



Tropentag, October 6-8, 2009, Hamburg

“Biophysical and Socio-economic Frame Conditions  
for the Sustainable Management  
of Natural Resources”

## The Quality of Geodata in Viet Nam in the WRM Process – A Challenge

ANDREAS BORGMANN, SANDRA GREASSIDIS, SYLVIA JASCHINSKI, CHRISTIAN JOLK

*University of Bochum, Environmental Engineering and Ecology, Germany*

### Abstract

Within the German Vietnamese research project “Integrated Water Resources Management Viet Nam” a Planning- and Decision-Support-System on a regional scale is being developed which includes tools and methods for the analysing data with regards to water resources, water use, water quality and additional environmental data by using ArcGIS. The research area is situated in the Dong Nai river basin (Southern Highlands, Viet Nam).

During the data collection difficulties had to be solved concerning how environmental data are generated, edited and provided by the different institutions and authorities in Vietnam:

The socio-economic and land-use data collected on the province and the district level are not equal in all provinces. One solution was to abstract the land use classes to higher levels of aggregation (For instance: The various forest types were summarised into two classes natural and planted forest).

The geodata features had various technical errors such as gaps between adjacent polygons, overlapping polygon areas, interrupted line (For instances: River and streets), incorrect attribute tables etc. (For instance: Streets where classified as land for aquaculture). With the help of actual satellite images, topographic maps and a redigitalisation of interrupted lines the errors could be fixed.

The errors were categorised and cleared to get consistent geodata features. The definition of digitalisation rules, the specifications of metadata information and the content of the attribute tables in shape files are necessary tasks to build up a consistent geodata management.

The importance of the quality of geodata in the IWRM process is being communicated with the Vietnamese institutions and authorities.

**Keywords:** Dong Nai Viet Nam, geodata management, IWRM