



**UNFCCC ACTION PLEDGE
BY OXFORD UNIVERSITY CENTRE FOR THE ENVIRONMENT:**

**Researching and Assessing the Adaptive Capacity of Coastal Zones and
Practical Adaptation Options in the Least Developed Countries / Small Island
Developing States (LDCs/SIDS)**

OVERALL OBJECTIVES

- This Action Pledge directly addresses the Call for Action, '9 CFA Coastal Zones'.
- The Action Pledge meets Nairobi Work Programme (NWP) objective:

'To assist all Parties, in particular developing countries including the least developed countries and small island developing States, to improve their understanding and assessment of impacts, vulnerability and adaptation, and to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound, scientific, technical and socioeconomic basis, taking into account current and future climate change and variability'.

- The 'Areas of Work' of the Nairobi Work Programme addressed by this Action Pledge are:
 - ⇒ Methods and Tools
 - ⇒ Data and Observations
 - ⇒ Climate Related Risks and Extreme Events
 - ⇒ Socio- Economic Information
 - ⇒ Adaptation Practices and Planning
 - ⇒ Research and Technologies for Adaptation
- The Action Pledge contributes to the NWP by:
 - ⇒ Promoting research on adaptation options and the development and dissemination of technologies, know-how and practices for adaptation, particularly addressing identified adaptation priorities and building on lessons learned from current adaptation projects and strategies.
 - ⇒ Facilitating communication and cooperation among and between Parties and relevant organizations, business, civil society and decision makers, and other stakeholders
 - ⇒ Developing methodologies and tools for adaptation planning, measures and actions, integration with sustainable development
 - ⇒ Promoting understanding of response strategies, including early warning systems and local coping strategies, and of lessons learned that can be applied elsewhere

- This Action Pledge is responding to the following need:

There is limited understanding of the adaptive capacity of coastal zones, especially of the capacity of coastal ecosystems e.g. mangroves or coral reefs to adapt naturally, and the adaptive capacity of human systems and livelihoods in coastal zones of LDCs/SIDS.

The adaptive capacity of coastal zones in LDCs/SIDS is determined by the relationship between coastal settlements and ecosystems and other factors including physical features, key sectoral activities (such as tourism, agriculture and fisheries), social features such as extensive social networks and institutional features such as process of decision-making, policies and regulations. Research is needed to better understand these relationships as well as various adaptation options, how these options affect ecosystems, local livelihoods, cultures and traditions.

PROJECT PURPOSE

Designing and undertaking research to understand the adaptive capacity of coastal zones in LDCs/SIDS (specifically in those 12 countries currently identified as both LDCs/SIDS; Cape Verde, Comoros, Guinea Bissau, Haiti, Kiribati, Maldives, Samoa, Sao Tome and Principe, Solomon Islands, Timor Leste, Tuvalu and Vanuatu).

Especially to design and undertake research to understand the natural adaptive capacity of coastal ecosystems, human systems, and the local contexts of adaptation in the LDCs/SIDS as they relate to communities' livelihoods and key related sectors e.g. tourism, fisheries and agriculture, including underlying access to resources, processes of decision-making and impacts of adaptation measures

KEY ACTIVITIES

- Undertake and design research to understand local contexts of adaptation, including underlying access to resources, natural adaptive capacity of coastal ecosystems, adaptive capacity of human systems and livelihoods, and effects of adaptation measures
- Undertake and design research on policies, regulations, key sectors, perverse subsidies and other constraints to the development of adaptive capacity of coastal systems
- Undertake and design research aimed at identifying and assessing practical adaptation options, including their costs, benefits and possible trade-offs
- Develop a set of indicators and a conceptual framework for adaptation in coastal zones that would assist in identifying the range of available adaptation options while at the same time providing for flexibility and redesign of options as more clarity emerges regarding the level of change or impacts to which different coastal zones need to adapt
- Support the development of local scientific capability to understand local impacts and develop responses – capacity building, scientific centres, financial resources

KEY ACTORS

- United Nations organizations and other relevant international and regional organizations including:
 United Nations Environment Programme
 United Nations Development Programme
 United Nations World Tourism Organization
 World Meteorological Organization
 Food and Agriculture Organization of the United Nations
 World Wildlife Fund

- Relevant (in country) national ministries, agencies and communities
- ‘In country’ research institutions and universities level
- International experts and practitioners in climate change coastal zones, adaptation, livelihoods and relevant industry sectors

EXPECTED RESULTS

Development of a set of indicators and a replicable framework with which to evaluate and monitor levels of adaptive capacity and assess practical adaptation options for coastal zones in LDCs /SIDS.

INDICATORS OF ACHIEVEMENT

- Documentary evidence of indicators and replicable framework with which to evaluate and monitor levels of adaptive capacity and assess practical adaptation options for coastal zones in LDCs /SIDS.
- Pilot documents containing assessment of adaptive capacity of coastal zones in selected LDCs/SIDS
- Pilot documents containing assessment of practical adaptation options for coastal zones in selected LDCs/SIDS

OXFORD UNIVERSITY CENTRE FOR THE ENVIRONMENT (OUCE) AS THE CENTRE RELATES TO THE ACTION PLEDGE (IN BRIEF)

The Oxford University Centre for the Environment (OUCE) incorporates the School of Geography and the Environmental Change Institute and has particular expertise in climate change science, global and regional climate modelling, as well as climate impacts, vulnerability, adaptation and policy, and ecological economics. Among other activities, OUCE is a core partner in the Tyndall Centre for Climate Change, hosts the UK Climate Impacts Program, and conducts research into ecosystem dynamics, human ecology, biodiversity and climate change, and conservation practice. OUCE are also closely involved in the Oxford based, *climateprediction.net* project, the largest public-resource climate modelling project in the world.

SELECTION OF KEY INVESTIGATORS IN ACTION PLEDGE

Mark New is a Reader in Climate Change Science at OUCE and a deputy program leader for the Tyndall Centre for Climate Change. His expertise lies in observed climate change, climate modelling and impacts and especially uncertainty in climate scenarios. He is currently editor for *Geophysical Research Letters*, and has been a contributing author and expert reviewer for the last two IPCC reports. His publications have been cited over 1000 times in the last six years. He is PI on a number of climate change grants, including the EU ENSEMBLES project, UK NERC projects and with the UK Environment Agency.

Murray Simpson is a Senior Research Associate at OUCE and an expert working on climate change, tourism, the environment and sustainable development. Murray is co-author of forthcoming UNWTO, UNEP and WMO technical report, ‘Climate Change and Tourism: Responding to Global Challenges’ and lead author of Chapter 3, ‘Impacts and Adaptation at Destinations’ and has co-authored and contributed to many other UNWTO publications. He has extensive stakeholder liaison experience and is a founding member of the peak international climate change and tourism organization; Experts in Climate Change and Tourism (eCLAT). Murray has worked on projects in Africa, the Caribbean, Asia, Europe, the USA, UK, Australasia and South America. Murray also works in the field of sustainable livelihoods, is a Fellow of the Royal Geographical Society, a member of the International Human Dimensions Programme on Global Environmental Change (IHDP-GEC) UK committee, and a member of the UNWTO Panel of Tourism Experts. He has worked closely with stakeholders and communities in developing countries and small island states on the interactions between climate change, the environment, tourism and livelihoods.

Rob Hope is a Senior Research Fellow at OUCE; his expertise lies in socio-economic assessments, ecosystem valuation and modelling scenarios of decision-making behaviour. His research combines qualitative and quantitative social research methods, such as scenario-based approaches. Rob has worked extensively with scenario designs involving effective and inclusive engagement with, and understanding of, primary stakeholders' needs, preferences and constraints, which have then been tested and modelled to interrogate and modify sustainable policy design. His research has explored these themes in many countries around the world in tropical, temperate and semi-arid ecosystems. Rob was a member of a Department for International Development, UK (DFID) cluster of international development projects exploring water catchment management and social impacts from 2001-06.

Jacqueline Hamilton is a Research Associate at OUCE. An economist and regional planner she has worked on climate change and tourism for 5 years and was a member of the team working on the EU project DINAS-Coast. She has also recently worked on landscape change and its effect on recreation and amenity value. Jacqueline has also spent some time working freelance on regional tourism and climate change for the United Kingdom Climate Impacts Programme (UKCIP).