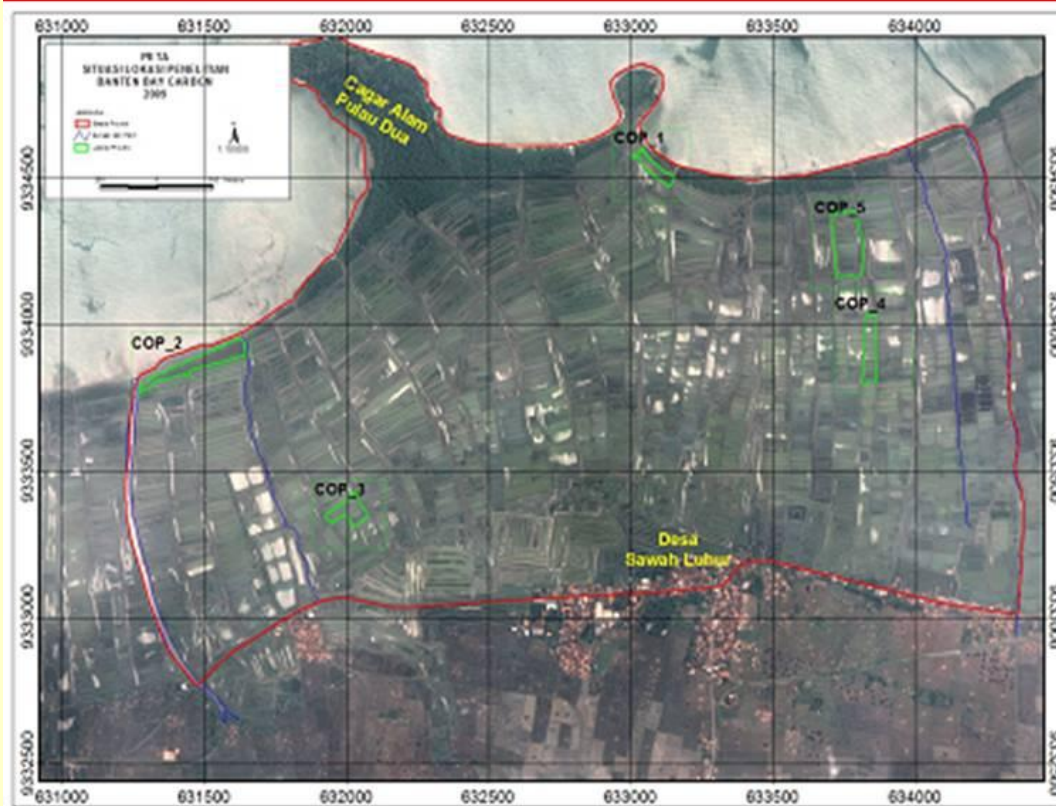
Globally...

- WI strives to pilot experiences on optimization of services in coastal ecosystems
- Opportunity to benchmark scientific knowledge on below-ground carbon from peat experience (and incidence on policy)
- WI Coastal Resilience “Community of Practice” - Panama, Senegal, Guinea-Bissau, Kenya, NL, India, Malaysia, Indonesia, China, Japan



Example from Indonesia...

Case study of Carbon Offset Project Banten Bay, Serang 2009 - 2023



Land Code & its local name	Area (m2)
BB-COP 1 (Pulau 1)	4,412
BB-COP 2 (Zona penyangga)	14,860
BB-COP 3 (Si Daun)	7,992
BB-COP 4 (Si Ambon)	9,745
BB-COP 5 (Si Bom Besar)	17,700
Total	54,709

Example from Indonesia...

How much carbon sequestered within 1 year in 5.5 ha of BB COP lands ??

Total amount of carbon sequestered within Des 2009 - Des 2010						
Location	No. Survive	ww (gr/ind)	Total WW (kg)	Total dw (kg)	Total C (kg)	total species planted
BB COP 1	995	149	148	51.89	20.24	1 sp
BB COP 2	21,186	200-800	5,534	1,936.83	755.36	8 sp
BB COP3	8,162	284-508	4,109	1,438.27	560.92	2 sp
BB COP 4	4,594	135-215	852	298.27	116.32	3 sp
BB COP 5	12,688	47-215	2,129	745.15	290.61	3 sp
				Total carbon (kg)	1,743.46	

FINDINGS @@@@:

Each plant individual growth differently (different in No. of leaves, in height, in wet weight)

R stylosa grow faster then R mucronata faster then R a piculata (192 > 168 > 73 gr/ind)

Carbon stored in BB COP 2 is higher due to earlier plnated in 2008

Amount of CO2 sequestered = 6,4 ton CO2

assume 5 C-organik = 39% and dry weight 39% from wet weight

IF 1 Car spent 2 liter a day in 1 year will approx. emit 1825 kg CO2.....
So how many trees should you planted to offset your emission ??

DRR

CREATE ENVIRONMENTALLY FRIENDLY PONDS

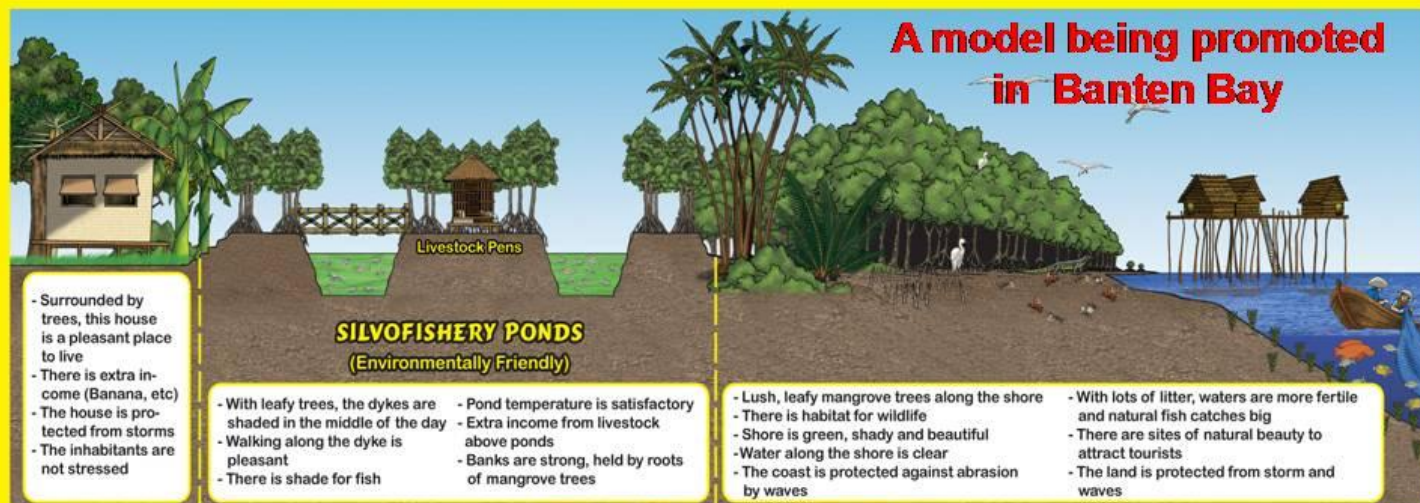
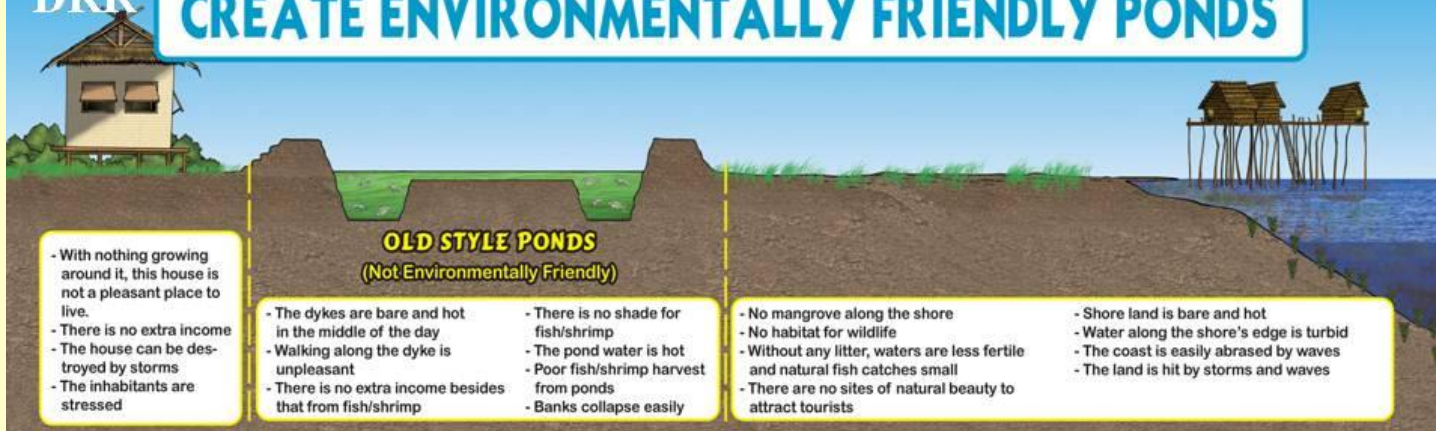
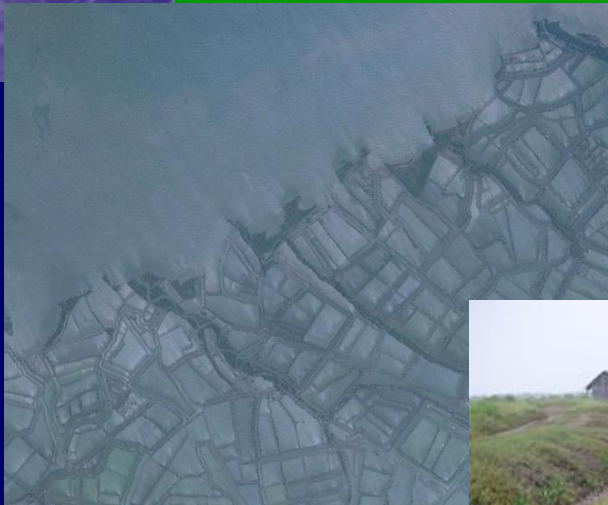


Illustration: Giti & Akko, Computer Graphics: Dita, Design: Akko (swire_design@yahoo.com)

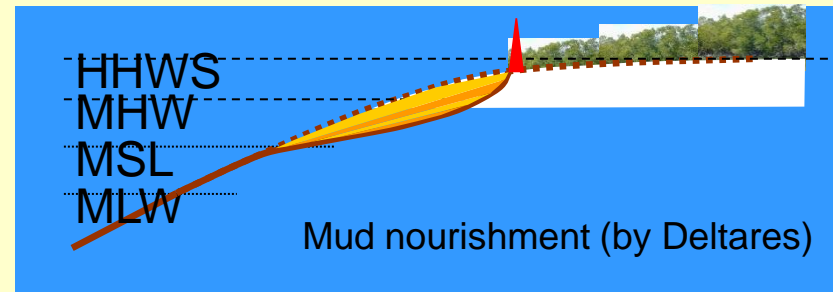
Sylvo-fishery: DRR + Livelihood + Mitigate CC



Mangrove Capital project...

- Seeks to replicate BB experience in other sites in Indonesia
- Designing new strategies for erosion prevention, coastal protection, use of hybrid engineering
- Document mangrove services – fish nursery, DRR, aquaculture productivity, carbon sequestration
- Create enabling environment – locally/nationally

→ National “custom” experiences shared and “put in common” across the WI global network and with partners



Gracias!



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