

LEG NAPA Implementation Workshop,
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Supporting Adaptation To Climate Change – focus on Coastal Adaptation

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Risks posed to MDGs by Climate Change

Millennium Development Goals	CC Risks
 <p>1</p> <p>ERADICATE EXTREME POVERTY AND HUNGER</p> <p>Eradicate extreme poverty and hunger</p>	<p>Depleted livelihood assets, reduced economic growth, and undermined food security.</p>
 <p>2</p> <p>ACHIEVE UNIVERSAL PRIMARY EDUCATION</p> <p>Achieve universal primary education</p>	<p>Reduced ability of children to participate in full-time education by loss of infrastructure, livelihoods (forcing children to work), and displaced families.</p>
 <p>3</p> <p>PROMOTE GENDER EQUALITY AND EMPOWER WOMEN</p> <p>Promote gender equality and empower women</p>	<p>Additional burdens on women's health and time to participate in decision-making and income-generating activities.</p>
 <p>4</p> <p>5</p> <p>6</p> <p>REDUCE CHILD MORTALITY; IMPROVE MATERNAL HEALTH; COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES</p> <p>Reduce child mortality; Improve maternal health; Combat HIV/AIDS, malaria and other diseases</p>	<p>Greater prevalence of vector- and water-borne diseases, heat-related mortality. Declining food security, maternal health and availability of potable water.</p>
 <p>7</p> <p>ENSURE ENVIRONMENTAL SUSTAINABILITY</p> <p>Ensure environmental sustainability</p>	<p>Negatively impacted natural resources and productive ecosystems.</p>

Leveraging resources and partnerships to support countries

Country	LDCF/SCCF (US\$)	AAP (US\$)
Niger	3.6	3
Rwanda*	3.1	3
Lesotho**	2.5	3
Burkina Faso	3	3
Tanzania	UNEP	3
Mozambique	5	3
Congo	3	3
Ethiopia	1	3
Sao Tome and	WB/LDCF	3
Malawi	AFDB	3

Note:

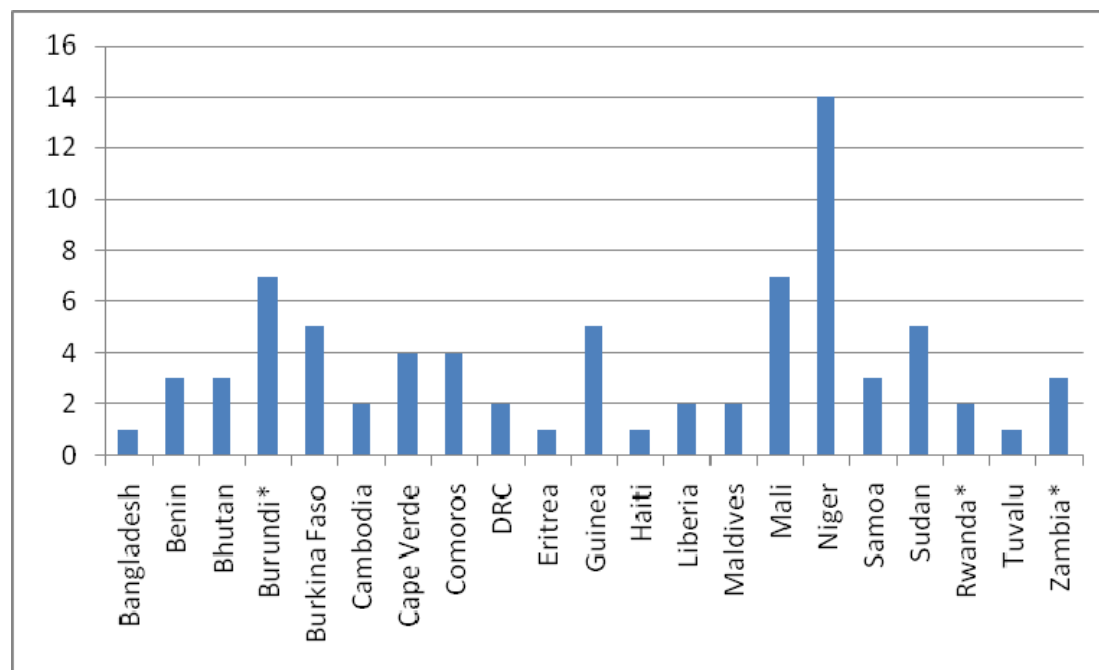
**With UNEP*

** *Awaiting Govt Review and Endorsement*

Promoting country drivenness and ownership

- UNDP is supporting the implementation of 66 NAPA priorities through **21 LDCF projects**

Number of NAPA Priorities
Addressed with UNDP-GEF support



- Additional NAPA priorities addressed through **Africa Adaptation Programme**

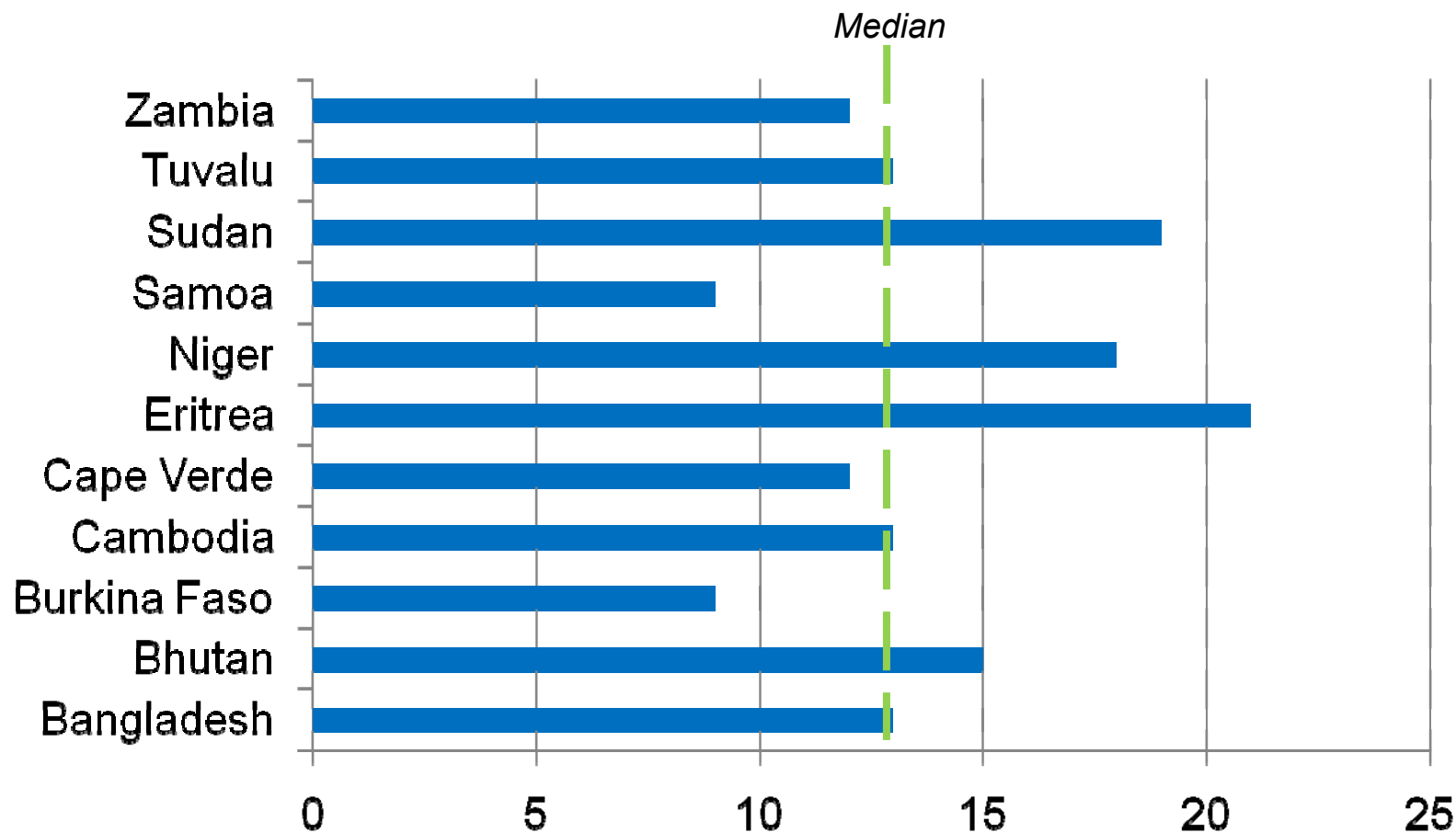
Status of LDCF NAPA Follow -Up Projects

#	Year	Country	Status
1	2008	Bhutan	Under Implementation
2	2008	Bangladesh	Under Implementation
3	2009	Samoa	Under Implementation
4	2009	Cambodia	CEO Endorsed (Apr 09); Govt Signed (Sept 09); Implementation (Oct 09)
5	2009	Burkina Faso	Under Implementation
6	2009	Niger	Under Implementation
7	2009	Cape Verde	CEO Endorsed (Sept 3, 2009); Implementation (Oct 09)
8	2009	Eritrea	CEO Endorsed (Aug 5, 2009)
9	2009	Sudan	CEO Endorsed (Sept 18, 2009)
10	2009	Tuvalu	Submitted to GEFSEC; Review comments; Expected Endorsement by end-Oct 2009
11	2009	Zambia	Submitted to GEFSEC; Review comments; Expected Endorsement by end-Oct 2009

#	Year	Country	Status
12	2009	Benin	Submission to GEFSEC in Oct 2009
13	2009	Dem. Republic of Congo	Submission to GEFSEC in Oct 2009
14	2009	Guinea	Submission to GEFSEC in Oct 2009
15	2009	Maldives	Submission to GEFSEC in Oct 2009
16	2009	Mali	Submission to GEFSEC in Dec 2009
17	2009	Haiti	Submission to GEFSEC in Oct 2009
18	2009	Rwanda (UNEP/UNDP)	Submission to GEFSEC in Oct 2009
19	2009	Liberia	March 2010
20	2010	Comoros	April 2010
21	2010	Burundi	Mid-2010

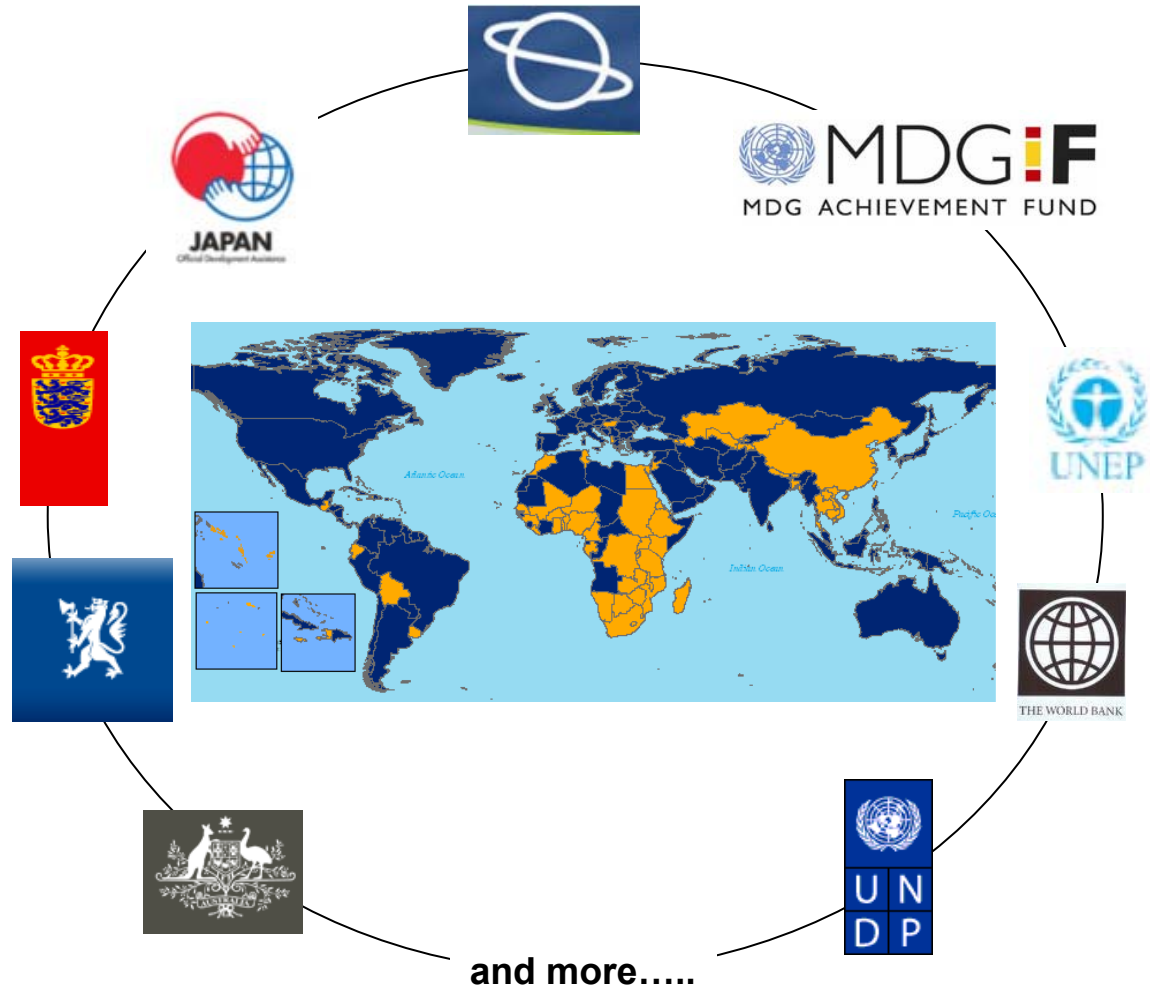
Time Taken to Formulate a Project?

Average Number of Months between
GEFSEC PIF/PPG Approval and Submission for CEO Endorsement





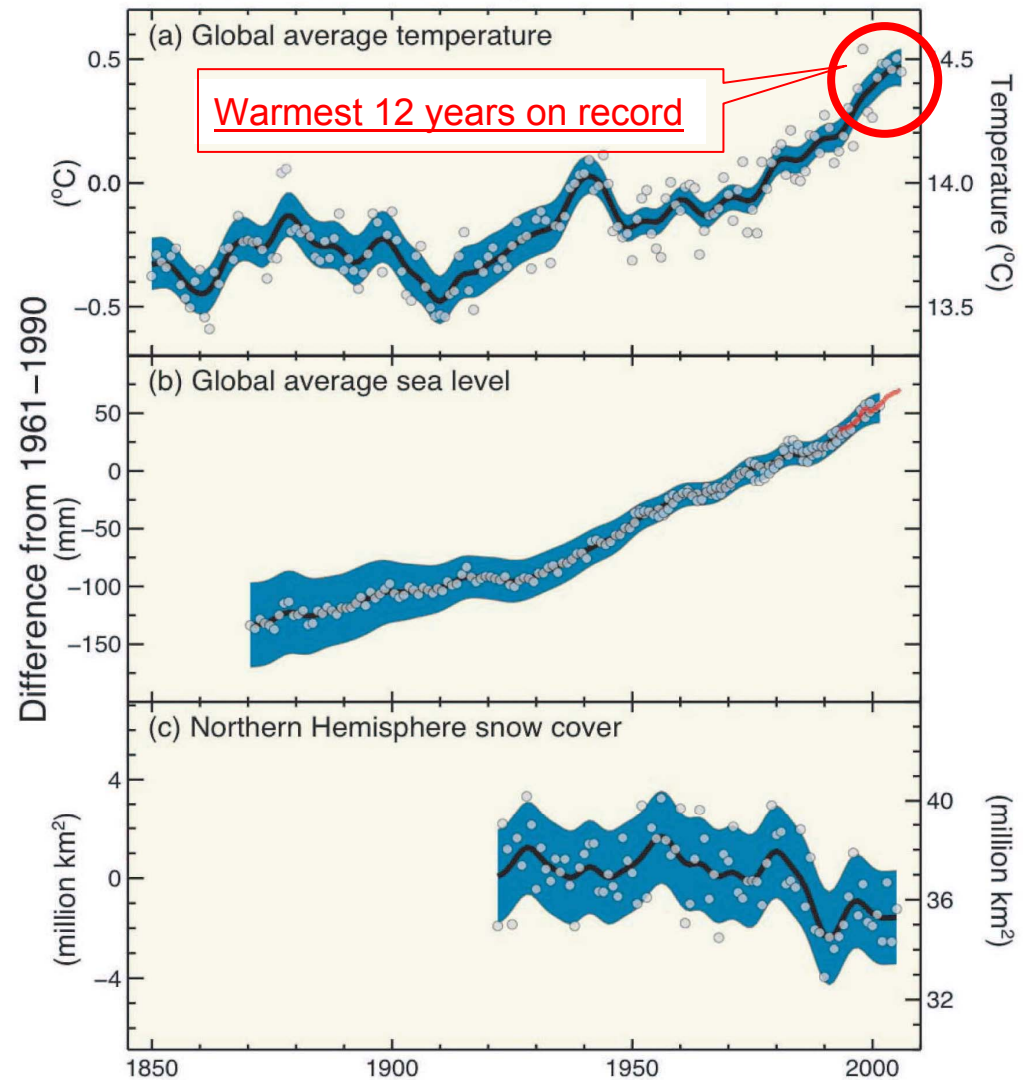
Partnerships are critical for UNDP



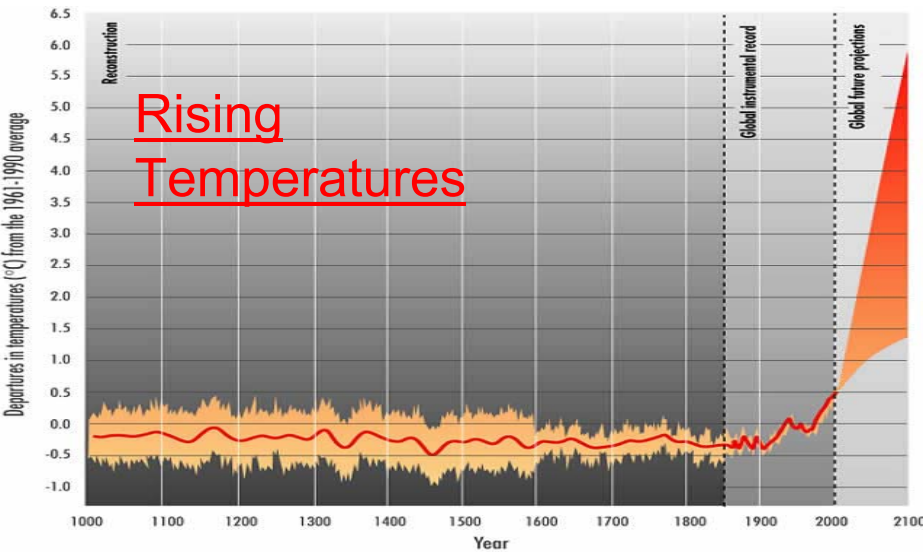
FACT # 1: Global Temperatures are rising

“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising of the global mean sea level.”
(IPCC, 2007)

Changes in temperature, sea level and northern hemisphere snow cover
[source: IPCC, 2007]



FACT # 2: Global Warming impacts on human and economic development



Changes in:

- Precipitation
- Soil evaporation, evapotranspiration
- Physical geography
- Sea level
- Frequency & intensity of extreme weather
- Ecosystem distribution & composition

PUBLIC HEALTH

AGRICULTURE

FORESTRY

WATER RESOURCES

COASTAL SYSTEMS

ECOSYSTEM SERVICES



Infectious, respiratory, water-borne, vector-borne diseases, heat

Less predictability, changing yields, changing irrigation demand, pest infestations

Forest composition, range, health & productivity

More variability in water supply, changes in water Quality/ distribution, competition

Erosion, inundation, salinisation, stress on mangroves, marshes, wetlands

Loss of habitat & species, migration

IPCC 4th Assessment Report: Africa conclusions

- By 2020, between 75 and 250 million people exposed to an increase of water stress due to climate change;
- Yields from rain-fed agriculture reduced by up to 50% by 2020;
- 12-15% of the existing agricultural land in the Nile delta lost due to sea level rise;
- Decreasing fisheries resources in the large lakes due to temperature increases;
- By 2100, agricultural losses of between 2 and 7% of GDP in parts of the Sahara.

Global Climate Change - Coasts

This affects coastal areas in various ways, for example:

- Storms and changing climate leading to floods and damage;
- Rising sea levels. Higher temperatures cause ocean volume to expand, and melting glaciers and ice caps add more water;
- Changes in fish populations and distribution.

Global Climate Change - Coasts

- Globally, the average sea level rose by 10 to 20 cm during the 20th century;
- An additional increase of 18 to 59 cm is expected by the year 2100.

Global Climate Change - Coasts

The IPCC, concluded :

- Coasts are already experiencing the adverse consequences of climate change and sea-level rise.
- Coasts will be exposed to increasing risks and erosion over coming decades.
- The impacts are made worse by increasing human-induced pressures.
- Impacts are likely to be most extreme for poor countries and poor communities.
- West Africa considered especially vulnerable.

Adaptation Measures

- Beach and dune nourishment - generally repeatedly bringing in sands from another place
- Offshore reefs (low breakwaters)
- Set back: undeveloped areas (basically, create a buffer zone and allow it to be eroded slowly)
- Controlled abandonment. Where losses are not too quick. Means basically relocation of communities
- Breakwaters
- Seawall
- Building Standards
- Structural Shoreline Stabilisation (Management practice involving strategic placement of plants, stones, sand fill and other materials to achieve the dual goal of long-term protection/restoration/enhancement of shoreline habitats and the maintenance of natural processes)

Adaptation Measures (cont'd)

Others:

- Awareness raising
- Wetland protection
- ICZM
- Payments For Ecological Services (Financial instruments under which beneficiaries of ecosystem services compensate the suppliers as a means to fund sustainable environmental management policies and actions)

And for fisheries:

- Better studies of situation
- Fewer permits
- Protection of spawning areas



Climate change along the Liberian coast

Hotel Africa, Montserrado



Hotel Africa, Montserrado



West Point, Monrovia



Buchanan



Robertsport



Robertsport



The causes

- Climate change is a major cause of these, but there are other contributing factors:
 - Sand-mining;
 - Buildings in wrong places;
 - population growth;
 - Clearing mangroves;
 - etc...



The response



LDCF in Liberia: The Project

Title: Enhancing resilience of vulnerable coastal areas to climate change risks in Liberia;

Project Objective: To reduce vulnerability and build resilience of local communities and socio-economic sectors to the additional threats of climate change in Liberia's low-elevation coastal zones

Project components

1. Capacity development:

- Relevant national coastal and land use and other policies introduced and/or revised on the basis of climate change scenario planning and impacts economic assessments.
- National awareness building and training programmes to enable decision makers and stakeholders to understand and manage climate change related coastal risks.
- Cost-effective standards to manage climate change risks integrated into ICZM and coastal development policies/programs.
- Master Plan for urban coastal cities (Monrovia and Buchanan), zoning regulations and land-use plans reviewed and amended to incorporate climate risk management needs.
- Proposal for revising national sectoral budgets to address climate change threats in coastal zones (based on thorough economic valuation of impacts) developed.

Project components

2. Demonstration measures to reduce vulnerability

- An environmentally-friendly and cost-effective breakwater system for Monrovia coastal area (with co-financing).
- Soft systems to reduce beach erosion induced by sea-level rise implemented in selected coastal areas (Monrovia or Buchanan).
- Mangroves systems and coastal natural “buffer zones” restored and maintained to withstand climate-induced pressures).
- Early warning system for informing national planners and coastal communities on climate change-related coastal risks established (with co-financing).
- A strategic framework developed for climate-resilient alternative livelihood options in selected priority areas (to be refined).

Project components

3. Knowledge management and up-scaling.

- This includes toolkits, guidance materials for government and municipal agencies, information dissemination workshops for policy makers, a project website, etc.

Project Component – pilot site

- There will be max. 3 pilot sites. At each pilot site, over 1-2 years, the project will ‘pilot’ a new adaptation approach in Liberia, and ‘demonstrate’ to government and international community how to succeed;

Pilot site will include both ‘soft’ and ‘hard’ measures;

Possibilities include:

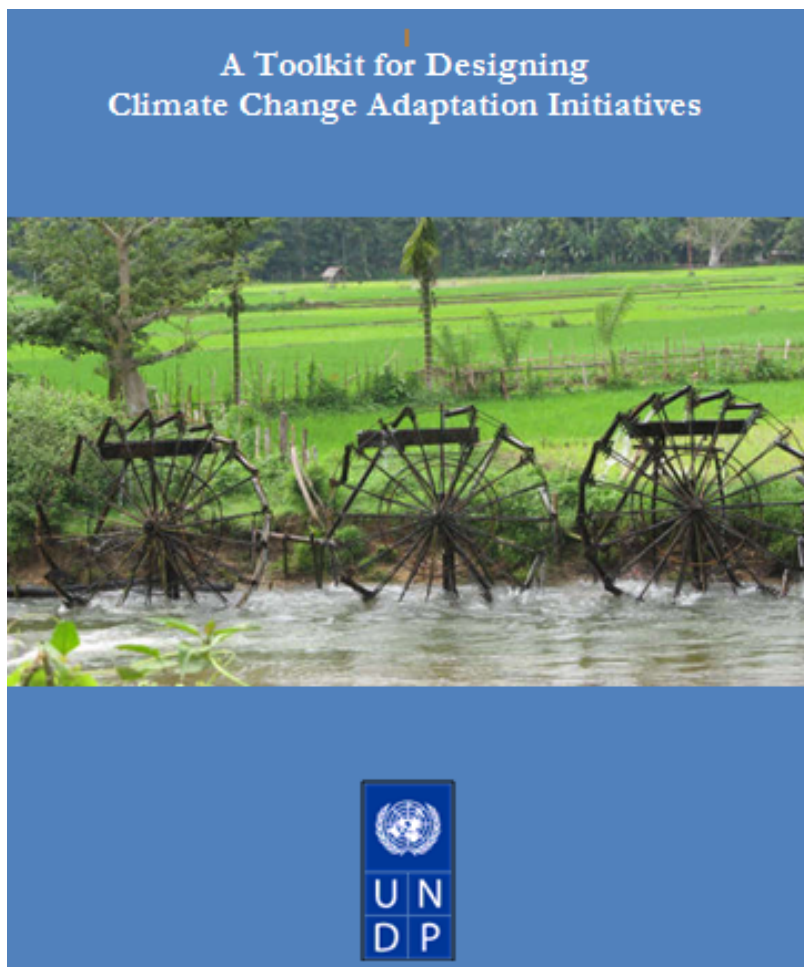
- Training, awareness raising, planning, data collection and analysis,
- Help to protect the coast or to stop/discourage bad practices (sand mining, mangrove destruction);
- There must be assurance that local government and community can continue afterwards and can maintain the investments (sustainability).

Project component – national level

Possibilities include:

- Training, capacity building;
- Integrating climate change adaptation into national planning;
- Data collection;
- Integrated coastal planning and management;
- Awareness raising;
- Assistance in mobilising additional funds.

Supporting Countries to Access Resources for Adaptation



- ***Guidance on Key Steps***
- ***Checklists***
- ***Training Power Point Slides***

***English version to be released
in **December 2009*****

***Will be available in French,
Spanish***



UNDP/GEF Adaptation Learning Mechanism

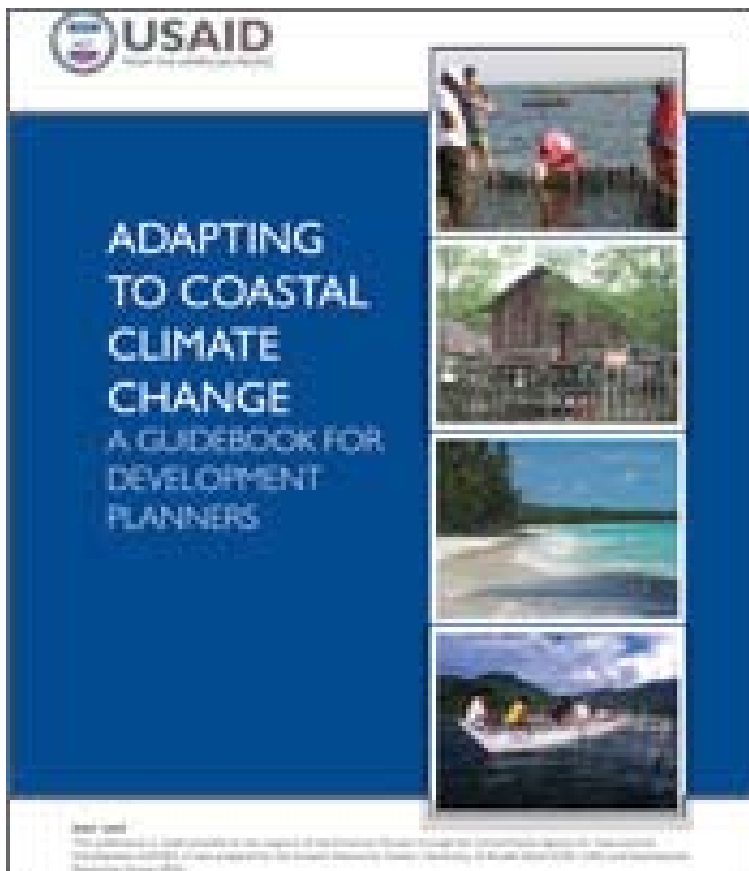
- knowledge-sharing platform on integrating adaptation to climate change into development planning
- Provide practical guidance and tools to meet stakeholders' needs
- <http://www.adaptationlearning.net/>

1,290 Resources

RESOURCE	THEME	TYPE	DATE
1. Dorec id metus. Ut nibh nisi, mattis non, mattis et, tempus eg dui.	Coastal Zone Management	Experiences	MAR 23 2009
2. Integer quis metus eget neque hendrerit Sincidunt.	Disaster Risk Management	Development Programming	FEB 27 2009
3. Duis nulla mauris, cursus eu, commodo vitae, ornare et, massa.	Public Health	Training Materials	FEB 25 2009
4. Etiam aliquam, ut ut mattis pharetra, massa eros luctus dolor.	Agriculture/Food	Guidance and Tools	FEB 11 2009
5. Nam placerat. Nullam massa augue, suscipit in.	Disaster Risk Management	Experiences	JAN 30 2009
6. Fusce mattis, odio ut eleifend luctus, erat orci cursus massa.	Water resources	Climate Data	JAN 10 2009
7. Nam vel lorem.	Coastal	Training Materials	OCT 20 2008
8. Dorec scelerisque proerra libero. Suspendisse tristique odio.	Coastal	Development Programming	OCT 16 2008
9. Praesent varius, eros eget rutrum tristique.	Coastal Zone Management	Impact Assessments	OCT 12 2008
10. Nam lacinia sem at risus gravida fringilla. In dignissim heit.	Agriculture/Food	National Assessments	NOV 26 2008

Outcomes

- 1. Adaptation practices** – what can be done to adapt to climate change on the ground?
- 2. Integration of climate change** risks and adaptation into development policy, planning and operations – how can policies and plans support adaptation over time?
- 3. Capacity building** – how can people be better assisted in becoming equipped for adapting to climate change?



http://www.usaid.gov/our_work/cross-cutting_programs/water/docs/coastal_adaptation/adapting_to_coastal_climate_change.pdf

Additional Resources

- **Country Adaptation Profiles** <http://country-profiles.geog.ox.ac.uk/#documentation>
- **Guidelines for developing adaptation programmes** www.undp.org/gef/adaptation.
- **Thematic Areas Papers on Adaptation Programming** <http://www.undp.org/climatechange/adapt/program.html>
- **Monitoring and Evaluation Framework for Adaptation** <http://www.undp.org/climatechange/adapt/program.html>
- **The Adaptation Policy Framework (APF)** <http://www.undp.org/climatechange/adapt/apf.html>
- **Adaptation resource library** www.undp.org/gef/adaptation



THANK

YOU!

