



# TIAS Quarterly

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Miyun Reservoir, Beijing, China (J. Halbe)

## 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 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.

## Feature

### Sustainability in the Water-Energy-Food Nexus

*Joanne Vinke-de Kruijf and Claudia Pahl-Wostl, TIAS*

In May 2014, the Global Water System Project (GWSP) held an international conference on the Water-Energy-Food Nexus<sup>1</sup>. The event attracted numerous scientists, policy makers and practitioners who focused on one central question: how to reduce the trade-offs and build synergies among various sectors that play a role in the WEF nexus in order to strengthen sustainability. In this article, we share some of our insights from that conference.

#### From integration to nexus

The interconnectedness between water resources and other sectors, such as agriculture, nature conservation and spatial planning, has long been recognized in the water sector. In addressing these interconnections, Integrated Water Resources Management (IWRM) has become a key concept. Other sectors have also adopted integrated approaches, for example, for the management of energy, pesticides or waste. To some extent, the nexus approach can be seen as a follow-up to existing attempts to implement more integrated approaches. In comparison to the concept of IWRM and other integrated approaches there are, however, important differences. First, the nexus concept explicitly refers to multiple sectors and is therefore expected to be much more successful in attracting the attention of actors from these sectors. Second, whereas sectoral approaches such as IWRM have a strong emphasis on the three pillars of sustainability, the nexus concept has been criticized for not paying sufficient attention to the environment. This shortcoming can be overcome when the concept of ecosystem services is integrated into the operationalization of the nexus concept.

<sup>1</sup> More information about the conference can be found at: <http://wef-conference.gwsp.org/>

#### The importance of the WEF Nexus

A central theme at the GWSP conference were the interconnections among water, energy and food. The rationale for focusing on this nexus is that the safeguarding of water supplies, energy resources and food security is one of the greatest challenges we face, particularly since demand is rising, resources are being depleted and climatic conditions are changing. The conference served to reinforce the fact that water, food and energy are interconnected in many different ways. To mention just a few: energy production requires cooling water, irrigated agriculture is the largest user of freshwater, and water supply and wastewater treatment are among the largest energy users. Increasing biofuel production has tremendous impacts both on agriculture (e.g., competition for farm land, depletion of soil productivity) and water (e.g., pollution, scarcity). Interconnections among water, energy and food are one of several aspects that matter in the nexus approach. Just as important are, for example, sustainability, ecosystem services, urbanization and livelihoods. Within this context, special attention was also given to using the nexus approach in the global Sustainable Development Goals that are currently being formulated (as a follow up to the United Nations Millennium Development Goals).

#### Governance of the nexus

One of the conference conclusions states that “responsible governance of natural resources is the necessary first step for action on the Water-Energy-Food Nexus”. As various speakers argued, implementing a nexus approach is predominantly a governance problem. Despite their functional and physical linkages, governance sectors still tend to work in their silos. Domain interests, power structures, rigid regulatory sectoral frameworks and sectoral communication structures are just a few examples of barriers to improved cross-sectoral cooperation. Speakers commonly agreed that while there is a

huge lack of capacity in existing institutions to govern across boundaries, the development of new institutions does not provide a solution either. Rather, policies and governance mechanisms that are more inclusive and enhance cross-sectoral coordination must be developed. This involves the adaptation of existing policies and, if necessary, the development of new ones. Both governments and international organizations should play a role in achieving improved coordination which can be stimulated, if necessary, by economic incentives<sup>2</sup>. Coordination needs to take place at different levels. Adaptive policy frameworks should set targets but leave flexibility for tailoring coordination mechanisms to socio-economic and environmental conditions during implementation. Developing and implementing such integrated and flexible policy frameworks requires integrated assessment and stakeholder participation at various levels, challenges for which considerable expertise and experience exist within the TIAS community.

### Concluding remarks

During the various plenary and parallel sessions at the conference, a wide range of interconnections and related issues were introduced and explored. How much sectors and sectoral policies can be integrated and to what extent remains a key question. At the conference, particular attention was paid to the following questions:

- How much can and should the water-energy-food nexus be coordinated during the policy development and policy implementation processes?
- Which instruments are already available and in place for implementing the nexus?
- What can the role of international cooperation be in supporting knowledge exchange for implementing the nexus?
- What are major knowledge gaps for implementing the nexus and what is needed from science to fill them?

Looking back on the conference and its results, a wide range of topics were covered which attracted a broad audience. The ambition of the next TIAS webinar in October 2014 is a more modest focus on the water-food nexus only. In this webinar we will further elaborate on the challenges associated with the nexus approach and explore how the TIAS community may contribute expertise to tackling these challenges.

<sup>2</sup> See also the Conference Call to Action (Bonn, May 20<sup>th</sup> 2014), <http://wef-conference.gwsp.org/call-to-action.html>

## Social Impact Assessment

### Learning from the Multiple Discourses of SIA

Caroline van Bers, TIAS

The basis for and breadth of our interest in promoting improved social impact assessment processes was initially described in the feature article of the March issue of the [TIAS newsletter](#).

This year, TIAS launched a working group to support the community of practitioners who conduct Social Impact Assessment (SIA) in order to help improve what is often a challenging and complex undertaking. In order to provide an overview of the state of the art and to help define the scope of the working group's efforts, TIAS hosted a webinar on May 15<sup>th</sup>. The event was attended by 21 practitioners and scientists and featured three experts with perspectives from different sectors who shared their experiences in SIA:

*Distributional impacts of environmental policies in Germany.*  
Dr. Klaus Jacob, Research Director, Environmental Policy Research Centre, Freie Universität Berlin

*Measuring the social impact of business: Current practices and challenges.*

Ms. Kitrhona Cerri, Manager, Redefining Value, World Business Council for Sustainable Development

*Challenges and developments in SIA at the project level.*

Prof. Frank Vanclay, Professor of Cultural Geography, University of Groningen

Their presentations and a summary of the webinar as a whole can be downloaded from the TIAS website: <https://www.tias-web.info>. In the discussions that took place among participants subsequent to the presentations, several aspects of SIA were identified for strengthening, improved guidance and/or adding value to the practice:

- How to guide organisations from multiple sectors through a complex field, featuring many approaches and tools?
- How to demonstrate positive and negative impacts through SIA?
- Providing guidelines for carrying out SIA at the community level.
- The use of causal-loop diagramming for scoping - identification of key variables and disentangling multiple viewpoints and interests.
- The need for simplification in order to integrate distributional effects into Impact Assessments.
- How to avoid the oversimplification of social impact to income/employment distribution only (in a social development context).

In addition to these methodological considerations, another theme of interest was identified, that of integrating or merging the separate discourses that have emerged including: SIA as an ex ante policy assessment tool in the EU, an organisational effectiveness tool, a regulatory tool for determining project acceptability and an industry tool for managing the social impacts of projects. At a minimum it is valuable to explore these for the learning experience to be gained.

Working group members have reviewed these open questions and topics. The first set of methodological challenges is largely in the domain of professional organisations like the International Associate of Integrated Assessment (IAIA) as well as academia where methods, data and measurement issues are being addressed. Connecting the various discourses has therefore been identified as a gap that TIAS can help to fill from a practical rather than theoretical perspective. Global assessments have been and are a theme for many members of TIAS, and could also be considered among the discourses. The value of linking these discourses or venues lies in the exchange and thus mutual learning that it facilitates.

The work will involve a literature review and expert interviews and will culminate in a paper to be submitted to and presented at a conference (most likely IAIA) in 2015. In addition, it may, depending on the results, be valuable to create a guidance document for practitioners. The working group is currently seeking an organisation that is interested in commissioning this work.

More details on the scope of this study will be provided in the next issue of this newsletter. Individuals who are interested in this work may contact Caroline van Bers for more information: [cvbers\[at\]gmail\[dot\]com](mailto:cvbers[at]gmail[dot]com)

## Projects

### LIAISE Conference: "Impact Assessment for Sustainable Development: Knowledge Systems for the Future"

On April 1<sup>st</sup> and 2<sup>nd</sup> this year, the FP7-funded LIAISE Network of Excellence held its final conference on "Impact Assessment for Sustainable Development: Knowledge Systems for the Future" in Brussels. The conference was attended by approximately 120 participants from the LIAISE network, policy makers and practitioners from the European Commission and Member State institutions, from other networks (such as IAIA, TIAS) and participants from academia.

The conference provided an opportunity for the main results of the LIAISE work on Impact Assessment for Sustainable Development over the past 4.5 years to be presented. This included presentations on:

- The current practice of Impact Assessment in Europe and beyond;
- The LIAISE KIT: A knowledge and community platform for Impact Assessment for Sustainable Development. At its core is the concept of Quality of models and methods for IA;
- An approach for the Co-Design of Knowledge with interested parties;
- A concept for a Shared Research Agenda session that sets out the path ahead for joint research programming.

In order to ensure the relevancy of research for societal decision making, the network will continue its efforts and provide services in the context of impact assessment for sustainable development. The mission of the Network is outlined in the LIAISE Charter which was presented during the conference.

Furthermore, the future of LIAISE as a Community of Practice was discussed with regard to desired directions for future research and activities of the Community. The feedback from the LIAISE Policy Board in a round table discussion at the end of the conference was overall very positive and encouraging. In particular, many panelists highlighted the LIAISE KIT as a tangible and valuable result of the LIAISE Network of Excellence.

#### The LIAISE KIT for Impact Assessment: <http://www.liaise-kit.eu/>

The LIAISE KIT is a website that contains descriptions of various types of knowledge that can be used in the context of policy Impact Assessment. This site provides two services:

- A **library** of models, methods, good practices and experts: Various sources of knowledge are described and can be queried using keywords from the domain of policy Impact Assessment
- A **community platform** to collaborate in the field of Impact Assessment: users are invited to share their knowledge in the field of Impact Assessment for sustainable development. The LIAISE network encourages participation on the platform as an expert or a lead editor. Users can also upload their publications.



## Book Release

### Action Research for Climate Change Adaptation - Developing and applying knowledge for governance

*Edited by Arwin van Buuren, Jasper Eshuis, and Mathijs van Vliet*

Governments all over the world are struggling with the question of how to adapt to climate change. They need information not only about the issue and its possible consequences, but also about feasible governance strategies and instruments to combat it. At the same time, scientists from various social disciplines are trying to understand the dynamics and peculiarities of the governance of climate change adaptation.

This book demonstrates how action-oriented research methods can be used to satisfy the need for both policy-relevant information and scientific knowledge. Bringing together eight case studies that show inspiring practices of action research from around the world, including Australia, Denmark, Vietnam and the Netherlands, the book covers a rich variety of action-research applications, running from participatory observation to serious games and role-playing exercises. It explores many adaptation challenges, from flood-risk safety to heat stress and freshwater availability, and draws out valuable lessons about the conditions that make action research successful, demonstrating how scientific and academic knowledge can be used in a practical context to reach useful and applicable insights.

The book will be of interest to scholars and students of climate change, environmental policy, politics and governance.

The book is available from December 12 onwards and can be pre-ordered from:

<http://www.routledge.com/books/details/9781138017603/>

## New Publications

Reis S., G. Morris, L.E. Fleming, S. Beck, T. Taylor, M. White, M.H. Depledge, S. Steinle, C.E. Sabel, H. Cowie, F. Hurley, J.McP. Dick, R.I. Smith, and M. Austen. 2013. *Integrating Health & Environmental Impact Analysis. Public Health*, in press, corrected proof. DOI: 10.1016/j.puhe.2013.07.006

Dick J. McP., R.I. Smith, L. Banin and S. Reis. 2014. Ecosystem service indicators: data sources and conceptual frameworks for sustainable management. *Sustainability Accounting, Management and Policy Journal*. Special issue "The development, use and abuse of indicators and indices in sustainability and environmental management". In press.

Vinke-de Kruijf, J., H. Bressers and D.C.M. Augustijn. 2014. How social learning influences further collaboration: experiences from an international collaborative water project. *Ecology and Society*. 19 (2): 61. DOI: 10.5751/ES-06540-190261

Voinov A., R. Seppelt, S. Reis, J.E.M.S. Nabel and S. Shokravi. 2014. Values in socio-environmental modelling: Persuasion for action or excuse for inaction. *Environmental Modelling & Software*. 5: 207–212. DOI: 10.1016/j.envsoft.2013.12.005

## Conferences and Events

### 2014 Oxford Adaptation Academy

10 – 30 August, 2014 in Oxford, UK

The Academy is a professional development programme to develop technical and leadership skills through actual project work and practical case studies. It is run jointly by the Global Climate Adaptation Partnership and Smith School of Enterprise and the Environment at the University of Oxford.

More details can be found at:

<http://www.smithschool.ox.ac.uk/education/gcap-programme-2014.pdf>

### International Society for Environmental Epidemiology (ISEE) 2014 conference

24-28 August, 2014, Seattle, USA

6th Annual International Society for Environmental Epidemiology Conference - From Local to Global: Advancing Science for Policy in Environmental Health

More information:

<http://depts.washington.edu/uwconf/isee2014/>

### Deltas in Times of Climate Change Conference 2014

24-26 September 2014, Rotterdam, the Netherlands

Theme: Opportunities for People, Science, Cities and Business

The second international delta conference aims at exchanging scientific knowledge, lessons learned and best practices with regard to rising risks to deltas and delta cities driven by climate change.

More information:

<http://www.climatedeltaconference2014.org/>

### 4th Asia-Pacific Climate Change Adaptation Forum 2014.

1-3 October, 2014, Kuala Lumpur, Malaysia

Theme: New Partnerships for Resilient Development - Government, Business and Society.

The 4th forum is organised by The Asia Pacific Adaptation Network (APAN) and will focus on adaptation actors and how they collaborate to form partnerships and networks. Actors are individuals, organisations or networks that participate in decision-making and action-taking related to adaptation to climate change. Actors in adaptation can influence agendas and activities in many ways all the way from lobbying or advising through to creating and following rules, norms and procedures.

More information:

<http://www.asiapacificadapt.net/adaptationforum2014/>

### Open Conference on Global System Science

8-9 October 2014 in Brussels, Belgium and Phoenix, USA

9-10 October in Beijing, China

Theme: Unpacking Green Growth

The main goal of this meeting is to facilitate a rich and fruitful intercontinental dialogue between scholars and practitioners to share insights and discuss open questions about green growth in the context of global challenges. The three sub-events Brussels, Phoenix and Beijing will be connected via Internet.

More information: <http://www.globalclimateforum.org/>

### 35th Annual Conference of the International Association for Impact Assessment (IAIA) – First Announcement

20-23 April 2015, Florence, Italy

Theme: Impact Assessment in the Digital Era

New technologies are influencing all aspects of our societies, and they play a pivotal role in promoting sustainability worldwide. The aim of this conference is to advance a multidisciplinary discussion about the challenges and opportunities associated with the use and diffusion of new technologies in impact assessment. Could “smart” cities and solutions be an opportunity for institutions, businesses, practitioners, and society in a web-connected world? How do we face social differences and challenges for planning the sustainability of our future?

More information:

[http://www.iaia.org/downloads/IAIA15\\_first\\_announcement.pdf](http://www.iaia.org/downloads/IAIA15_first_announcement.pdf)

## Blog

Your events, forthcoming publications or any other news relevant for TIAS members may be posted on the TIAS blog: <http://tiasonline.wordpress.com/>

Please send your entry to Johannes Halbe, [jhalbe@uos.de](mailto:jhalbe@uos.de)

## Call for Submissions

TIAS members are encouraged to submit feature articles and/or news items for future issues of the TIAS Quarterly and our blog. Contact Johannes Halbe, [jhalbe@uos.de](mailto:jhalbe@uos.de)

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#### TIAS Membership fees:

Individuals: € 50 / US\$ 65 annually

Students: €15 / US\$ 20 annually

Institutions: € 200 / US\$ 250 annually