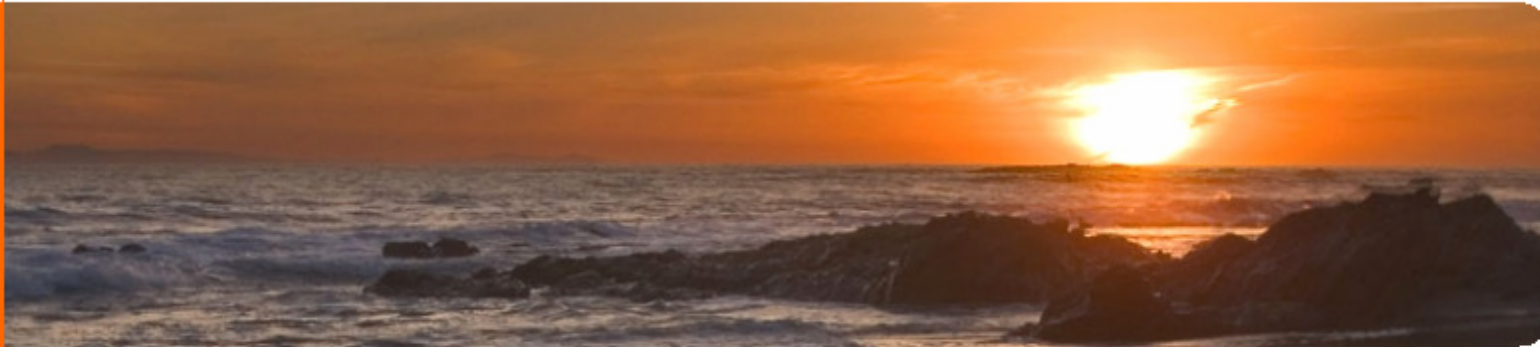


IARU International Scientific Congress on Climate Change, Copenhagen, 10-12 March 2009



Participatory scenario development for integrated sustainability assessment

“Climate Tools and Information to Support Adaptation”

Lisa Bohunovsky and Ines Omann



Aim of this presentation

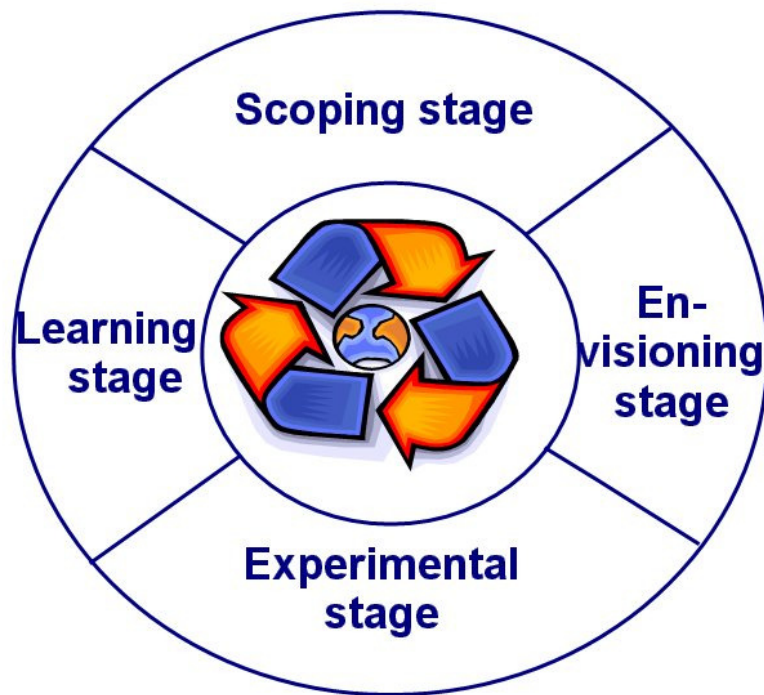
- integrated sustainability assessment and climate change
- participatory scenario development
- project examples

Adaptation to Climate Change

- Climate change is a complex and persistent problem of unsustainability.
 - Holistic approaches are needed in order to capture various interlinkages.
- Participatory processes at the local/regional level
- increase credibility, robustness, chances for successful implementation
 - direct link to those who should act



Integrated Sustainability Assessment (ISA)

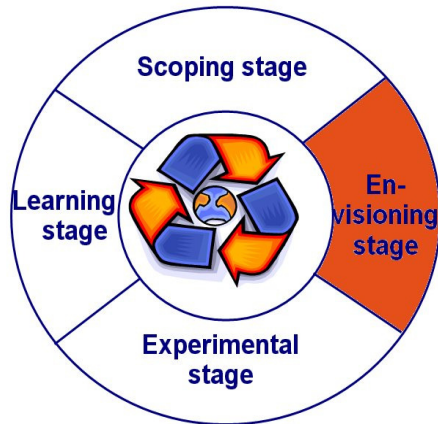


The ISA cycle



ISA is a cyclical, participatory process of *scoping*, *envisioning*, *experimenting* and *learning* through which a shared interpretation of sustainability for a specific context is developed and applied in an integrated manner in order to explore solutions to persistent problems of unsustainable development.

Scenarios within Envisioning phase



- ~~trends, forecasts, predictions, ...~~

Scenarios outline pathways into the future, shaped by divergent assumptions about actions, approaches, and choices.

“..one of the few tools available for unravelling the secrets of future” (Anastasi, 2003)

Participatory processes needed

- include those who are affected and those who might influence development (stakeholders)
 - derive a shared vision of sustainability
 - effectiveness, social robustness
 - process of scenario development at least as important as result (identification, empowerment, acceptance, etc.)
- extent of participation varies



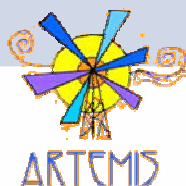
Project examples

ARTEMIS	ALARM	EcoChange
Assessment of Renewable Energy Technologies on Multiple Scales (ARTEMIS) – A Participatory Multi-Criteria Approach	Assessing large scale environmental risks for biodiversity with tested methods	Challenges in assessing and forecasting biodiversity and ecosystem changes in Europe
Austrian Science Fund (FWF)	EC FP6	EC FP6
2003-2006	2004-2009	2007-2011



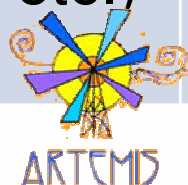
Scenarios within project examples

ARTEMIS (local)	ALARM	EcoChange
<p>Local energy scenarios with focus on RET; pre-developed scenarios were completed with citizens;</p>	<p>Socio-economic scenarios linked to IPCC climate change and land use scenarios on EU scale; consultative forum with stakeholders from science, administration and NGOs</p>	<p>Socio-economic scenarios linked to climate change & biodiversity scenarios on the scale of three European regions; interviews, workshops with local stakeholders</p>



Scenario details

ARTEMIS (local)	ALARM	EcoChange
four scenarios (focus on heat, electr., efficiency)	BAMBU, GRAS, SEDG + shock scenarios	downscaling of ALARM scenarios to case studies
future developm. of energy demand (increasing vs. reduction)	economic, demographic, political development	link to regional structures, stakeholders, etc.
energy generation (heating systems, biogas, SHP, etc.)	always link to environmental / biodiversity implications	



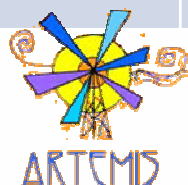
Comparison of Approaches

ARTEMIS (local)	ALARM	EcoChange
<ul style="list-style-type: none"> + local scale + participatory + direct link to implementation 	<ul style="list-style-type: none"> + broad socio-economic, political and environmental focus 	<ul style="list-style-type: none"> + local/regional scale + participatory scoping and scenario development
<ul style="list-style-type: none"> - rather narrow description of scenarios (technical focus) 	<ul style="list-style-type: none"> - European scale - minimum standard of participation 	<ul style="list-style-type: none"> - restrictions of participation due to lack of money and time



Outcomes

ARTEMIS (local)	ALARM	EcoChange
participation in e5-programme (Energy Globe)	policy briefs highly requested at EC	aim is to initiate regional thought-process of possible sustainable developments; projects ends 2011
energy team with ARTEMIS-stakeholders still active	participatory processes in several case studies	
very active with regard to RET and efficiency	dissemination through members of consult. forum	



Conclusions

- Scenarios are important in order
 - to look at „what happens if“
 - to get a holistic picture of a situation and the possible futures
 - to build a solid basis for political decisions
- Participation
 - inclusion of ideas and knowledge
 - empowerment
- Local level is
 - closer to implementation
 - can be more concrete



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What is needed?

- further experience and applications
- science policy that allows for participatory approaches → time and money!
- training of scientists to accompany participatory processes



Thank you for your attention!

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Key literature

- Methodology of participatory scenario development: e.g. GEO Resource Book, Training module 6. Scenario development and analysis
- **MATISSE and ISA:** Jäger, J., Bohunovsky, L. and Binder, J. (eds.) 2008. Methods and Tools for Integrated Sustainability Assessment. Project Summary. Sustainable Europe Research Institute, Vienna, Austria.
- **ALARM Scenarios:** Spangenberg J.H. 2007. Integrated Scenarios for Assessing Biodiversity Risks. Sust. Dev. 15
- **ISA and climate change:** Weaver, P.M. et al. 2006. Mainstreaming action of climate change through participatory appraisal. IJISD 1/2

