

Appendix 2. Additional results on scenario assessments.

Rwenzori Region, Uganda

Box A2.1: Assumed driver interactions and implications of the first scenario developed for the RWR

The first scenario, the “Autocratic dangerous scenario”, is driven by a very effective but autocratic government which becomes increasingly influenced over time by funds dependent on international donors. Environmental laws are strictly enforced and contraventions severely punished. However, poor planning and too little investment into the educational system negatively affect environmental awareness. People’s resistance against restrictions to access natural resources hinders the implementation of strategies on INRM. Socio-economic development in the RWR is slow due to low education levels, and alternative income sources for improving food access are lacking. The restrictions on access to natural resources in Rwenzori’s protected areas increase pressures on the surrounding land to feed the growing population. With poor land management practices, soil and water resources degrade. Although the government aims to increase agricultural productivity and therefore permits the conversion of specific areas into cropland, food security has not improved much.

Details of the survey of local researchers to evaluate scenario processes and outcomes

Table A2.1: Information on local researchers who participated in the survey, with the number of co-authors given in square brackets

	Number of participants	Key functions and responsibilities in the INRM process	Professional background
OZW	4[1]	Environmental scientists (Institut des Régions Arides, Medenine, Tunisia)	Economy (1), Hydrology (2), Agro-Economy (1)
RWR	2[2]	Environmental scientists (Mountains of the Moon University, Fort Portal, Uganda)	Agro-Ecology (1) Natural resource management and conservation (1)
IND	3[1]	Environmental scientist (Wetlands International Mali Office, Rural Development Officer) Environmental scientist (NGO MCCA in IND) Regional Director of the Sustainable Development Programme of IND	Ecology and agriculture (1) Ecology and zootechnics (1) Engineer in water and forest science (1)
UTH	2[1]	Environmental scientists (International Water Management Institute (IWMI), Pretoria, South Africa and Institute of Natural Resources, Pietermaritzburg, South Africa)	Ecology (1, water resource management), Environmental management and resource governance (1)

Table A2.2: Survey of local researchers on the usefulness of the scenario process and outcomes for sustainability research to feed into the INRM process in the case studies. The scores represent the overall evaluation of each group of researchers. They are on an ordinal scale from 1 to 5 with 1: I absolutely do not agree, 2: I do not agree, 3: I partially agree, 4: I agree, and 5: I fully agree.

Question number	Survey question	OZW	RWR	IND	UTH
Credibility: the technical quality of the scenario process and outcomes					
1	There was sufficient knowledge and expertise of participants involved in scenario building process	5	4	4	5
2	The scenario tool (approach, model) was adequate to assess main system drivers	4	4	4	5
3	The scenario building approach was easy to understand	3	4	3	3
4	The developed scenarios are consistent and plausible	3	4	5	4
5	Adequate knowledge and facts were missing for some important factors and relationships (5 for no, 1 for many facts missing)	4	5	4	4
Salience: the relevance of scenario process and outcomes					
1	The scenario outcomes are helpful in future activities of your institute	5	5	5	3
2	The process and the scenarios improved the understanding of future developments from different perspectives	5	5	5	4
3	The scenario outcomes were documented in a way which was understandable	3	4	4	3
4	The scenario outcomes were presented to decision-makers (stakeholders)	5	5	5	1
5	The scenarios covered relevant themes and topics for the actual INRM process	4	5	4	5
6	Scenario assessment contributed to the overall INRM process in the region	3	5	5	2
7	The scenario assessment met the defined targets	3	5	4	1
8	The topics treated in scenarios were, independently of our research, also a matter of concern in local media or the public	5	5	5	5
9	There have been parallel activities taking place on INRM by administration / planning / legislation / NGOs	5	5	5	5
Legitimacy: the fairness of the process					

1	Improved process / dialogue between stakeholders and scientists involved in INRM during the process	4	5	4	5
2	The targets of the scenario process were clear to all participants	4	3	5	4
3	The targets of the scenario process were shared by all participants	4	5	5	3
4	The scenario process took into account diverging values and preferences of involved participants	5	4	5	4
5	The process allowed for open participation	2	5	5	2
Capacity building: usefulness for future activities of the research team					
1	The applied techniques, models or tools for scenario assessments will be used in future research activities	5	5	4	3
2	The scenario process enhanced the understanding of feedbacks between nature and human system	5	5	4	4
3	The scenario process enhanced understanding of main urgent sustainability problems	5	5	5	4
4	The scenario process enhanced knowledge about thresholds of the system of analysis	3	4	5	4
5	The scenario process enhanced knowledge about key uncertainties	5	5	4	4
6	The scenario process enhanced knowledge about spatial scale-interactions & scale dependencies	3	5	5	4
7	The scenario process enhanced knowledge about bringing together long term sustainability goals and short term decision making	2	5	5	4
8	The scenario process enhanced knowledge about implications of human behavior for sustainability goals	3	5	5	4
9	The scenario process enhanced knowledge about people's values and preferences for future development	3	5	5	2
10	The scenario process enhanced knowledge about potential sustainable transition pathways	5	4	3	4
11	The scenario process contributed to the process of prioritizing management options	4	4	5	2
12	The scenario process contributed to the process of assessing the impact of management options	2	4	5	2
13	The scenario process contributed to the process of implementing management options	2	5	3	1
14	The scenario process improved the knowledge to deal with surprising events / abrupt changes	5	5	2	3