



# Surveillance data for: Marine Spatial Planning

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#### **Brief company introduction**





#### Framework

- Maritime Spatial Planning is a tool for improved decision-making.
- It provides a framework for arbitrating between competing human activities and managing their impact on the marine environment.
- Its objective is to balance sectoral interests and achieve sustainable use of marine areas.

The text above is taken from the Roadmap of Maritime Spatial Planning, published by the European Commission in November 2008.

Also UNESCO policy.

# Framework

Final recommendation: Data is abundantly available on many maritime activities in Europe, but there is a lack of aggregated data, consistent definitions and consistent knowledge bases in the European continent to make fair and valid comparisons or analyses.

For MSP to be successful, the transparency of the governmental institutions involved in the maritime arena needs to be enhanced significantly.

Roadmap of Maritime Spatial Planning, published by the European Commission in November 2008.



# Framework (within EU since 2013)

- Member States shall organize the collection of the best available data and the exchange of information necessary for maritime spatial plans and integrated coastal management strategies.
- The data referred shall include:

   Environmental, social and economic data
   Marine physical data in marine waters and geomorphological data in coastal zones.



# In Hong Kong?

- •HK Institute of Planners
- •HK Government
- •The Nautical Institute
- •Aim in HK:
  - Reduce emissions
  - Prevent conflicts of interest



#### **Data collection for MSP**



# Example 1 raw data





#### **Example 2 raw data**





### **Enough room?**







#### **Raw Data**



# **Data collection**

- Previous slides are 24 hour sampled
- More is possible via recording and replay
- Storage is no longer issue
- Sensors : radar and/or AIS



# **Data analysis**

- Looking for specific ships?
- Looking for specific ship types?
- Use of certain areas?
  - Traffic routes
  - Anchorages
  - Protected areas
- Emissions related data



# Data analysis

- Recording and replay:
  - Traffic is continuously recorded
  - Over longer periods of time datasets available

• Datasets at request possible



# Data analysis





# Data ownership ?

- AIS data ?
- Radar data?
- Datastreams from:
  - Data providers (network owners)
  - Satellite AIS providers
  - Government organizations
- Real time or historical data?



# Data ownership ?



# **Data formats**

- IALA recommendation V145 on Inter VTS exchange format (IVEF) service based on XML
  - <u>www.openivef.org</u>







# **Data formats**

- Other formats are:
  - IEC 61162
  - IEC 61992 for example LRIT data
  - Proprietary formats



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