

PROVIA

PROGRAMME OF RESEARCH ON
CLIMATE CHANGE VULNERABILITY,
IMPACTS AND ADAPTATION

www.provia-climatechange.org



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BACKGROUND

As governments, communities and civil society gear up to adapt to climate change they are often confronted with a lack of adequate knowledge about both the threats of climate change and how to respond.

There is an urgent need for immediate and adequate actions to adapt to current climate change before its impacts become unmanageable. Equally important is the need to prepare for potential future impacts and more long-term consequences of a changing climate. As governments, communities and civil society prepare to adapt to climate change, they are often confronted with a lack of adequate knowledge about both the threats of climate change and how to respond. There is major uncertainty about the kind of impacts to be expected, about the vulnerability of nature and society to these impacts, and about the effectiveness of different response measures required to adapt to changing conditions.

Decision-makers increasingly consider adaptation a key part of international climate policy. In 2010, governments agreed at the UN Climate Change Conference in Cancún on an Adaptation Framework to allow better planning and implementation of adaptation projects, and to set up a Green Climate Fund, with a financial target of US\$100 billion per year by 2020. A growing body of evidence suggests that implementing adaptation measures does not only impose burden, but also presents opportunities for innovation and the advancement of new developments in science.

The scientific research community and other stakeholder groups are generating much knowledge about climate vulnerability, impacts and adaptation (VIA). However, the ability of societies to effectively anticipate and adapt to such changes is hampered by, among other challenges, poor communication

to decision makers and the absence of a common platform where the scientific community can become organized and avail their VIA knowledge to those who need it most.

The Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA) responds to the current lack of international co-ordination towards meeting VIA research needs and especially those gaps that are important to fill to achieve major policy objectives, such as those of the UNFCCC. PROVIA is a new and growing network of scientists and decision-makers working towards identifying research gaps and meeting VIA policy needs. Acknowledging emerging policy strategies, new scientific developments and lessons learnt from past programmes, PROVIA promises to deliver, through an evolving partnership with UNEP, WMO and UNESCO, improved co-ordination of international research on the impacts of and responses to climate change, and to strengthen the provision of the high quality scientific information that is being increasingly requested by the world's decision makers.

PROVIA works closely with various research institutions, global change programmes of the Earth System Science Partnership (ESSP), and the Intergovernmental Panel on Climate Change (IPCC). In the emerging Global Framework for Climate Services, it is intended that PROVIA will provide direction and coherence at the international level for VIA research. PROVIA also provides important contributions to UNEP's ongoing adaptation work, for example in the area of Ecosystem Based Adaptation (EBA), where more research is needed to grasp when, where and how EBA can be applied most effectively.

Together with its collaborative partners, knowledge networks such as the UNEP-led Global Adaptation Network and the larger VIA community, PROVIA will strive to promote a greater science-policy dialogue.



“PROVIA responds to the urgent call by the scientific community for more cohesive and coordinated global research on climate change vulnerability, impacts and adaptation.”
*UNEP Chief Scientist,
Prof. Joseph Alcamo*

VISION, OBJECTIVES AND SCOPE OF WORK

The overall aim of PROVIA is to help provide international direction and improve the coherence of research on climate change vulnerability, impacts and adaptation (VIA).

PROVIA addresses the critical need to harmonize, mobilize, and communicate the growing knowledge-base on VIA research that decision makers and the rest of society need in order to understand and adapt to risks from climate change. With this in mind, it is our vision to create a new and vitally important interface between the scientific community and decision-makers involved in VIA issues, and improve the availability and accessibility of such knowledge to the people that need it most.

OBJECTIVES

The overarching objectives of PROVIA are:

- To advance research on vulnerability, impacts and adaptation related to climate change
- To coordinate and facilitate the dissemination and practical application of this research for the benefit and value of society

Specific objectives are:

1. To build a new and important interface between the scientific community and decision makers and other stakeholders involved in VIA issues.
2. To promote communication within the community of scientists working on VIA issues by providing a vehicle for exchanging new research results, encouraging cooperative work on specific research challenges, and providing a forum for improving the quality of research.

3. To identify VIA research gaps, priorities and critical emerging issues that are important to both the science and policy communities.
4. To provide a new avenue by which decision makers can solicit scientific input to new critical policy issues.
5. To provide an information-clearinghouse on current and emerging VIA issues.
6. To contribute to the capacity-building of young scientists in developing countries to carry out scientific assessments of climate change VIA.

SCOPE OF WORK

PROVIA is developing through three phases. The scope, range and resource needs for the functions and core services of PROVIA are expanding from one phase to the next. Work on four initial priority activities, agreed by the Interim Scientific Steering Committee, are well underway, and PROVIA is initiating work on new activities proposed by the SSC. The four initial priority activities include:

- Developing and communicating to governments and international agencies a prioritized international agenda of VIA research
- Provision of scientific advice to the UNFCCC process on adaptation
- Strengthening of communication within the VIA research community
- Revision of technical guidelines on VIA assessment methods



*"The Climate challenge is enormous and requires a comprehensive and coordinated response from the world community."
Global Framework for Climate Services*

PROGRAMME STRUCTURE

PARTNERS

PROVIA is conceived as a collaborative inter-agency initiative that intends to build on the convening power and expertise of the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the World Meteorological Organization (WMO).

Partnerships are fundamental to the PROVIA vision and are at the core of its aim: To provide direction and improve international coherence for vulnerability, impacts and adaptation research.

PROVIA will work closely with various research institutions, global change programmes of the Earth System Science Partnership (ESSP), and the Intergovernmental Panel on Climate Change (IPCC). PROVIA will also seek to partner closely with and improve interactions between various knowledge networks and platforms such as the Global Framework for Climate Services, the Global

Adaptation Network, and many other affiliated scientific partners.

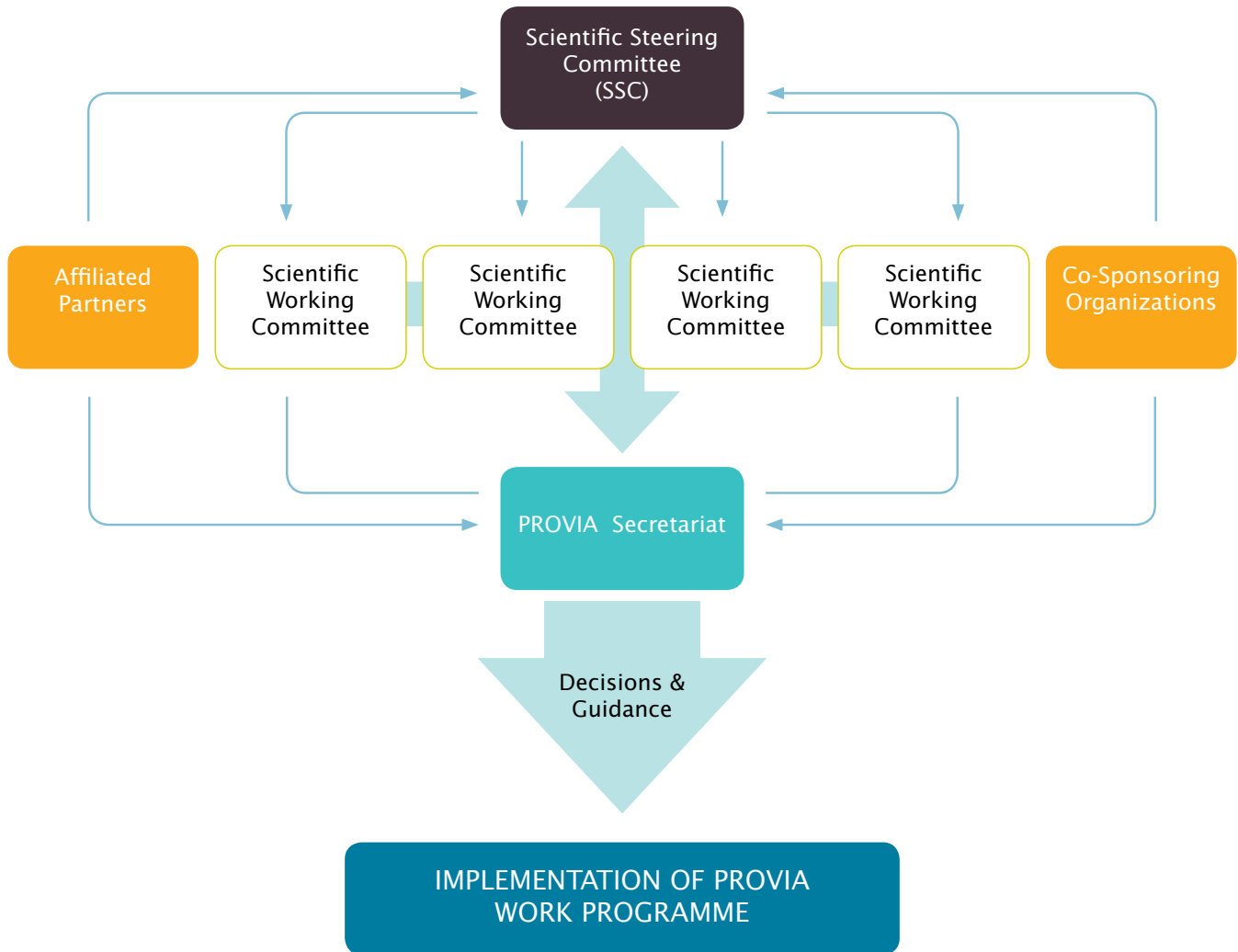
The beneficiaries of PROVIA include, in addition to the VIA research community, multilateral organizations and UN agencies engaged in VIA-related issues, as well as governments and vulnerable communities who serve to benefit from the enhanced knowledge and information that PROVIA will broker.

SECRETARIAT STAFF

PROVIA is currently funded by UNEP, which also hosts its Secretariat. The Secretariat administers the Programme's day-to-day operations, finances, and overall Programme of Work. It supports the Scientific Steering Committee (SSC) and Scientific Working Committees, and assists in formulating the scope of PROVIA and implementing its core activities and outputs through the working committees.



GOVERNANCE AND OPERATIONAL STRUCTURE



SCIENTIFIC STEERING COMMITTEE

The governing body of PROVIA is an international Scientific Steering Committee (SSC). The SSC sets the general scientific direction of PROVIA and supports efforts to communicate findings to scientists, policymakers and other stakeholders. It guides the Secretariat in the implementation of the Work Programme and establishes Scientific Working Committees.

The SSC is composed of a Chair and 14-20 distinguished members from the scientific community at large, including ex officio members from co-sponsoring organizations. The members represent a wide range of disciplines and research areas related to climate change vulnerability, impacts and adaptation.

An Interim Scientific Steering Committee was established in November 2010.

MEMBERS OF THE PROVIA INTERIM SCIENTIFIC STEERING COMMITTEE:

Dr. Saleemul Huq (Chair),
International Centre for Climate Change and
Development

Prof. Chris Field,
Stanford University

Prof. Balgis Osman-Elasha,
African Development Bank

Prof. Christopher Gordon,
University of Ghana

Prof. Martin Parry,
Imperial College London

Dr. Ian Noble,
Formerly World Bank, lead on adaptation

Prof. Erda Lin,
Chinese Academy of Agricultural Sciences

Prof. Richard Klein,
Stockholm Environment Institute

Prof. Jean Palutikof,
NCCARF, Griffith University

Prof. Anand Prabhakar Patwardhan,
India and Duke University

Dr. Cynthia Rosenzweig,
NASA Goddard Institute for
Space Studies

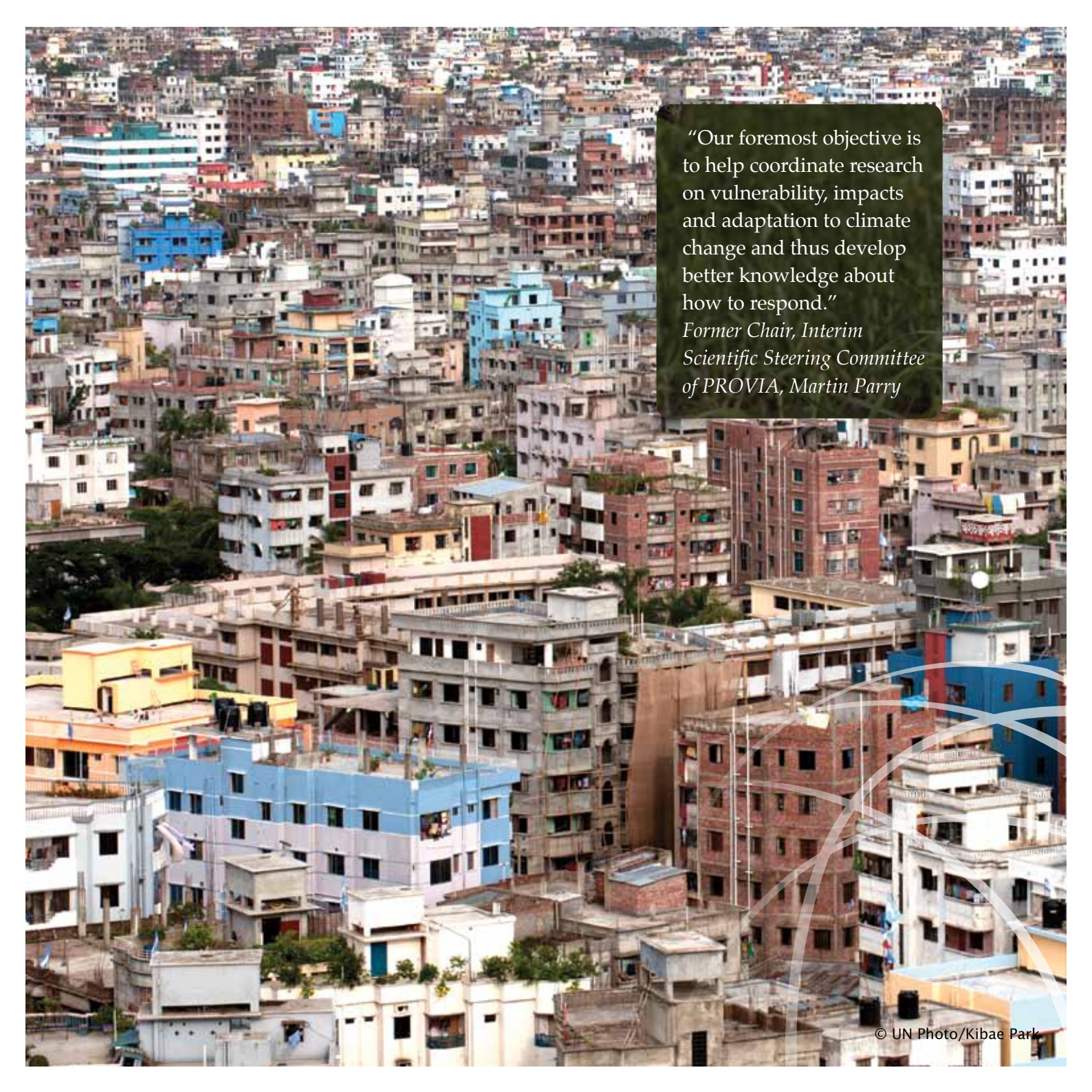
Ms. Carolina Zambrano Barragan,
Municipality of the Metropolitan
District of Quito, Ecuador

Ex officio:

Prof. Joseph Alcamo,
Chief Scientist, UNEP

Mr. Peter Dörsé, UNESCO

Dr. Ghassem Asrar,
Director, WCRP, WMO
(Alternate: Mr. Avinash Tyagi,
Director CWD, WMO)



"Our foremost objective is to help coordinate research on vulnerability, impacts and adaptation to climate change and thus develop better knowledge about how to respond."

*Former Chair, Interim
Scientific Steering Committee
of PROVIA, Martin Parry*

PRIORITY ACTIVITIES

Work Programme 2010-2011

ACTIVITY 1

Develop and communicate to governments and international agencies a prioritized international agenda of research on VIA

PROVIA has developed a list of global VIA research priorities through a series of activities aimed at identifying research gaps and needs in this area. This involved a gap analysis using a variety of publications and other sources, as well as consultations with the scientific and policy communities.

PROVIA will launch an official UNEP report on the global VIA research priorities in February 2013. Possible follow-up activities include expanding the global research priority topics into a research action plan to support international VIA research, and using the list of research priorities to support upcoming sessions of the UNFCCC.





ACTIVITY 2

Provide advice and scientific information to the United Nations Framework Convention on Climate Change (UNFCCC) and other international bodies, to enable more effective adaptation

PROVIA is, in a number of ways, an active ‘provider’ of scientific information to the United Nations Framework Convention on Climate Change (UNFCCC) process, and is now a designated partner of the Nairobi Work Programme (NWP). The NWP is undertaken under the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the UNFCCC to improve understanding and assessment of impacts, vulnerability and adaptation to climate change. PROVIA was also involved in the Research Dialogue of the SBSTA in 2011, as well as in the preceding workshop. In 2012 PROVIA participated in the SBSTA Research Dialogue by presenting the draft PROVIA list of global VIA research priorities.

PROVIA will be present at COP18 in Doha, with the objective of communicating information to the UNFCCC, governments, international agencies and VIA experts. PROVIA will organize a side event featuring a panel discussion that include Scientific Steering Committee members and other experts. An overview of the PROVIA global VIA research priorities will be presented at the side event, with the intention of initiating further dialogue and research coordination among VIA experts and the policy community.





ACTIVITY 3

Strengthen communication within the Vulnerability, Impacts and Adaptation Research Community

PROVIA is promoting communication of VIA information through a number of mechanisms, including the PROVIA website (www.provia-climatechange.org). There is now an established biennial PROVIA International Adaptation Conference that brings together research scientists, policy makers and practitioners from developed and developing countries to share knowledge about adaptation challenges and opportunities.

The 2nd Conference was held at the University of Arizona in Tucson, USA in May 2012. Nearly 700 researchers, policy makers and practitioners from over 60 developed and developing countries shared insights into the challenges and opportunities that adaptation presents. A call for offers to host the 3rd International Adaptation Conference in 2014 has already produced 8 offers. The Earth System Science Center-National Institute for Space Research (CCST INPE) will host the 3rd International Adaptation Conference in Fortaleza, Brazil.





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ACTIVITY 4

Improve the robustness of VIA assessments, by developing revised technical guidance on tools and research methodologies

PROVIA is developing guidance for climate change VIA assessment methods. The guidance will be published in early 2013.

PROVIA is exploring possibilities to summarise and synthesise the PROVIA guidance report into a document that could complement the UNFCCC Guidance targeted specifically at the National Adaptation Plans under the UNFCCC. The UNFCCC process for preparing National Adaptation Plans (NAPs) was agreed at COP16 in Cancun. The UNFCCC Secretariat is currently preparing technical guidance to support NAP preparation, which takes place in parallel with the development of PROVIA Guidance.





PROPOSED WORK PROGRAMME 2012-2013

In addition to current activities, PROVIA is considering the following Proposed Activities for the 2012-13 Work Programme:

- Evaluation of current and promising adaptation approaches. At present very large scale funding is being considered for implementing adaptation strategies (a target of c. \$100 billion per annum together with mitigation), but relatively few adaptation methods and technologies have been properly evaluated, especially of adaptation in practice. Results of such an evaluation will be communicated immediately to a wide range of stakeholders affected by climate change.
- Developing and analysing scenarios of climate adaptation and socio-economic trends. The next generation of impact and adaptation assessments requires an analysis of future socio-economic and adaptation scenarios. These scenarios should address questions such as:
 - a) what adaptation will be needed between now and 2030 to cope with early unmitigated impacts; and
 - b) what are the likely unavoidable impacts beyond 2030. PROVIA will lead in the development of new scenarios and develop an accessible guide to the methods of scenario development for VIA assessment.
- Monitoring current vulnerability and adaptation, and avoiding potential surprises. Current vulnerability is being mapped in different and non-comparable ways. We need tested and reliable means of vulnerability mapping to identify people and places most at risk. In addition, we need to systematically monitor the emergence of impacts and analyse in real-time the adaptations to those impacts. This will enable a robust and empirically-based evaluation of adaptation methods. The monitoring system should include 'horizon-scanning' for non-linearities that could detect (and avoid) potential surprise impacts.



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