



TIAS Quarterly

April 2007

The newsletter of *The Integrated Assessment Society (TIAS)*
<http://www.tias-web.info>

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The Society

The Integrated Assessment Society is a not-for-profit entity created to promote the community of inter-disciplinary and disciplinary scientists, analysts and practitioners who develop and use integrated assessment. The goals of the society are to nurture this community, to promote the development of IA and to encourage its wise application.

Integrated Assessment Defined

Integrated Assessment (IA) can be defined as the interdisciplinary process of integrating knowledge from various disciplines and stakeholder groups in order to evaluate a problem situation from a variety of perspectives and provide support for its solution. IA supports learning and decision processes and helps to identify desirable and possible options for addressing the problem. It therefore builds on two major methodological pillars: approaches to integrating knowledge about a problem domain, and understanding policy and decision making processes. IA has been developed to address issues of acid rain, climate change, land degradation, water and air quality management, forest and fisheries management and public health.

Features

As a prelude to the upcoming TIAS-GWSP workshop in WashingtonDC (May 9-11), the theme of this issue of the TIAS Quarterly focuses on the theme of the workshop: 'Global Assessments'

Major Global Environmental Assessments 2007-2008

Compiled by OECD jointly with the managers of the various assessments; layout by UNEP

A number of global environmental assessments will be released by different organizations over the course of 2007 through early 2008. These include the Summary for Policy Makers of the fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC), a Comprehensive Assessment of Water Use in Agriculture by CGIAR, the fourth Assessment Report of Climate Change by IPCC, the fourth Global Environment Outlook (GEO-4) Assessment by UNEP, a first ever International Assessment of Agricultural Science and Technology for Development by World Bank and others, and the second OECD Environmental Outlook.

Each assessment has a specific focus or entry point, and a different methodological approach. Together they provide a complementary package assessing expected environmental developments over the next few decades and the policies and actions that can be taken to avert significant environmental damage and related impacts on societies and the economy. It is expected that a number of common messages will emerge from these authoritative assessments on the most pressing environmental challenges ahead and how they might be tackled.

Each assessment report is being produced through a rigorous review process, often, including the involvement of a large number of government representatives, scientists, civil society and industry stakeholders. The assessments draw on state-of-the-art knowledge in their field of specialty, and all use scenarios or other quantitative analysis to project environment-related changes into the future.

The lead agencies carrying out these assessments are holding regular consultations in order to exchange information on the

respective findings, and to identify common messages and possible differences. The consultations also provide an opportunity to share results and technical capacity, in order to avoid duplication of efforts between the assessments.

This note provides an overview of these different assessments, their main focal themes, their analytical approaches, contact persons and release dates.

Global Environment Outlook 4 (GEO-4)

Lead agency: United Nations Environment Programme (UNEP)

Focal theme: "Environment for development" with a special focus on the role and impact of the environment for human well-being and the use of environmental valuation as a decision-making tool.

Key questions: How are various forms of natural and human-induced global and relevant sub-global environmental changes affecting human well-being and development opportunities? What are the key policy-relevant issues and findings relating to the interactions between environment and society and where is there need for further action? How far do environmental policies act as a driver for environmental change, what are the most efficient and effective ways to implement them? What are the barriers and what are the corrective measures that could be taken?

Analytical approach: The GEO-4 retrospective horizon is the 1987 Brundtland Commission report - *Our Common Future*. It also provides a future outlook - for the short-term up to 2015 (with special consideration of the Millennium Declaration Targets), as well as for the medium term up to 2050, based on four contrasting scenarios and the use of different models. It assesses state-and-trends of major environmental issues, and their interlinkages with the development process, analyses policy responses and impacts, and discusses future response options and opportunities for mitigating/adapting to environmental change. The extensive global and regional analysis of issues is presented in the context of inter-

national environmental governance. The models used in the assessment include: Integrated Model to Assess the Global Environment (IMAGE), WaterGap, International Futures (IFs), Global Methodology for Mapping Human Impacts on the Biosphere (GLOBIO), the Asian Integrated Model (AIM), IMPACT/LEITAP (worldwide models of food supply, demand and trade) and UBC Fisheries.

Governance and oversight: UNEP's Governing Council (Environment Ministers)

Publication date: first week of October 2007

Contact information and website:

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OECD Environmental Outlook to 2030

Lead agency: Organisation for Economic Co-operation and Development (OECD)

Focal themes: environment-economic linkages to 2030; policy analysis

Key questions: How will economic and social developments drive environmental change to 2030? What policies are needed to address the main environmental challenges? How can OECD and non-OECD countries best work together to tackle these challenges?

Analytical approach: Projections to 2030 are developed using a global general equilibrium model (ENV-LINKAGES) coupled with an integrated environmental impacts model (IMAGE). A single reference baseline is developed, against which the economic and environmental impacts of specific policy simulations are compared. The projections are complemented by qualitative discussions based on extensive OECD analytical work.

Governance and oversight: Developed under the authority of the OECD Environment Policy Committee (EPOC), as an input to the March 2008 OECD Environment Ministerial Meeting.

Publication date: mid-February 2008

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Intergovernmental Panel on Climate Change, Fourth assessment report (AR-4)

Lead agency: Intergovernmental Panel on Climate Change (IPCC)

Focal theme: Global Climate Change

Key questions: Comprehensive assessment with increased focus on new findings and cross cutting themes including key vulnerabilities, integration of adaptation and mitigation, sustainable development, water, technology, uncertainties and risk, and regional matters.

Analytical approach: The assessment reports provide review and synthesis of peer-reviewed literature along three main lines: (i) the physical science basis; (ii) impacts, adaptation and vulnerability; (iii) mitigation of climate change. The fourth assessment reviews a wide range of available scenarios but does not develop new scenarios.

Governance and oversight: IPCC plenary

Publication date: Working Group reports spread over the first half of 2007; Policy Makers Summary in November 2007.

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International Assessment of Agricultural Science and Technology for Development (the AgAssessment)

Lead agency: World Bank. Co-sponsored by FAO, UNEP, UNDP, WHO, UNESCO and GEF

Focal theme: Agricultural Knowledge, Science and Technology Systems for the future

Key questions: How can agricultural knowledge science and technology be used to address the challenges of hunger and poverty alleviation in an environmentally, socially and economically sustainable manner?

Analytical approach: One worldwide and five regional assessments are conducted. The assessment reports provide review and synthesis of peer-reviewed literature looking back 50 years and forward 50 years, providing options for action to decisionmakers. The global assessment involves a single quantified reference baseline to 2050 as well as a review of other relevant scenarios. The role of key assumptions for the developments to 2050 is analyzed with model-based simulations. Models include IMPACT and IMAGE.

Governance and oversight: Intergovernmental with a multi-stakeholder Bureau (includes governments, private sector, NGOs, producers, consumers and international organizations)

Publication date: second week of January, 2008

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www.agassessment.org

Comprehensive Assessment of Water Management in Agriculture (the Ag Water Assessment)

Lead agency: International Water Management Institute (IWMI), one of the CGIAR centres

Focal theme: a critical evaluation of benefits, costs, and impacts of the past 50 years of water development and current challenges to water management

Key questions: How can water for food be developed and managed to help end poverty and hunger, ensure environmentally sustainable water-agriculture practices, and find the balance between food and environmental security?

Analytical approach: While the assessment's scope is global, it focuses on developing countries where water-for-food is critical for livelihoods. It takes the approach that water management in agriculture includes a continuum of practices between rain-fed and irrigated agriculture, wise use of wetlands, freshwater fisheries and aquaculture, and livestock. Over the past five years, the Ag Water Assessment has engaged a participatory process of dialogue, partnerships, research, synthesis, review and outreach. Diversity of participation is a key principle of the process in terms of background, region and gender.

Governance and oversight: Steering Committee selected from key CGIAR centres and key partners

Publication date: March 2007 (Book title: Water for Food, Water for Life: the Comprehensive Assessment)

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How to include the human dimension in water assessments?

Claudia Pahl-Wostl, Institute of Environmental Systems Research

The Global Water System Project (GWSP) was established in order to develop a sound interdisciplinary science base to better understand the global water system and inform policymakers about present and emerging challenges. To achieve this ambitious goal, it will be important, but not sufficient, to develop a new generation of global water models in which processes linked to human activities are better represented. From a scientific perspective, it would not do justice to the complexity and richness of social processes to reduce them to model parameters only. From the policy perspective, one can question if such models will have a real policy impact. What is needed is to embed the development of models and the integrated knowledge base directly into policy processes. This builds the necessary communication interface and space for mutual learning between science and policy, and at the same time offers the social scientist the possibility of learning more about the dynamics of policy processes, about the social construction of an issue in the policy domain, and the role of scientific information in such processes.

One can learn here from developments in the field of Integrated Assessment. At the level of river basin management IA approaches are now finding more widespread application. In many cases, the lack of access to water of sufficient quantity and quality is not caused by technical or environmental factors, but by the absence of effective and fair governance regimes. The growing awareness of complexities, unexpected consequences of management strategies, and the increase in uncertainties from global change have provided arguments for a change towards more integrated, adaptive and participatory water management regimes. The EU-funded NeWater project (New Approaches to Adaptive Water Management under Uncertainty) was initiated to develop and implement innovative approaches to water management that take into account the full complexity of the systems to be managed and the human dimension. First results, for example, provide evidence that adaptive management in relation to climate change is limited in prevailing designs, practices and ideas surrounding river basin management. Addressing impacts of climate change may require a reframing of river basin management issues involving a shift in the focus from flood management to a wider basin management view that includes storage and buffering of flow and capacity upstream, and taking into account ecosystem services.

Similarly the framing of water issues at the global scale may be reframed when emerging challenges derived from global water scenarios become apparent. Will such insights lead to more cooperation or even more conflicts? To be able to better understand potential developments we need to better understand the nature of global water governance (See GWSP workshop on global water governance June 2006: www.gwsp.org/govworkshop_presentations.html). But, in particular, the exchange with policy processes should be actively sought.

Progress in capacity building in this field is urgently needed. One initiative to promote this is the collaboration between Global Water System Project (GWSP), NeWater and TIAS to run a summer school series on adaptive water management (see courses on page 4). Furthermore, the three are collaborating in the organization of the upcoming International Conference on Adaptive and Integrated Water Management (CAIWA).

www.usf.uos.de/projects/caiwa/index.htm

[This article has been adapted from *Global Water News, GWSP Newsletter*, No. 4, October 2006. www.gwsp.org]

News

Launch of GEO Resource Book to support capacity building for integrated environmental assessment

The United Nations Environment Programme (UNEP) and the International Institute for Sustainable Development (IISD) announces the joint launch of the Global Environment Outlook Resource Book on May 10, 2007 at the TIAS-GWSP Global Assessment workshop in Washington, DC.

The Global Environment Outlook (GEO) is UNEP's flagship report on the current state and direction of the global environment, using the most recent environmental science and policy knowledge. A multi-scale assessment, GEO relies on the active participation of many partners working on the sub-global scale. In addition to the global GEO reports there is now a large and increasing number of reporting initiatives utilizing the integrated environmental assessment methodology that was spearheaded by GEO.

Given the response by governments and other partners, outlined in the Bali Strategic Plan for Technology Support and Capacity Building, UNEP has been actively engaged in capacity building for integrated environmental assessment (IEA) at the regional, national and in some cases sub-national level.

Building on the success of earlier capacity building materials and programs, UNEP and IISD have lead the development of a new generation of resource materials to support IEA capacity building efforts over the coming years.

The GEO Resource Book is a product of over 40 leading assessment practitioners from around the world. Its purpose is to help design and run effective capacity building programs at the sub-global level. Its intended primary audience includes designers and leaders of assessment and reporting focused capacity building programs. The ultimate audience includes designers of actual IEA programs at the sub-global level, whether the assessments are focused on countries, specific ecosystems or other geographic units.

The Resource Book follows a flexible, modular design and it can be used in whole or in part depending on the priority needs of the audience. Typically it is delivered in a workshop setting where it requires the active engagement of participants. Plans are being developed to make the Resource Book available in an e-learning format to facilitate individual learning. Periodic updates will be made based on its practical application.

Running an IEA that has real impact requires careful planning and consideration of a range of process, content and institutional issues. The Resource Book covers these issues through the following eight modules:

1. The GEO Approach to Integrated Environmental Assessment
2. National IEA Process Design and Organization
3. Developing an Impact Strategy for your Integrated Environmental Assessment
4. Monitoring, Data and Indicators
5. Integrated Analysis of Environmental Trends and Policies
6. Scenario Development and Analysis
7. Creating Communication Outputs from the Assessment
8. Monitoring, Evaluation and Learning

The GEO Resource Book will be available in print and electronic form on UNEP's website and also from the International Institute for Sustainable Development (www.iisd.org) website and on CD-ROM. Editions in official UN languages will follow. For more information on the GEO programme visit

www.grid.unep.ch/activities/assessment/geo/

For more information on, and pre-registration for the GEO book launch in Washington, please contact: Donna Huffam, IISD Media

and Communications Officer. Tel: +1(204) 958-7740
Cell: +1(204) 962-1303 dhuffam@iisd.ca

TIAS-GWSP Workshop on Global Assessments: Bridging Scales and Linking to Policy

9 - 11 May 2007, Washington DC

Next month, scientists and practitioners from a variety of fields will meet at the University of Maryland to share and consolidate new research ideas and fostering future co-operations in the area of global assessments (www.tias-web.info). The event will be held back-to-back with the International Water Association's WATERMATEX 2007: the 7th International Symposium on Systems Analysis and Integrated Assessment in Water Management (www.WATERMATEX2007.org).

During this event on May 10, TIAS will hold its Annual General Meeting.

Sessions include:

May 9 (Joint day with the International Water Association)

- Uncertainty & Models in Policy Processes for Water Management (several keynote presentations followed by panel discussion)

May 10

- A Year of Global Assessments
- Scenarios of the 4th Global Environmental Outlook
- The Role of Land Use in Integrated Water Management
- Impacts of Policy Decisions on Land Use Change
- Evening: Launch - UNEP Global Environment Outlook Resource Book
- TIAS Dinner: AGM meeting

May 11

- Linking Impacts and Adaptation Modeling of Climate Change to the Policy Process
- Global Change Impacts on Water and Food Security - Economic Analyses
- Representation of the human dimension in Global Water Assessments - Current State and major challenges

For a detailed programme and registration information visit the workshop site: <http://www.tias.uos.de/wash2007/>

TIAS Annual General Meeting and Dinner

Thursday 10 May, 2007 at 19:45

Chasen Family Room, UMUC Inn and Conference Centre at the University of Maryland. For more information, contact TIAS Secretary, Caroline van Bers (cvbers@usf.uos.de)

Events

7 - 9 May, 2007. **7th International IWA Symposium on Systems Analysis and Integrated Assessment in Water Management: WATERMATEX 2007**. International Water Association. Washington DC. More information: www.watermatex2007.org/

8 - 10 May 2007. **Sustainable Neighbourhood - from Lisbon to Leipzig through Research (L2L): A conference on research for sustainable development in Europe**. Leipzig, Germany. presentations and posters, see below. www.fona.de/L2L

17 - 18 May 2007. **Leading with Confidence in the Face of Uncertainty: A Two-Day Executive Education Program**. Cambridge, MA, USA. Hosted by New England Complex Systems Institute. <http://necsi.org/events/exec2007.html>

7 June 2007. **Water Security: Does Europe Have a Strategy?** A High Level European Policy Summit. Brussels, BE. Co-organised by Friends of Europe and the European Water Partnership. www.friendsofeurope.org/conferences.asp

13 June 2007. **Integrating Planning for Land and Water Conference: A conference for practitioners and stakeholders involved in spatial planning and environmental consultancy**. Oxford, UK. Planning Dept, Oxford Brookes University. <http://www.brookes.ac.uk/schools/be/planning/shortcourses/>

29 - 31 May 2007. **Congress on Advancing Sustainable Hydropower**. Antalya, Turkey. International Hydropower Association. www.hydropower.org

3 - 6 September 2007. **Third International Conference on Climate and Water**. Helsinki, Finland. Finnish Environment Institute. <http://www.ymparisto.fi/default.asp?contentid=169172&lan=en>

8 - 10 October 2007. **The IASTED Asian Conference on Modelling and Simulation ~AsiaMS 2007~**, Beijing, China. More information: www.iasted.org IASTED Secretariat - AsiaMS 2007, calgary@iasted.com

Courses

11 - 21 Sept 2007. **NeWater-GWSP Summer School 2007: Transitions to Adaptive River Basin Management**. (Co-hosted by TIAS and the Dutch Research Institute for Transitions). Alla-Fonte Hotel and Seminar Facility, Bad Krozingen, Germany. More information: www.newater.info

1 - 13 Sept 2007. **ALTER-Net Summer School 2007: Trends in Biodiversity: European Ecosystems and Policy**, Peyresq, France. Hosted by Potsdam Institute for Climate Impact Research. More information: www.alter-net.info

Job Openings

Professor of Water Policy and Governance and Assistant Professor (Tenure Track) of Water Policy and Governance. The Swiss Federal Institute of Aquatic Science and Technology (Eawag) in Dübendorf. Institute for Environmental Decisions (www.ied.ethz.ch) or the Center for Comparative and International Studies (www.cis.ethz.ch). Deadline for applications 30 April 2007.

Call for Submissions

The E-Journal "Integrated Assessment" for your publications: www.iajonline.org

TIAS Members are encouraged to submit feature articles and/or news items for future issues of TIAS Quarterly. Contact Caroline van Bers cvbers@usf.uos.de

The TIAS Quarterly

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