

# ***An input-output analysis of the economic impact of natural disasters: a case study for the Prestige oil-spill***

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## ***Abstract***

What does it happen when natural resources are damaged or degraded up to the point that the economic exploitation is not possible (oil-spills, desertification, water pollution, salinization of soils, and so on)? Which is the impact of the exhaustion of natural resources on economic structures? Direct impact of natural disasters on a particular industry can be measured with help of sectorial and/or regional databases, and also of national accounts statistics. The measurement of direct impacts is not always a simply task, nevertheless the main difficulty arises in the analysis of indirect impacts on the related industries. Input-output tables, gathering the intersectorial relations of an economy, is then useful to evaluate the whole impact in terms of production and/or employment on industries that are not critically affected by the disaster. In this work we focus on a case study in order to show how the standard input output modelling can be useful to evaluate this issue. In particular, we focus on the well known *Prestige* oil-spill on Galician coasts on November 2002. Our aim is not only to measure the economic impact on the regional economic structure but also to provide a set of prospective scenarios in case of future oil-spills. We use the symmetric input output table of Galicia (IGE, 1998) and also the tables for the Spanish economy (INE, 2000), as well as regional statistics of the fisheries sector. We resort to the hypothetical extraction method (HEM) and examine the influence of this extraction on the other sectors in the economy (we consider that domestic production, which is not realized, is replaced with imports). A preliminary conclusion is that the complete exhaustion of fisheries would have an impact of 2.5% on regional PIB in Galicia, but only 0.2% in the rest of the Spanish PIB.

The indirect effects on the economic structure are not very significant, since backward (and forward) linkages of the fisheries sector are very weak. Beyond the importance of fisheries for consumption, the relevance of the case study consists in that the effects of the disaster are spatially concentrated, and so important consequences on the local and regional labour market arise.

**Keywords:** Input Output, Natural Disasters, Oil-spill, Prestige.