

CLIMATE CHANGE ADAPTATION BULLETIN

A Quarterly Update of Activities

United Nations Development Programme

ENVIRONMENT AND ENERGY

ISSUE No. 15
APRIL 2014



This bulletin is produced by the UNDP-GEF Unit of UNDP's Environment and Energy Group. It provides an overview of UNDP-GEF's support to countries to affect policy and institutional change for climate change adaptation at the national, sub-national and community levels. It includes updates on a range of topics including the status of on-going projects, new project approvals, performance indicators, project impacts and results, and noteworthy announcements.

To contribute to future issues, please write to: adaptation@undp.org

Despite Enormous Success, Bhutan Continues to Face the Risk of Glacial Lake Outburst Floods

Contributed by: [Yusuke Taishi](#), UNDP Asia Pacific Regional Centre



Map of Thorthomi Lake, Bhutan
Photo: Project photo/UNDP

One of the first climate change adaptation projects in the world, "Reducing Climate Change-Induced Risks and Vulnerabilities from Glacial Lake Outburst Floods (GLOF) in the Punakha, Wangdue and Chamkhar Valleys," was implemented by the Royal Government of Bhutan between 2008 and 2013, with the direct support of UNDP and financing from the Least Developed Country Fund (LDCF), quickly became a huge success story. The key goal of the project was to prevent the imminent threat of glacial lake outburst floods (GLOFs) in the Punakha, Wangdue and Chamkhar Valleys. GLOFs occur when fragile moraine dams, which trap melt water from glaciers, burst as a result of rising temperatures, causing massive floods in the valleys below. (continued on page 2)

In this Issue

Featured Stories

- Despite Enormous Success, Bhutan Continues to Face the Risk of Glacial Lake Outburst Floods 1
- UNDP and Financing from the LDCF Strengthen Climate Information for Resilient Development Planning and Adaptation to Climate Change in Africa 2

Events

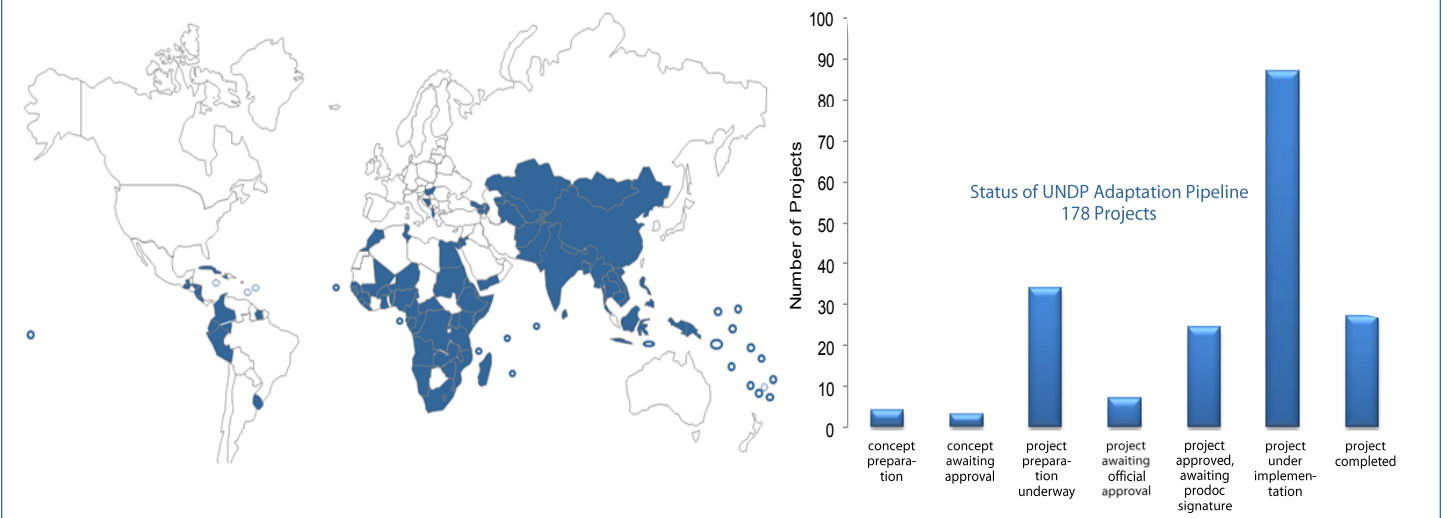
- Supporting LDCs in Advancing National Adaptation Plans
 - Asia Regional Training Workshop 3
 - Africa Regional Training Workshop 3
- Learning from Experience and Strengthening South-South Cooperation through the Newly Launched Canada-UNDP Climate Change Adaptation Facility- Side Event at GEF Assembly. 3

Portfolio Information

- Quick Glance at UNDP's Adaptation Portfolio 1
- Recent Concept/Project Approvals. 4
- Status of UNDP-supported Adaptation Initiatives 4

Quick Glance at UNDP's Adaptation Portfolio

(as of April 2014)



(continued from page 1)



Manual excavation of Thorthormi Lake, Bhutan
Photo: UNDP

At the time of the project's inception experts warned that Bhutan's Thorthormi Lake, one of the 20+ glacial lakes that were considered at critical risk of bursting, could give way as early as 2010, if glaciers continued to melt.

More than five years of hard work, involving manual excavation and channeling of water, under harsh weather conditions,

resulted in the reduction of water levels by 5.04 meters in the main lake of Thorthormi, 3.66 meters in Subsidiary Lake I, 5.08 meters in Subsidiary Lake II, and a cumulative total excavation of 21,000 cubic meters of soil and rock. Water and seismic monitoring devices and an early warning system were installed to warn inhabitants living in the valleys below at first sign of dam collapse, which could precede a GLOF.

The peace of mind that project activities supported by UNDP have brought to the people living in the valleys below the glacier is immeasurable. The early warning system now covers 90 percent of households in the 21 vulnerable communities downstream of the Punatsangchu River in the Punakha-Wangdue Valley, which includes 875 households, 4 schools, 2 Vocational Training Institutes, one Basic Health Unit, Public Works Department staff, as well as an estimated 15,000 workers currently employed by hydropower projects.

In addition to these remarkable successes, the LDCF resources have made a significant impact on raising awareness globally on the consequences of climate change through a number of excellent documentary films which have been broadcast across the world. These films make the unequivocal link between a warming planet and melting glaciers in the Himalayas, and make the devastation of GLOFs easier to understand. The films capture images of Bhutanese men and women trekking to an altitude of 4,500 meters above sea level and manually excavating moraine debris and rocks in near-freezing water against the cruel striking contrast of beautiful ice-capped Himalayan Mountains – vividly implying the unfairness associated with the issue of climate change. Unfairness that these communities, who have little or nothing to do with global warming bear the brunt of its impact: a resounding call for additional international support.

The euphoria of the Royal Government of Bhutan's success with this GLOF project may soon be overshadowed by growing concerns. The successful implementation of the project removed the imminent threat of GLOFs, but for how much longer? The lakes continue to grow with each drop of the melting glaciers. There are more than 20 glacial lakes in Bhutan alone that are considered to have a potential risk of outburst, and many more in other nations that share the Himalayas. The experience gained from the implementation of this project is now being shared with Nepal and Pakistan where UNDP is involved in supporting similar initiatives. Also, UNDP is supporting Bhutan with developing a second LDCF financed initiative aimed at enhancing national, local, and community capacity to prepare for and respond to climate-induced multi-hazards.

The following is a list of project documentaries beautifully capturing the essence of this project's work:

- [Himalayan Meltdown](#) was produced by Arrowhead Films, at the request of the GEF and broadcast on Discovery Network. It

was part of the Discovery Asia "Revealed" series, and won the prestigious Platinum Award in April 2012 in the broadcast documentary category at the 45th Annual Worldfest International Film Festival, the oldest independent film festival in the world.

- [86centimetres](#) by Peter Jan van der Burgh, Tshering Gyeltshen for Bhutan and Partners (2012). A documentary about Tashi and his fight against the threat of GLOF in Bhutan. This documentary was screened at various international film festivals such as the Environmental Film Festival in Washington, D.C., in 2012.
- [Tsunami from the Sky](#), a short documentary compiled by United Nations TV in September 2009 and uploaded on the Internet in March 2010.

For more information, please visit the [UNDP-ALM](#) platform.

UNDP and financing from the LDCF Strengthen Climate Information for Resilient Development Planning and Adaptation to Climate Change in Africa

Contributed by: [Benjamin Larroquette](#), UNDP Regional Service Centre Africa



Participants of the Climate Information and Early Warning Systems Workshop in Liberia
Photo: Benjamin Larroquette/UNDP

As climate change persists, on the ground impacts are felt stronger every season. To help African nations better manage expected climate induced impacts, UNDP is supporting 10 African countries to better predict oncoming inclement weather and thus better prepare for the potential damage it could bring. The initiative aims to strengthen climate change information and early warning systems in Benin, Burkina Faso,

Ethiopia, Liberia, Malawi, Sao Tome and Principe, Sierra Leone, Tanzania, Uganda and Zambia in a cooperative manner.

The programme was officially launched in January 2014 and is working with national institutions to build national capacities and empower local communities to prepare for and adapt to extreme weather shocks. With the help of on-the-ground technical specialists, local communities will benefit from learning how to improve their climate information systems, which in turn will pave the way to adapting to new and alternative technologies to deal with impacts brought with changing climate patterns.

Agricultural communities will work with meteorological advisors on planning the types of crops to plant and the best ways to ensure crops survival during inclement and extreme weather changes, while learning how to more accurately predict the onset of severe weather to save livelihoods and lives. National Meteorology Agencies' capacities are also being improved, as reiterated by Liberia's Minister of Transport, H.E. Varpilah, "[this initiative] will enable us to provide weather and climate information and services to health, agriculture, energy, transport, environment, water and general public sectors"; all of which will ultimately benefit people.

Funds from the Least Developed Countries Fund (LDCF) will be used

(continued from page 2)

to install much-needed infrastructure tailored to the specifics of each of the 10 countries. For example, new climate observation stations will be established using updated tools to measure precipitation, which will help train local authorities to better interpret data in order to make more educated decisions. Local farmers will learn how to better gauge the onset of floods, prolonged hot seasons, lack or overabundance of water supplies, and severe weather events, enabling them to better plan for their future.

For more information, please visit the [blog](#) for Climate information and Early Warning Systems in Africa or the individual project sites on the UNDP-ALM platform: [Benin](#), [Burkina Faso](#), [Ethiopia](#), [Gambia](#), [Liberia](#), [Malawi](#), [Sao Tome and Principe](#), [Sierra Leone](#), [Tanzania](#), [Uganda](#) and [Zambia](#).

Events

[Past Events](#)

Asia Regional Training Workshop – Supporting LDCs in Advancing National Adaptation Plans

Contributed by: [Esther Lake](#), UNDP Asia Pacific Regional Centre



Participants of NAP-GSP Regional Workshop for Asia
Photo: Esther Lake/UNDP

Policy makers and technical officials from eight Least Developed Countries (LDCs) in Asia - Afghanistan, Bangladesh, Bhutan, Cambodia, Timor-Leste, Lao PDR, Nepal, and Yemen - met in Pattaya, Thailand from 17 to 20 February 2014 to advance the National Adaptation Plan (NAP) process within their countries.

Country teams participating included ministries of environment, finance and planning. The training also provided an avenue for South-South exchange between Asian LDCs, China and Korea on adaptation strategies and planning as well as discussion on African case studies. Experiences from Germany and New York City contributed to the meeting. NAP-GSP partners – UNDP, UNEP, UNFCCC, LEG, FAO, GIZ, GEF, UNITAR, UNISDR, GWP and WHO contributed to the training.

For more information on the Asia Regional Workshop for NAPs please click [here](#).

Photos from the workshop can be found [here](#).

Africa Regional Training Workshop – Supporting LDCs in Advancing National Adaptation Plans

Contributed by: [Esther Lake](#), UNDP Asia Pacific Regional Centre

Regional training workshops for Africa took place in Addis Ababa from 14-17 April 2014 for Anglophone countries, and 21-24 April 2014 for Francophone countries. These workshops are part of a series of activities aimed at supporting Least Developed Countries (LDCs) to address the adverse impacts of climate change through medium- and longer-term National Adaptation Plan (NAP) proc-

esses. By facilitating a regional exchange and providing technical support in the form of existing guidance and tools, these regional workshops aim to support policy makers and technical officials. Participants included officials from Ministries of Finance, Planning, and Environment from the following countries: Angola, Eritrea, Ethiopia, Gambia, Lesotho, Liberia, Malawi, Mozambique, Rwanda, Sierra Leone, Somalia, Sudan, Tanzania, Uganda and Zambia (for the Anglophone workshop); and Benin, Burkina Faso, Burundi, Comoros, Djibouti, Guinea, Guinea-Bissau, Equatorial Guinea, Madagascar, Mali, Mauritania, Niger, the Central African Republic, the Democratic Republic of Congo, Sao Tomé et Príncipe, Senegal, Chad, Togo and one non-African country, Haiti (for the Francophone workshop).

Additional information can be found on the [iisd](#) website and at the following links:

- workshop for [Anglophone](#) countries
- workshop for [Francophone](#) countries

[Upcoming Events](#)

Learning from Experience and Strengthening South-South Cooperation through the Newly Launched Canada-UNDP Climate Change Adaptation Facility

Contributed by: [Jennifer Baumwoll](#), Canada-UNDP Climate Change Adaptation Facility

UNDP, in partnership with the Government of Canada, has recently launched the Canada-UNDP Climate Change Adaptation Facility. This Facility brings together six national adaptation projects co-financed by UNDP and the Government of Canada, building on previous LDCF projects. The aim of the Facility is to promote south-south cooperation and enhance understanding about initiatives that address adaptation to climate change, particularly in the context of food security and taking into account the gender dimensions of adaptation. The emphasis will be on supporting global coordination, collecting and analyzing information and experiences, and disseminating lessons learned emanating from the portfolio of the six national projects in Cambodia, Cape Verde, Haiti, Mali, Niger and Sudan. More information is available on the [UNDP-ALM](#) platform.

An upcoming event sponsored by the Canada-UNDP Climate Change Adaptation Facility will take place at the Global Environment Facility 5th Assembly meeting in Cancun, Mexico. Canada and UNDP are jointly hosting a side event entitled: "LDC Experiences on Working towards Greater Food Security in a Changing Climate: Sharing Lessons and Looking Forward." The event will be held on Monday, 26 May from 17:45 – 19:15.

The event will provide a concrete illustration of the adaptation actions taken and impacts achieved on food security by LDCs with financial assistance from the LDCF and the Government of Canada. Questions will be addressed such as: *What are LDCs doing to address climate impacts on food security, while also advancing poverty reduction and increasing income generation? And How do we ensure the results achieved through public finance have catalytic and long-term impact?*

For more information on the Canada-UNDP Climate Change Adaptation Facility, please contact [Jennifer Baumwoll](#), Project Coordinator.

Recent Concept/Project Approvals

Country & Project Title	Source of Funds & Grant (US\$M)	Concept/Project & Approval Date
Afghanistan: Enhancing the resilience of communities of the agriculture sector through improved water management and use efficiency	LDCF 9.00	Project Apr-14
Bangladesh: Integrating Community-based Adaptation into Afforestation and Reforestation Programmes	LDCF 5.65	Project Feb-14
Benin: Integrating Climate Change into Coastal Zone Management	LDCF	Concept
Bhutan: Addressing the risk of climate-induced disasters through enhanced national and local capacity for effective actions	LDCF 11.49	Project Apr-14
Bosnia and Herzegovina: Technology transfer for climate resilient flood management in Vrbas River Basin	SCCF 5.00	Concept Feb-14
Comoros: Enhancing adaptive capacity and resilience to climate change in the agriculture sector	LDCF 8.99	Project Mar-14
Cuba: Reduction of vulnerability to coastal flooding through ecosystem-based adaptation in the south of Artemisa and Mayabeque provinces	AF 5.59	Project Feb-14
Global: Assisting Developing Countries (non-LDCs) with country-driven processes to advance National Adaptation Plans (NAPS)	SCCF 2.25	Concept Feb-14
Madagascar: Strengthening the climate resilience of agrosylvopastoral communities in the regions of Androy, Atsinanana and Analamanga of Madagascar	LDCF 5.88	Concept Feb-14
Niger: Scaling up Community-Based Adaptation (CBA)	LDCF 3.75	Project Mar-14
Philippines: Scaling up Risk Transfer Mechanisms for Climate Vulnerable Farming Communities in Southern Philippines	SCCF 1.05	Project Jan-14
Solomon Islands: Solomon Islands Water Sector Adaptation Project (SIWSAP)	LDCF 6.85	Project Mar-14

Status of UNDP-supported Adaptation Initiatives

Region	Country	Source of Funds	Grant (US\$M)
1. Concept Preparation <i>(by Country with UNDP support)</i>			
Africa	Burundi	LDCF	5.00
	Mali	LDCF	4.00
Asia	Myanmar	LDCF	10.20
2. Concept Awaiting Approval <i>(by GEFSEC or AFBSEC)</i>			
Asia	Timor Leste	LDCF	7.00
3. Concept Approved; Project Preparation Underway <i>(by Country with UNDP support)</i>			
Africa	Angola (2)	LDCF	9.20
	Benin	LDCF	8.00
	Burundi	LDCF	8.72
	DRC (2)	LDCF	10.09
	Guinea	LDCF	8.00
	Lesotho	LDCF	8.40
	Madagascar	LDCF	5.88
	Malawi (2)	LDCF	9.82
	Mali (2)	LDCF	10.46
	Namibia	SCCF	3.05
	Sao Tome and Principe	LDCF	4.00
	Senegal	LDCF	4.10
	Zambia	LDCF	3.89
Zimbabwe	SCCF	3.98	
Arab States	Djibouti	LDCF	5.38
	Somalia	LDCF	8.00
	Tunisia	SCCF	5.50
	Yemen	LDCF	4.92
Asia	Cambodia (2)	LDCF	9.48
	Timor Leste	LDCF	5.25
ECIS	Bosnia Hertzegovina	SCCF	5.00
Global	Global	SCCF	2.25
	Global	LDCF	2.00
LAC	Haiti	LDCF	5.38
Pacific	Fiji	AF	5.28
	Kiribati	LDCF	4.45
	Samoa	LDCF	12.32
	Vanuatu	LDCF	8.03

Status of UNDP-supported Adaptation Initiatives

(continued)

Region	Country	Source of Funds	Grant (US\$M)	Region	Country	Source of Funds	Grant (US\$M)	
4. Project Awaiting Approval <i>(by GEFSEC or AFBSEC)</i>				6. Under Implementation <i>(by Country with UNDP support)</i>				
Africa	Burkina Faso	LDCF	7.00	Africa	Benin	LDCF	3.41	
	Gambia	LDCF	3.00		Burkina Faso	LDCF	2.90	
	Ghana	AF	7.64		Cape Verde	LDCF/DFATD	4.80	
	Mali	AF	7.86		Comoros	GOF/LDCF	2.76	
	Sierra Leone	LDCF	2.94		DRC	LDCF	3.00	
Arab States	Sudan	LDCF	5.70		Equatorial Guinea	LDCF	0.20	
Asia	Afghanistan	LDCF	9.00		Eritrea	AF	6.01	
5. Project Approved; Awaiting ProDoc Signature <i>(by UNDP and Country)</i>						Ethiopia	LDCF	5.31
Africa	Benin	LDCF	4.00		Ghana	SCCF	1.72	
	Burkina Faso	LDCF	3.60		Guinea (2)	LDCF	6.69	
	Central African Republic	LDCF	2.78		Guinea Bissau	LDCF	4.00	
	Comoros	LDCF	8.99		Kenya	GOF/SCCF	1.14	
	Ethiopia	LDCF	4.50		Liberia (20)	LDCF	5.28	
	Gambia	LDCF	8.90		Mali	LDCF/DFATD	4.29	
	Liberia	LDCF	6.07		Mauritius	AF	8.40	
	Malawi	LDCF	3.60		Mozambique	LDCF/SCCF	5.39	
	Niger	LDCF	3.75		Niger	LDCF/DFATD	5.90	
	Seychelles	AF	5.95		Regional	SPA	3.30	
	Sierra Leone	LDCF	3.60		Regional	LDCF	3.46	
	Tanzania	LDCF	3.60		Rwanda	LDCF	3.49	
	Uganda	LDCF	4.00	Sao Tome and Principe	LDCF	3.60		
	Zambia	LDCF	3.60	South Africa	SCCF	3.54		
Asia	Bangladesh	LDCF	5.65	Swaziland	SCCF	1.67		
	Bhutan	LDCF	11.49	Zambia	LDCF	3.80		
	Myanmar	AF	7.29					
	Philippines	SCCF	1.05	Djibouti	AF	4.29		
	Sri Lanka	SCCF	3.12	Egypt	SCCF	4.00		
ECIS	Uzbekistan	AF	5.08	Somalia	LDCF	0.20		
LAC	Cuba	AF	5.59	Sudan	LDCF/DFATD	6.10		
	Grenada	BMUB	2.90					
	Guatemala	AF	5.00					
Pacific	Solomon Islands	LDCF	6.85					

Status of UNDP-supported Adaptation Initiatives *(continued)*

Region	Country	Source of Funds	Grant (US\$M)
6. Under Implementation <i>by Country with UNDP support)</i>			
Africa	Swaziland	SCCF	1.67
	Zambia	LDCF	3.80
Arab States	Djibouti	AF	4.29
	Egypt	SCCF	4.00
	Somalia	LDCF	0.20
	Sudan	LDCF/DFATD	6.10
Asia	Bangladesh	LDCF	3.30
	Bhutan	LDCF	3.45
	Cambodia	LDCF/DFATD	4.09
	India	SPA	5.76
	Indonesia	SCCF	5.00
	Lao (2)	LDCF	9.15
	Maldives (3)	AF/LDCF	14.43
	Mongolia	AF	5.07
	Nepal	LDCF	6.30
	Pakistan	AF	3.60
	Thailand	SCCF	0.87
	Timor Leste	LDCF	4.60
	Vietnam	SCCF	1.40
ECIS	Albania	SPA	0.98
	Azerbaijan	SCCF	2.70
	Georgia	AF	4.90
	Tajikistan	SPA	1.90
	Turkmenistan	AF	2.70
Global	Global (LDCs)	LDCF	1.00
	Global (5 countries)	SCCF	4.50
	Global (6 countries)	DFATD	1.06
LAC	Colombia	AF	7.85
	Ecuador	SCCF	3.00
	Haiti	LDCF/DFATD	6.20
	Honduras	AF	5.18
	Nicaragua	AF	5.70
	Uruguay	SPA	0.98
Pacific	Cook Islands	AF	4.96
	Regional	SCCF/AusAID	20.99
	Samoa (4)	AF/LDCF	14.40
	Solomon Islands	AF	5.10
	Tuvalu (3)	LDCF/AusAID	8.57
	Papua New Guinea	AF	6.02
7. Completed*			
Africa	Ethiopia	SCCF	1.00
	Namibia	SPA	0.96
	Tanzania	SCCF	1.00
	Zimbabwe	SCCF	0.98
ECIS	Armenia	SPA	0.90
	Hungary	SPA	0.99
Global	Global	SPA	0.72

*Note: This table does not include the 20 projects under the Africa Adaptation Programme (AAP) funded by the Government of Japan (GOJ). The completed AAP projects are reflected in the graph on page 1.

Acronyms

AF	Adaptation Fund
AFB SEC	Adaptation Fund Board Secretariat
AusAID	Australian Agency for International Development
BMUB	Germany's Federal Ministry for the Environment, Nature Conservation, Building, and Nuclear Safety
BSF	Benefit Sharing Fund
CBA	Community-Based Adaptation
DFATD	Foreign Affairs, Trade and Development Canada
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GEF SEC	Global Environment Facility Secretariat
GIZ	German Society for International Cooperation
GOF	Government of Flanders
GOJ	Government of Japan
GWP	Global Water Partnership
LAC	Latin America and Caribbean
LDC	Least Developed Country
LDCF	Least Developed Countries Fund
LEG	UNFCCC's Least Developed Countries Expert Group
SCCF	Special Climate Change Fund
SIDS	Small Island Developing States
SPA	GEF Trust Fund's Strategic Priority on Adaptation
UNDP	United Nations Development Programme
UNDP-ALM	UNDP Adaptation Learning Mechanism
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNISDR	United Nations Office for Disaster Risk Reduction
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization

For additional information, please contact:

Nik Sekhran
Officer-In-Charge
Environment & Energy Group
nik.sekhran@undp.org

Adriana Dinu
Executive Coordinator and Director, a.i.
UNDP-Global Environment Facility
adriana.dinu@undp.org



Empowered lives.
Resilient nations.

www.undp.org/climatestrategies/climatestrategies_adaptation.shtml