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Glowa Jordan River - Challenges and Approaches in Building the Bridge on Water-Related Research Between Socio-Economists and Natural Scientists in a Multi-National Environment

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Abstract

National and international political developments and relationships of power highly affect decisions on water resources management in the Jordan Valley. But demographics and the therewith intimately connected parameters of living standard and functionality of local social groups set essential cornerstones of the potential room for political manoeuvre. Findings of a network of regional and German social scientists indicate that changes in water arrangements are likely to have wide-ranging and complex impacts on the socio-economic carrying capacity of the region. Predominantly affected occupations are those that are linked to agriculture due to its outstanding role in providing livelihood and, simultaneously, its extremely high proportion in water consumption. Repercussions on adjacent fields of lower direct socio-economic importance, such as e.g. ecological systems and small-scale industries, may become crucial if their comparatively minor, but probably indispensable contributions to the carrying capacity, fall below critical, hitherto unknown thresholds. Analyses of existing databases and model scenarios cope with this bottleneck by applying general assumptions instead of precise, locally specific knowledge. The therefore obviously required interdisciplinary research faces the challenge of defining potential cause-effect-chains from biophysical and biochemical changes up to socio-economic parameters in a scientific environment, which is burdened with the difficulties of overcoming the barriers between the so-called ‘two cultures’ of natural and social sciences. The challenge becomes even more complex, if — as given in the Jordan Valley — political and social frame conditions set limits to the harmonisation of research methodologies of the different partners within scientific disciplines. All three problem areas, i.e. the need for defining cause-effect-chains as well as the aspects of inter and intra-disciplinary cooperation, find their exemplary expression in the set-up of the BMBF-funded project GLOWA Jordan River. Approaches for resolution have to meet the individual problems as well as their interactions by an accordingly complex set of measures, which range from structural adaptations, methodological compromise and communication mechanisms up to the mutually accepted delimitation of areas of competence and exchange.

Keywords: Interdisciplinary research, Jordan Valley, socio-economics, water