

# The Economics of the Marine Sector in Ireland

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# Presentation Overview

- ▶ The Marine Sector in Ireland
- ▶ Development of the Sector
- ▶ Overview of Project Objectives
- ▶ Current Issues
- ▶ Input-Output Analysis
- ▶ Conclusion

# Marine Sector Overview

- ▶ The Marine Economy was estimated at €3bn in Ireland & provided 21,824 jobs (Full-time Equivalent), representing 1.2% of total employment in 2003
- ▶ Sector can be divided into 3 main groups,
  - Marine Resources – Fishing, Water Transport, Seaweed, RE
  - Marine Manufacturing – Shipbuilding, Marine Equipment
  - Marine Services – Marine Construction, Environmental Consultancy, Tourism
- ▶ Research - significant development opportunities in the Irish Marine Sector
  - Niche markets

# Development of the Marine Sector

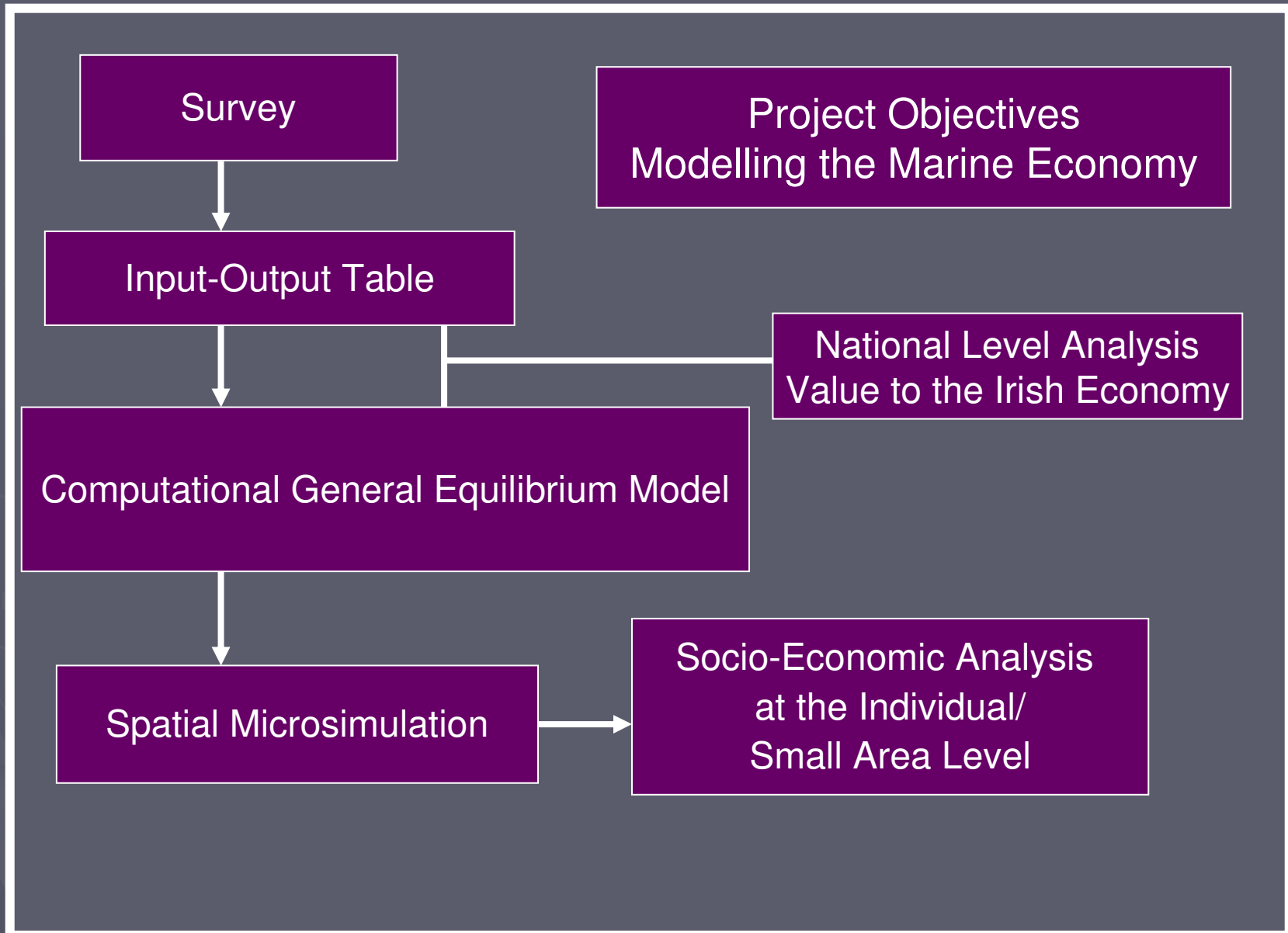
- ▶ Marine Strategy - increase the value of the marine sector by 50% by 2013 (Sea Change, 2003)
- ▶ The development depends on the
  - Exploitation of market opportunities &
  - The creation of high value-added outputs
- ▶ To achieve this goal;
  - A detailed understanding of the structure & characteristics of the Irish marine sector is required

# Issues

- ▶ Limited data on the marine economy – the location, employment levels, input/output of the marine sector, or marine sub-categories
- ▶ No distinct category for the marine sector in the Irish Input-Output tables
- ▶ Limited Data/Framework for Impact Analysis at the Macro Level
- ▶ Limited micro-level data - demographic, socio-economic, income characteristics of the marine population - impact analysis

# Project Objectives

- ▶ Produce a Marine Sector Report (Similar to EU Counterparts, IFREMER, France)
- ▶ Develop a Database of the Marine Sector
- ▶ Input-Output tables
  - Aggregate Economic Benefit of the Marine Sector
- ▶ CGE Model
  - Evaluate the Impact of Macro-Level Shocks on the Marine Sector
- ▶ Link to a Spatial Microsimulation Model (SMILE)
  - Micro-Level Economic Benefit of the Marine Sector



# Modelling Steps – I-O Analysis

- ▶ I-O analysis allows one to statically analyse the direct, indirect and induced effect of a sector or sub-sector & upstream and downstream linkages between sectors
  - Challenge - ensure consistent measures of margins sales by I-O heading (costs by sector, employment by occupation, etc) for a particular time period
  - Advantages – Holistic Approach
  - Disadvantage – Static/No impact Analysis



# Modelling Steps – CGE Model

- ▶ Given the advantages of I-O Tables in calculating the impact of a sector on an economy – I-O Tables have been combined with CGE Models, to overcome the static nature of I-O Tables
- ▶ I-O Tables assume there is no constraint on supply & everything is perfectly elastic.
- ▶ Allow for impact analysis at the macro-level

# Modelling Steps - SMILE

- ▶ **However, what about the impact of the Marine economy at the micro-level?**
- ▶ Linking the calibrated CGE model to a spatial microsimulation model (SMILE)
- ▶ Using a statistical matching technique, SMILE creates micro-level data for the population of Ireland
- ▶ Also, geo-referenced – ED information
  - Impact Analysis at the Small Area Level is possible

# Conclusion

- ▶ Allow policy-makers examine the impact of the marine economy at both the national and individual level
  - Allow in-depth analysis of marine sub-sectors & the potential for the development of niche markets,
  - Coherent impact analysis of various sub-sectors,
  - Provide stake-holders & various funding agencies with the relevant information regarding
    - ▶ potential returns from investment,
    - ▶ future regulations requirements,
    - ▶ R&D requirements and importantly
    - ▶ the impact of the Marine sector on the economy and across space.

Thank you for your time...