

### Inter and transdisciplinarity at ZEF

The current state and dynamics of the world's natural resources, often deteriorating or evolving at a pace unseen before, and the challenge of dealing with an unprecedented increase of knowledge about social, economic, and ecological systems and their interactions, forces science to adapt its approaches. This is even more an imperative given the social, economic, and ecological changes in the so-called “developing countries”, which are the research focus of ZEF. Despite globalization, the challenges these countries face can only be understood from different cultural and scientific perspectives.

For these reasons, development research at ZEF aims at crossing intra and interscientific boundaries. One way of dealing with the challenge of crossing boundaries is to apply interdisciplinary and trans-disciplinary research approaches whenever required to tackle particular research questions. Interdisciplinarity in development research means combining various academic disciplines in integrated research frameworks: teams composed of members of various disciplines work jointly toward a common research objective. Transdisciplinarity goes even further and bridges the gaps between science, politics and practice. Transdisciplinarity is therefore not to be seen as a new discipline, rather as an innovative way of organizing science that not only clarifies and integrates disciplinary research findings but, in addition, also engages actively local, regional and thus place-specific practitioners, stakeholders and potential end users in the research process.

ZEF has highlighted in its research that the modeling of environmental change and societal response to it as co-evolutionary processes can play an important role in supporting sustainable development. However, to make sure that models are of practical relevance, an interaction with all relevant stakeholder groups during the model development is preferable. Interaction with local actors not only leads to better scientific results, but also helps to understand in which way the knowledge exchange with different types of stakeholders has to be organized in order to cater for their knowledge needs and capacities. Scientific results can then be presented accordingly to target specific stakeholder groups (e.g. <http://www.glowa-volta.de/results.html>).

ZEF researchers have also applied trans-disciplinary approaches in the field of innovation development: Agricultural innovation packages have been developed jointly with local stakeholders to ensure the local fit of innovations ([http://www.zef.de/fileadmin/webfiles/downloads/FTI\\_guide\\_web.pdf](http://www.zef.de/fileadmin/webfiles/downloads/FTI_guide_web.pdf)) in, for example, post-Soviet countries. In the context of several projects, the trans-disciplinary approach led to the establishment of local, follow-up structures such as NGOs that can carry on ZEFs' vision and work beyond the lifetime of projects, for instance in Ethiopia and Uzbekistan (<http://www.ecff.org.et/>, <http://www.krass.uz/>).

Disciplinary and interest-related differences, which can sometimes hinder inter- and trans-disciplinary research interactions, are addressed by drawing on the boundary-crossing framework developed at ZEF ([http://www.zef.de/fileadmin/webfiles/downloads/zef\\_wp/wp33.pdf](http://www.zef.de/fileadmin/webfiles/downloads/zef_wp/wp33.pdf)). ZEF researchers are thus encouraged to look continuously beyond the borders of their own discipline, for the sake of the quality and relevance of our research.