

LOCAL ECOLOGICAL FISHERIES KNOWLEDGE IN SUPPORT OF SUSTAINABLE DECISION-MAKING THROUGH MARINE SPATIAL PLANNING

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The paper will report research results of “LECOFISH” (<http://www.lecofish.be>). Data on the distribution of fishery activities and fish species in the Belgian Part of the North Sea (BPNS) are very limited. Studies on biological valuation of the BPNS confirmed that certain spatial information is only fragmentary available, such as on epibenthos, macrobenthos and demersal fish species. Due to the large grid of ICES boxes and the fact that these data do not sufficiently provide spatial information for small coastal regions, sustainable management of fisheries combined with nature conservation often lacks sufficient information.

Starting from the assumption that we lack sufficient small scale fisheries data for sustainable fisheries and nature management, LECOFISH gathered fisheries data through local ecological knowledge (LEK) of fishermen, commercial and recreational, during a period covering the last 50 years. The Belgian coastal zone, including the territorial sea and exclusive economic zone (3,600 km²) is the case study area. LECOFISH made use of interviews and oral mapping of fishermen. The overall objective of LECOFISH was: 1. to gather data through LEK to improve our knowledge of local ecosystems and fisheries in the Belgian coastal zone and to further analyze spatial and temporal distribution of fishery activities and fish abundance; 2. to compare LEK data with available Scientific Ecological Knowledge (SEK) data in order to assess the scientific value of LEK as a tool to fill in fishery data gaps (validation process); 3. to discuss LEK and SEK results with stakeholders (fishermen, officials from the fisheries administration, fishery scientists); 4. to explain changes in fishery activities and fish species shifts during the past 50 years; 5. to develop spatial maps with information of fishing (where, what and why) that are useful for marine spatial planning. After having explained the methodology used, the results of the above mentioned objectives will be reported in a paper presentation with focus on three commercial fish species (cod, sole and shrimps) as an example for further decision-making. Finally, spatial fisheries and fish distribution maps in their historical perspective can be used in support of marine spatial planning and sustainable management of fisheries and nature conservation.