Global Technology Needs Assessment Project

Implemented by UNEP
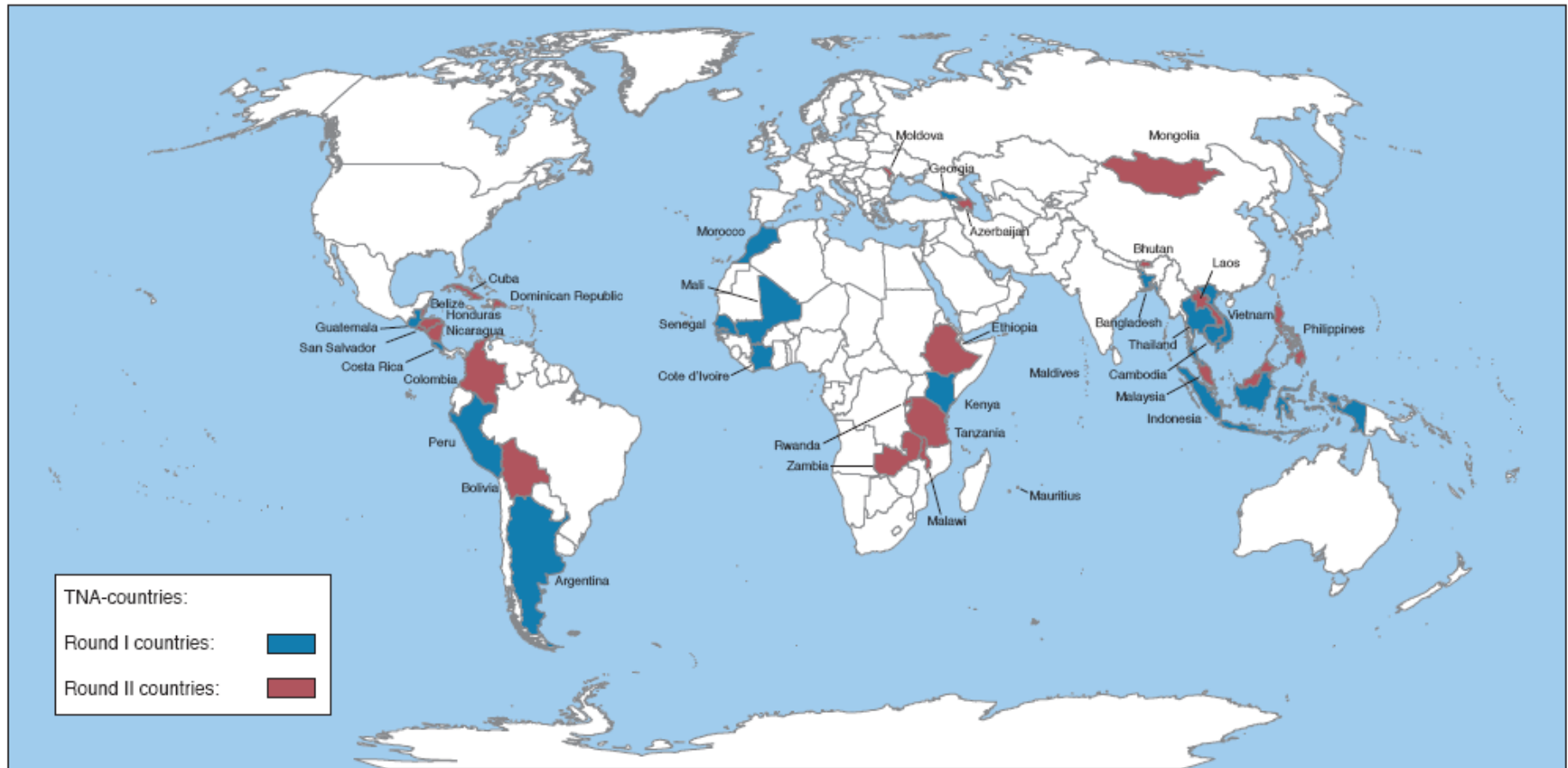### *with funding from GEF under the Poznan Program*

John Christensen
Director
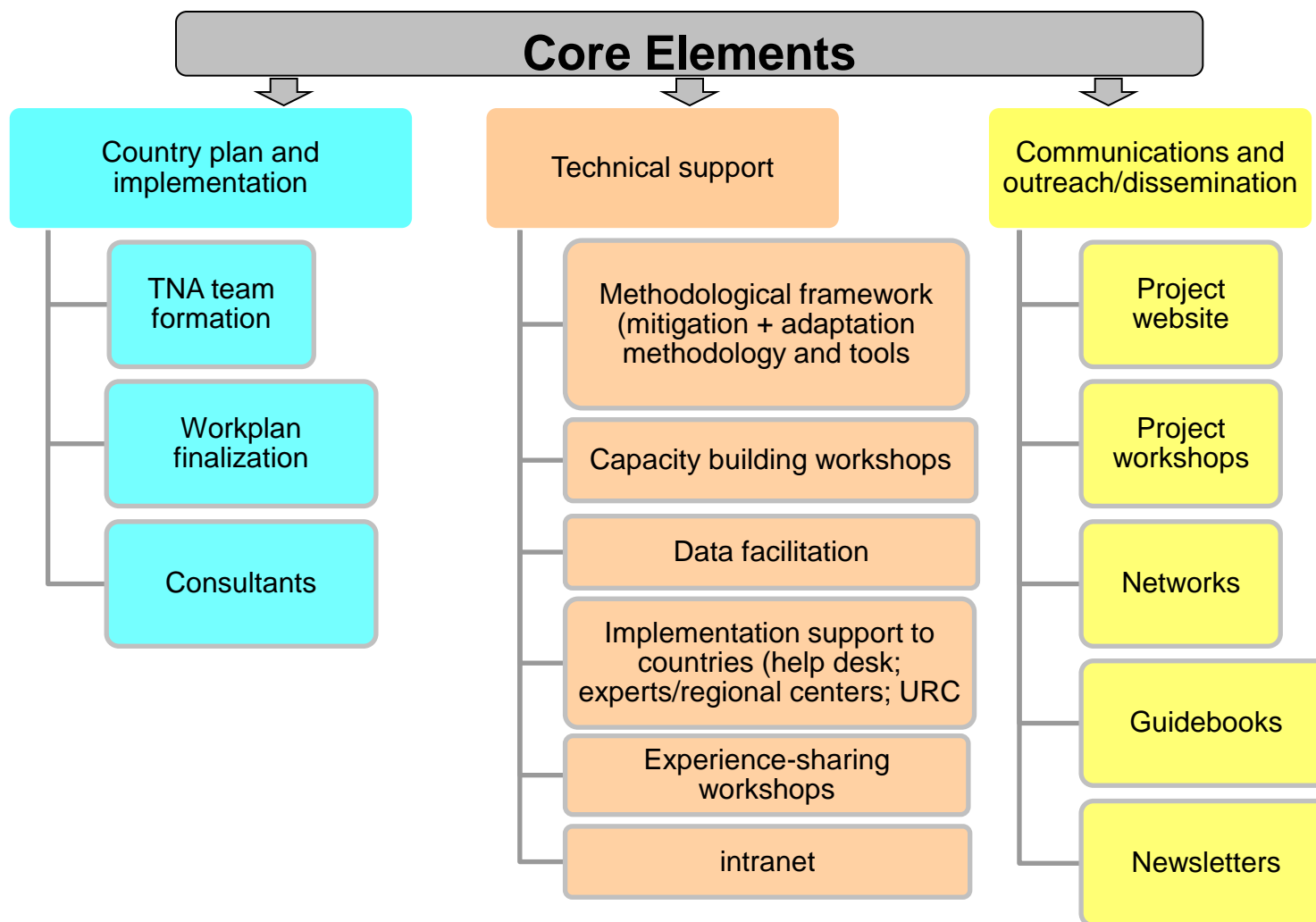UNEP Risoe Centre

Key Facts

- Part of the **Poznan Strategic Program on Technology Transfer**

- Support preparation of a *Technology **Action** Plan* for each participating country (36 countries currently included)

- **Technical support** on methodology and tools for prioritization of technologies, multi-criteria analysis (MCA), financial assessments of technologies, and stakeholder consultation

- **Guidance** (TNA Guidebook, sectoral guidelines for transport, buildings, market assessment methodology etc.)

- **Country TNA teams**: Coordinator, National TNA Team, experts and consultants, sectoral / technology workgroups, regional centres (technical support on technologies and on methodology); IEA (policies)

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Countries developing TNAs & TAPs

Approach

Core Elements

Country plan and implementation

- TNA team formation
- Workplan finalization
- Consultants

Technical support

- Methodological framework (mitigation + adaptation methodology and tools
- Capacity building workshops
- Data facilitation
- Implementation support to countries (help desk; experts/regional centers; URC
- Experience-sharing workshops
- intranet

Communications and outreach/dissemination

- Project website
- Project workshops
- Networks
- Guidebooks
- Newsletters

Steps in Preparing Technology Action Plans (TAP)

Step 1
- **Prioritizing technologies (TNA)**
  - Multi criteria analysis, development priorities, marginal abatement costs, local employment, etc

Step 2
- **Barrier analysis**
  - Legal, institutional, social, knowledge

Step 3
- **Policy options – enabling framework**
  - Legal, institutional, Finance

Step 4
- **Technology action plan**
  - Prioritized policy options

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Expected Outcomes

- **Capacity developed** through training workshops and utilization of guidebooks and easy access to technology information.

- **National consensus on priority technologies** and agreement on a national action plan, and readiness to implement the action

- **Methodologies which complement the revised TNA Handbook** and facilitate technology information available to countries.

- **Regional networks** ensure that support to the countries available in the region for technology information, methodology, preparation of action plan, and a cooperation mechanism to share TNA experiences.

- Increased **national and interregional cooperation on technology transfer** as a mean to facilitate preparation of TNAs and implementation of TAPs.
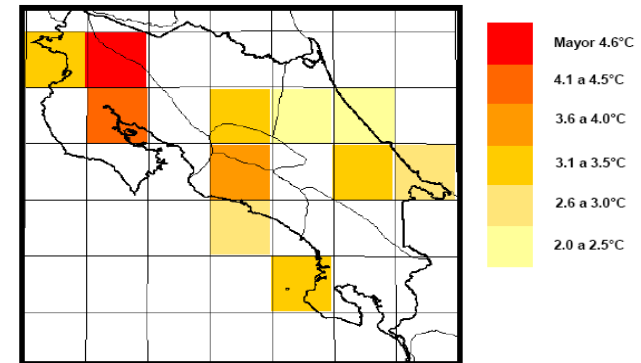
TNA structure
August 2010
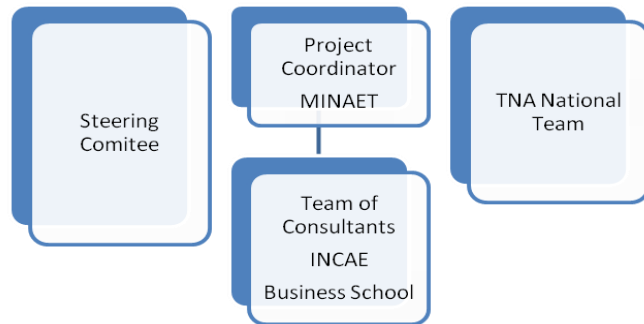
Stakeholders network and sectors
September 2010

Studies & research systematization
March 2010

Technology prioritization
April 2011

Barrier analysis and TAPs
August 2011

Results of prioritization in mitigation and adaptation

Ranking	Sector	Technology option for Mitigation	Score
1	Transportation	Road congestion	75%
2	Agriculture	Sustainable Production in Agriculture	73%
4	Transportation	Improving road infrastructure	71%
5	Electricity	Conservation and energy efficiency	69%
6	Transportation	Integrated public transport	68%
8	Solid Waste	Waste to energy	64%
10	Forest	Extension of Payment for Environmental Services	63%
11	Electricity	Cleaner Electric Expansion Plan	61%
12	Waste management	Methane use in landfill	61%
13	Transportation	Rapid bus system	58%
15	Forest	Habicom - prefabricated wooden houses	57%
16	Transportation	Streamlining procedures by e-government	56%
17	Transportation	Electric trains	55%
18	Transportation	Cycle trails	54%
19	Transportation	Sustainable alternative for private transport	51%
20	Transportation	Carpooling	51%
21	Electricity	Distributed generation system	51%
23	Transportation	Biofuels	47%
24	Transportation	Telework	46%
25	Transportation	Changing residence	41%
26	Transportation	Car Sharing	32%

Ranking	Sector	Technology option for Adaptation	Score
2	Agriculture	Sustainable agricultural production	73%
3	Water	Adaptive co-management of watersheds	71%
7	Meteorological	More detailed climate scenarios	67%
9	Water	Rainwater harvesting and its use in irrigation	64%
10	Forest	Extension of Payment for Environmental Services	63%
14	Water	Geographic Information System for Irrigation	57%
15	Forest	Habicom - prefabricated wooden houses	57%
22	Infrastructure	Road construction standards	50%

Prioritization for 21 mitigation technologies and 8 adaptation technologies

Training is Linked to the TNA Process

TNA Process Step	Organisational Elements		Methodological Elements	Database Supports	Training
	Decision Making Entity	Technical Support			
Prioritization of Technologies					
Stage 1 Prioritizing Sectors	• National TNA Committee	• National Consultants	• TNA Handbook • Guidebook		Regional Capacity Building Workshop -1 on Multi criteria, spreadsheets
Stage 2 Prioritizing Technologies	• National TNA Committee • Sectoral work groups	• National Consultants	• TNA Handbook • Multi Criteria Tool • Spreadsheets	• Sectoral Guidebooks • Help Desk (RC's) • Climate Techwiki	
Barrier Analysis & Enabling Framework	• Work groups	• National Consultants	• Market Analysis tool (Mitigation) • Barrier Analysis • Guidebooks	• Policy Database	Regional Capacity Building Workshop -2 on Market / Barrier Analysis & Template for TAP
Technology Action Plan	• National TNA Committee • Project Steering Committee	• National Consultants • Work groups	• Template		

Results as at May, 2012

❑ January 2012 Launching of Guidebook on Barrier Analysis and Enabling Framework.

❑ Training workshops were conducted in February 2012 for second round countries, bringing to a close the collective training programme of the project.

❑ From third quarter of 2011 through early 2012...

Additional TNA reports submitted by:

      Ghana, Lebanon, Thailand, Georgia, Sri Lanka, Vietnam, Mongolia and Moldova and Bhutan; Zambia

Final TAP reports submitted by:

      Indonesia and Costa Rica

Advanced draft TAP reports submitted by:

      Thailand, Vietnam, Mali, Morocco, and Cote d'Ivoire

Applying the results - Examples

Costa Rica

TAP will be used as a platform to design and structure sectoral NAMAs in Transport and Energy, and the National Climate Change Strategy.

Indonesia

Emissions reduction measures and technologies identified in the TAP will help define an enabling policy/regulatory framework for growth of a domestic solar PV panels manufacturing industry.

Thailand

Assessment results will be used to establish a baseline for specifying mitigation and adaptation targets for the country. The results are expected to inform high level policy decision and implementation by the government.

Process Guidance

- TNA Handbook
- Guidance Note on Institutional Structure
- Barrier Guidebook
- Presentations at workshops
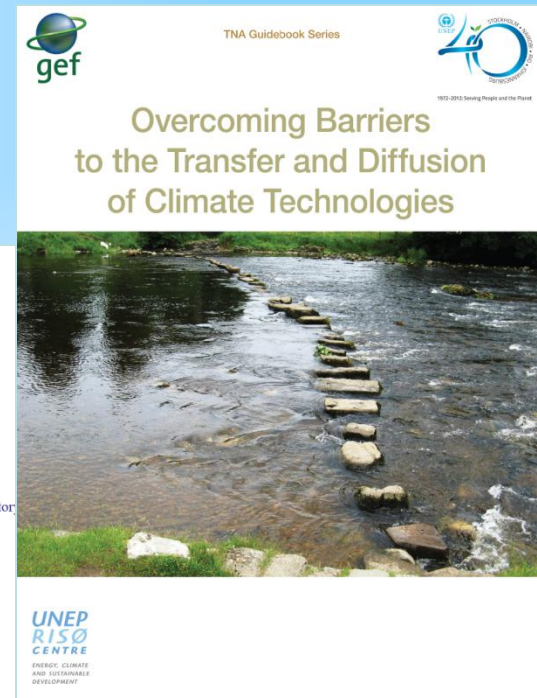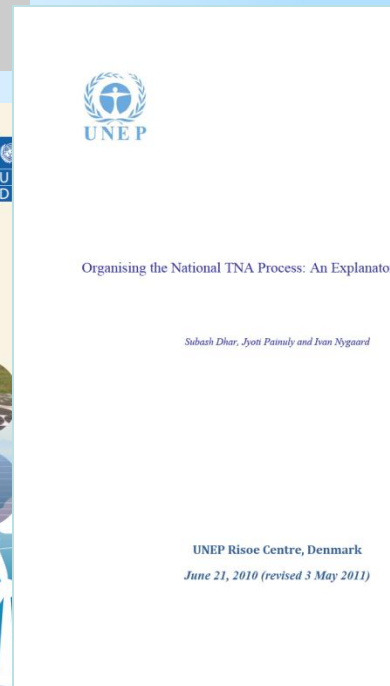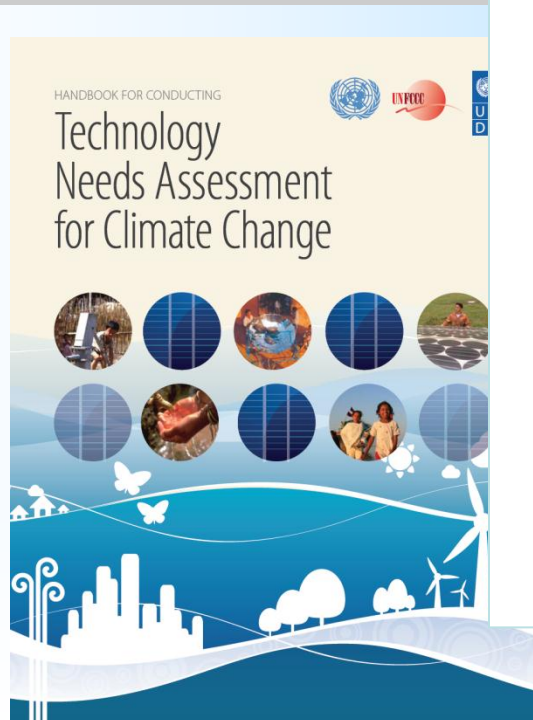
Sector Guidebooks
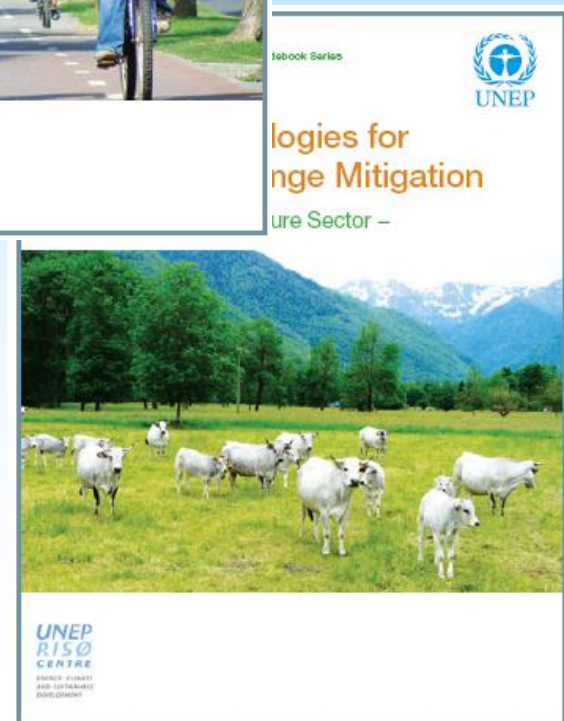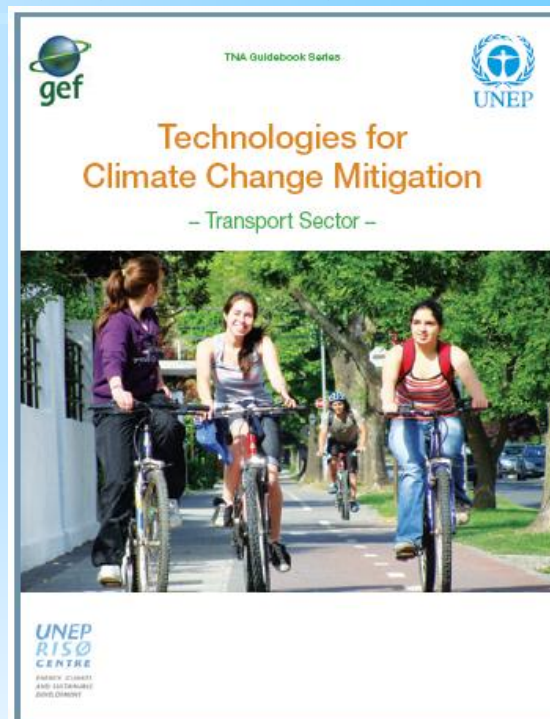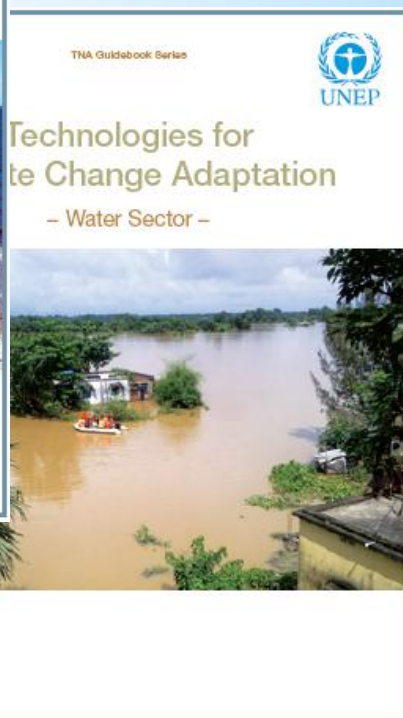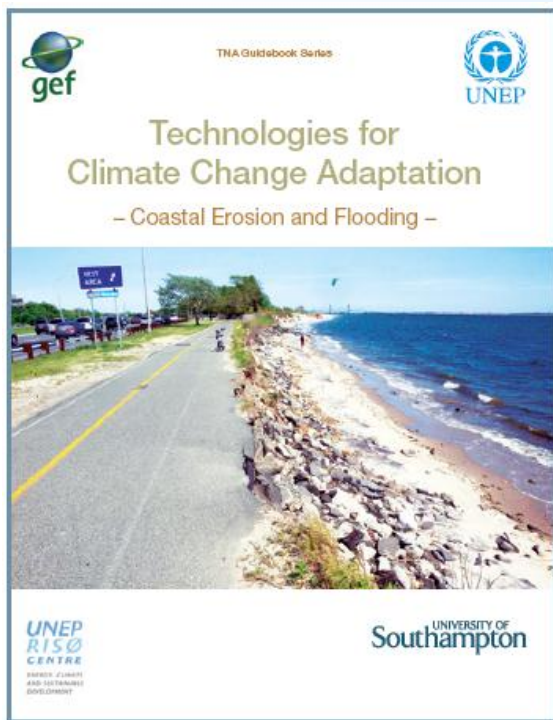
Download these guidebooks from:

http://tech-action.org//resources.htm

Climate Techwiki

ClimateTechWiki
An online clean technology database

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To support development and transfer of environmentally sustainable technologies, ClimateTechWiki offers an on-line database with up-to-date and "up-datable" technology descriptions in different sectors and categories

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Search by technology name	Search by technology name
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• Web address : http://www.climatetechwiki.org/

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