Harmonization and **N**etworking for contaminant assessment in the **I**onian and **A**driatic Seas

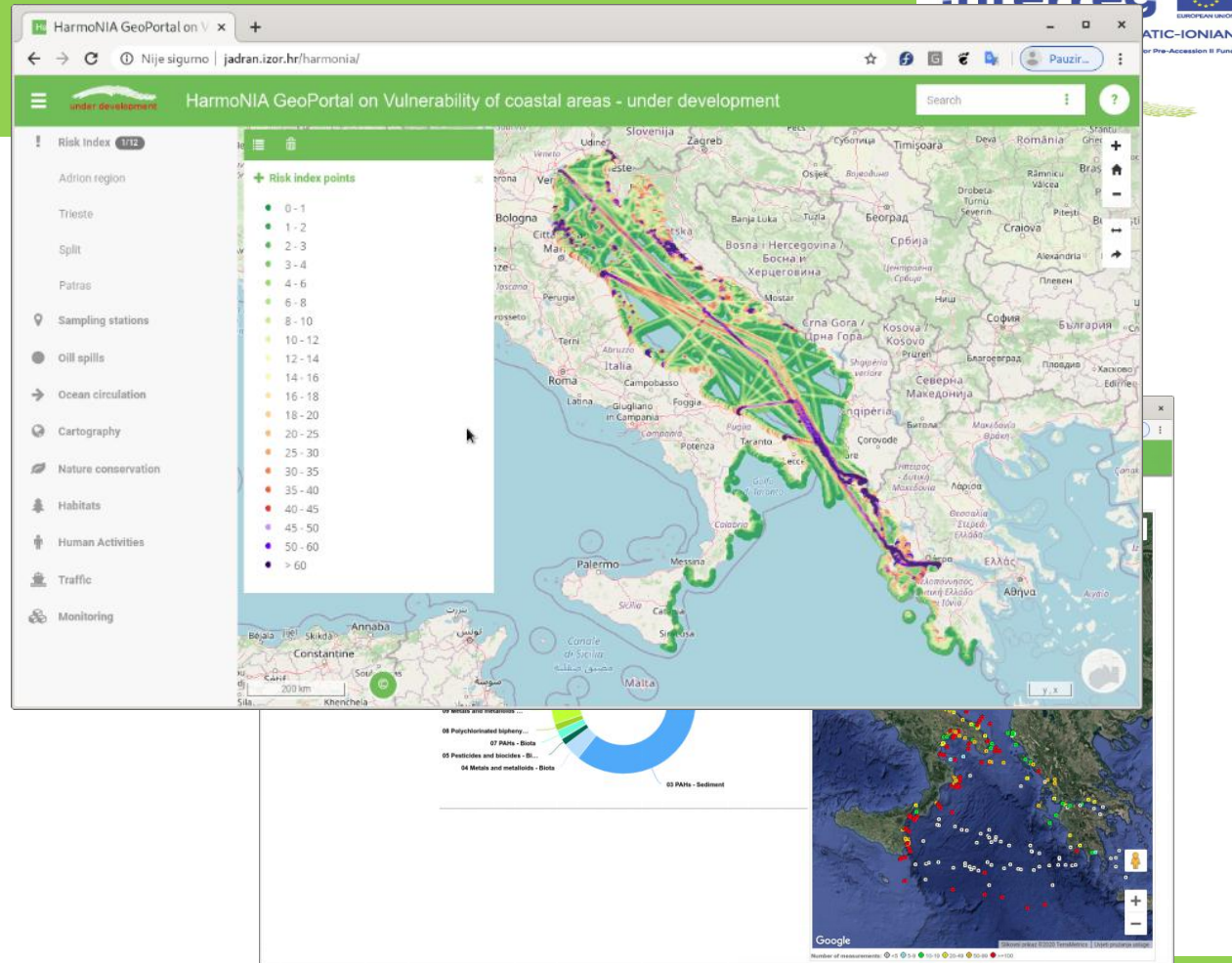## **Evaluation of coastal vulnerability to marine pollution dispersion on Harmonia Geoportal**

Institute of Oceanography and Fisheries, Split, Croatia
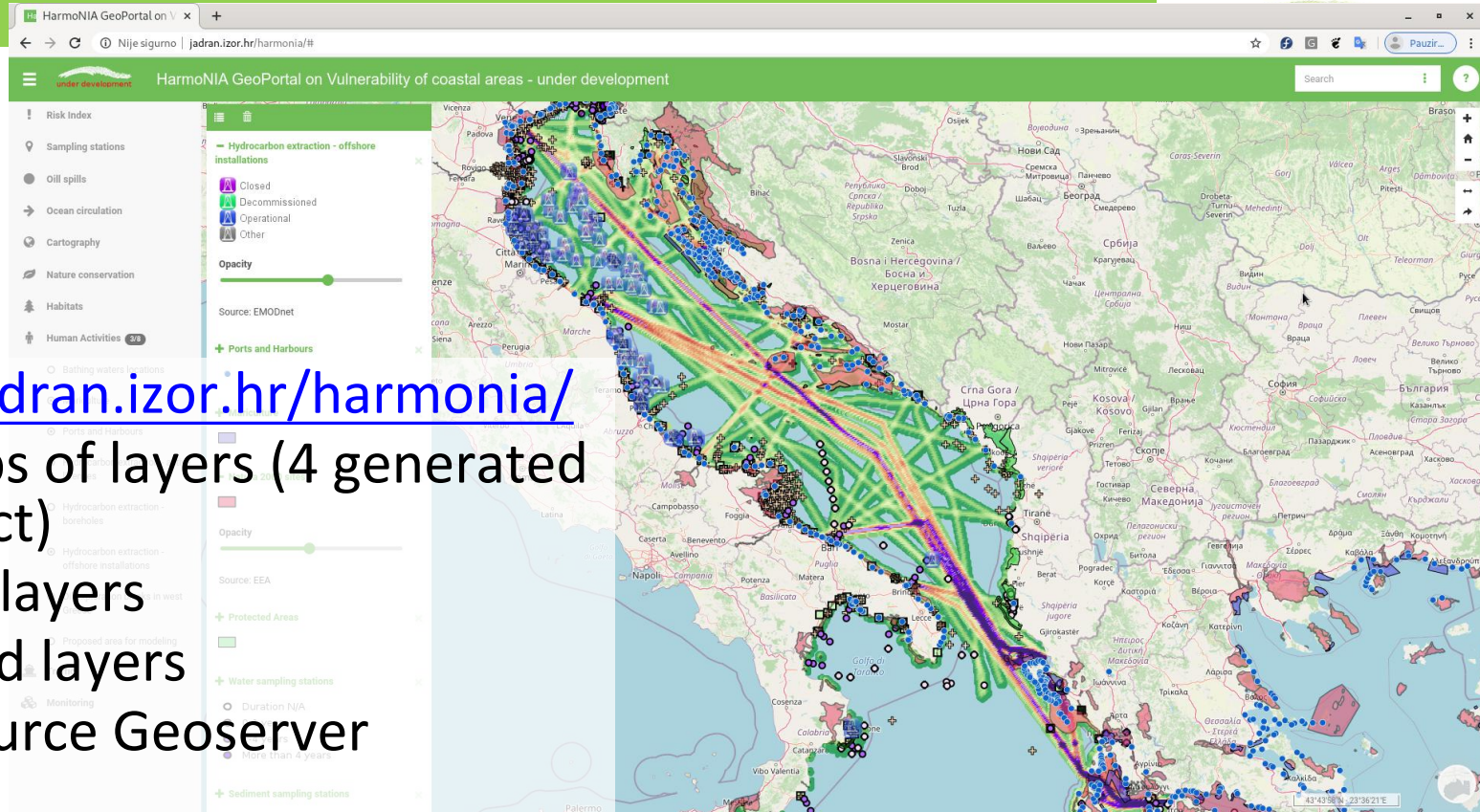
Damir Ivanković, Ivan Vučić

Introduction

- Focus on online products

- Products avaliable after formal ending of project

- Source of information

- Stakeholders, scientists and general public

HarmoNIA Geoportal

- http://jadran.izor.hr/harmonia/
- 10 groups of layers (4 generated by project)
- Total 58 layers
- Animated layers
- Open source Geoserver

- HarmoNIA project
- EMODnet
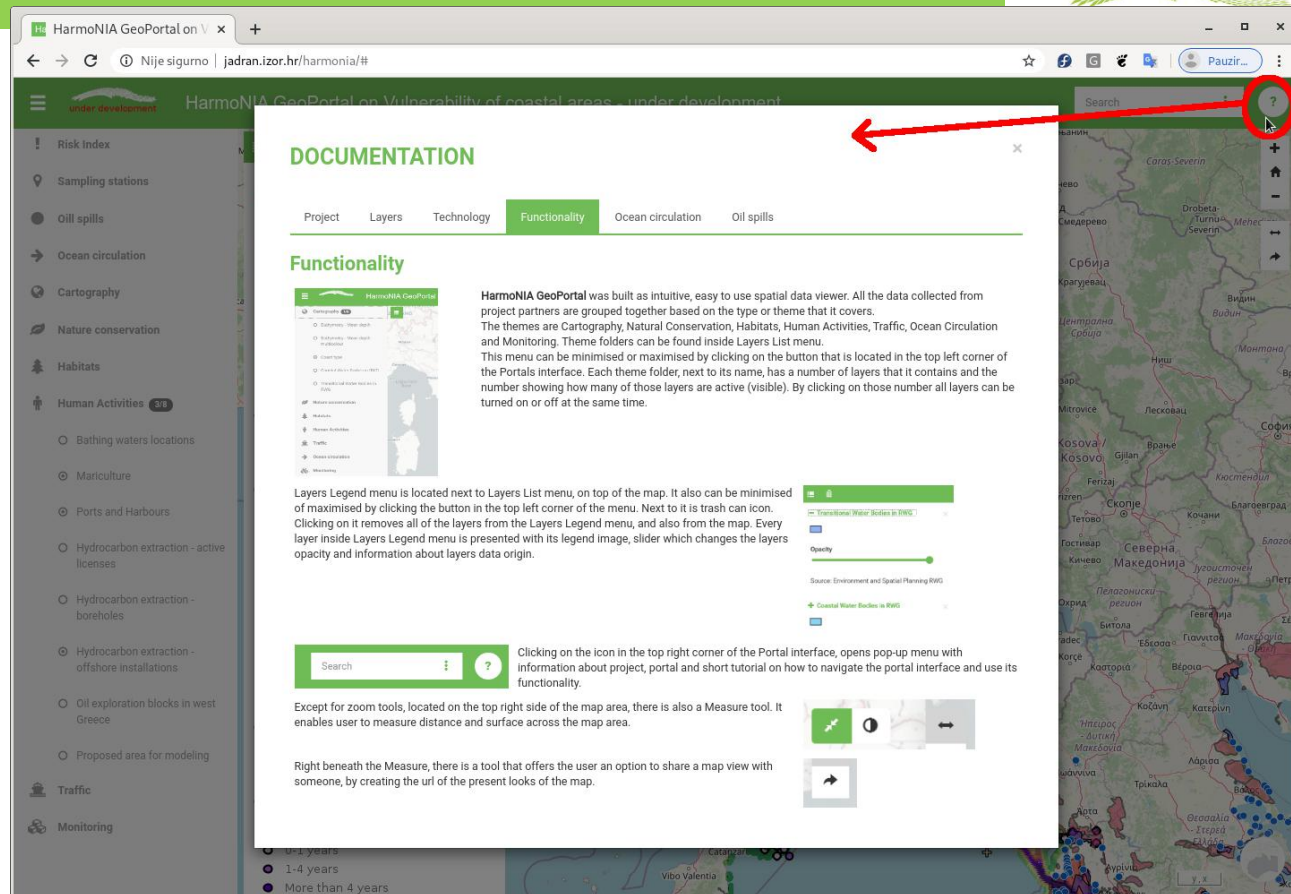- HAZADR project
- European Commisson
- EEA

About Geoportal and have to use it

- Help section
- Upper right corner

Methodology used in the oil spill risk assessment
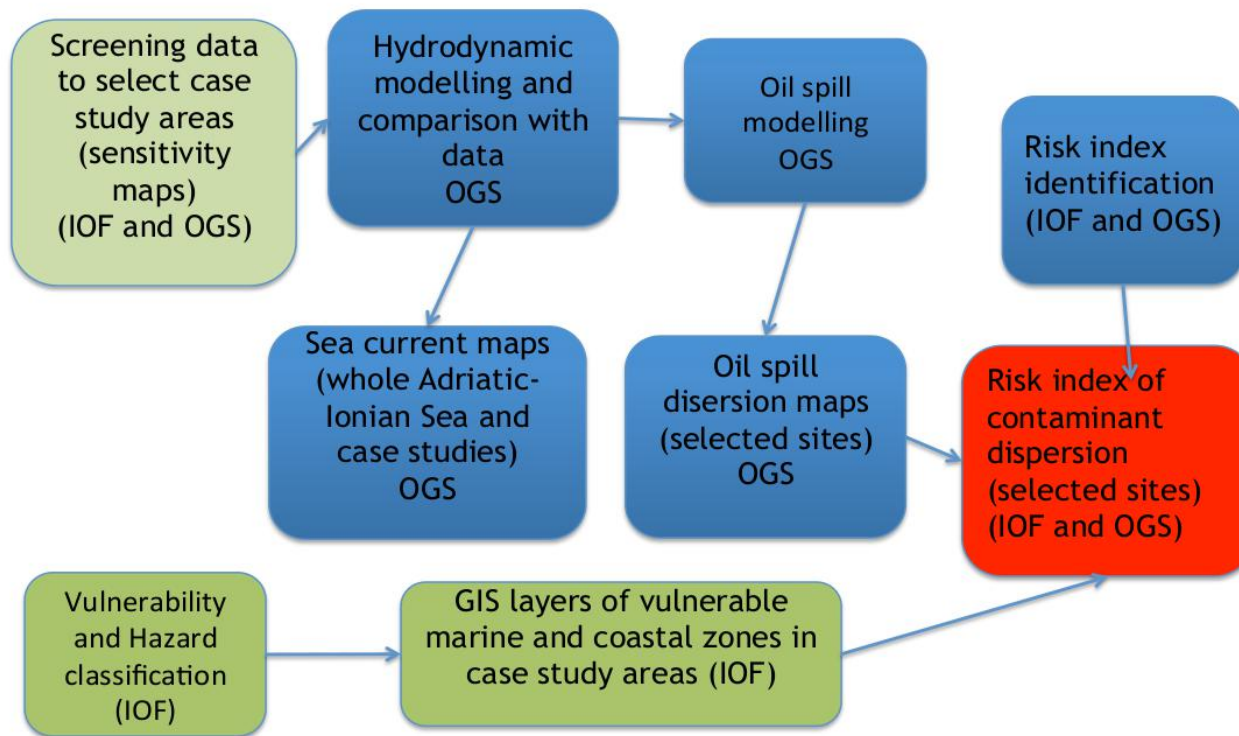
GIS layers of vulnerable marine and coastal zones

- Mariculture
- Protected areas
  - Ramsar sites data
  - Natura 2000 data
  - National data about natural protected areas
- Areas of socio-economic value
  - Bathing Water Directive

Vulnerability index

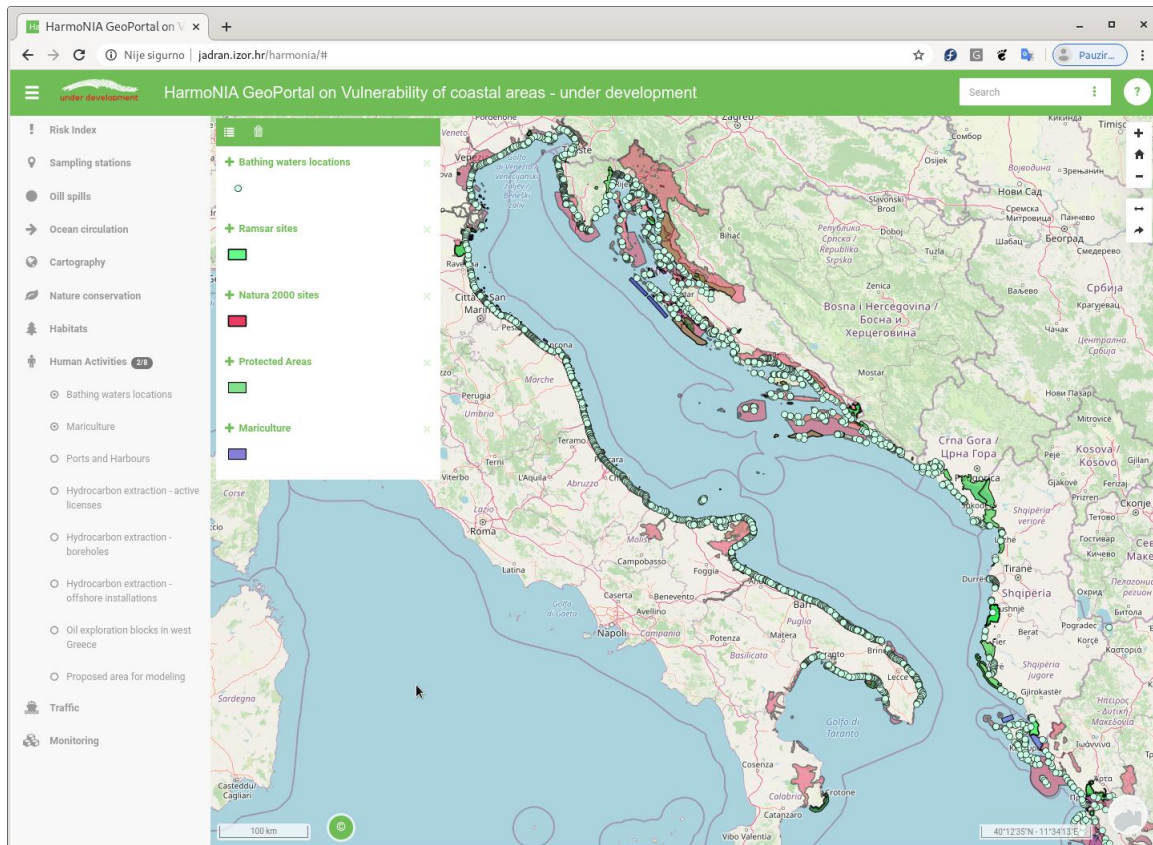- All Natural protected areas (weight factor 1)
  - 100m buffer Index 3 (v1)
  - 2000m buffer Index 2 (v2)
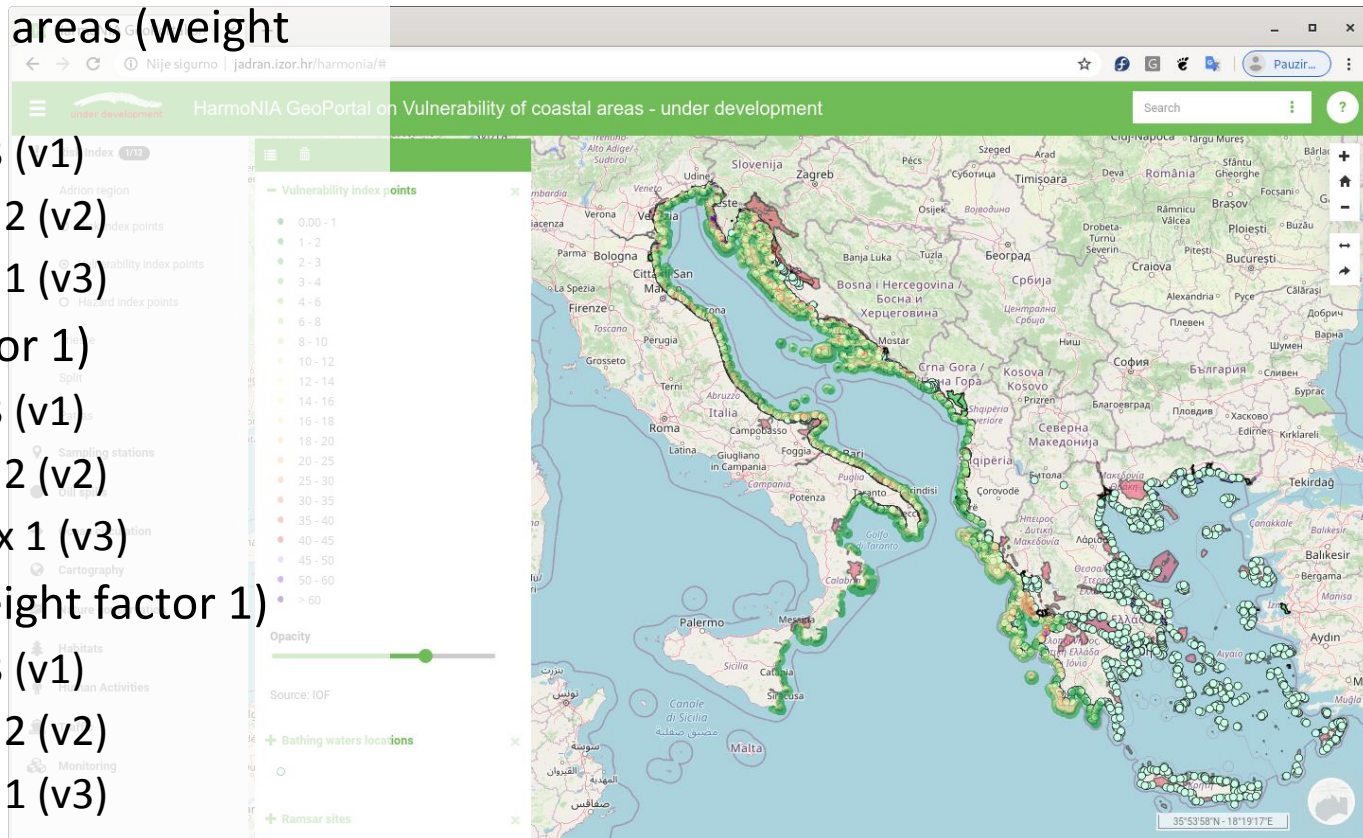 - 3500m buffer Index 1 (v3)
- Beaches (weight factor 1)
  - 100m buffer Index 3 (v1)
  - 2000m buffer Index 2 (v2)
  - 3500km buffer Index 1 (v3)
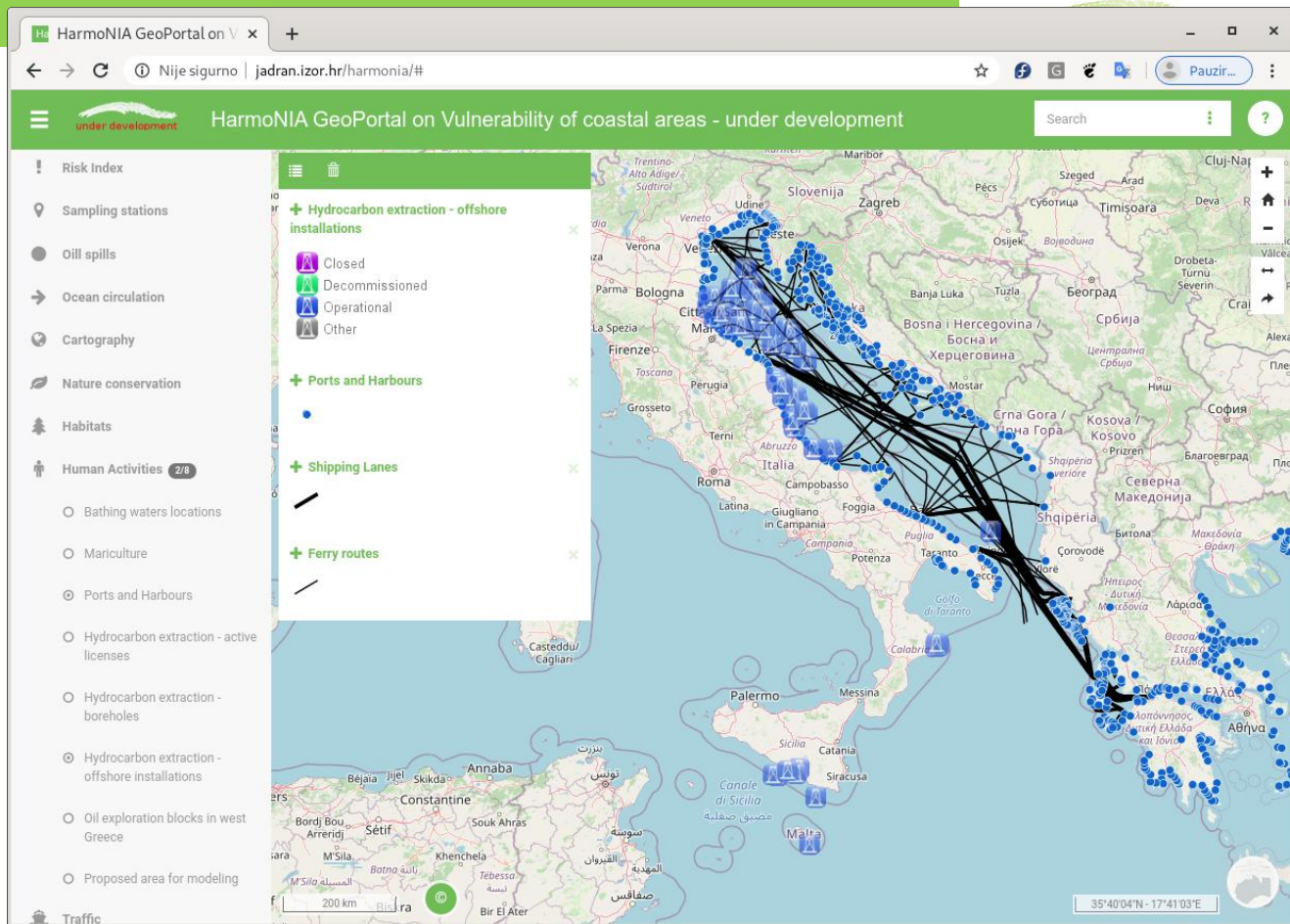- Mariculture sites (weight factor 1)
  - 100m buffer Index 3 (v1)
  - 2000m buffer Index 2 (v2)
  - 3500m buffer Index 1 (v3)

vtot=v1*3+v2*2+v3

# GIS layers of oil spill hazard

- Shipping lanes
- Ferry routs
- Ports and harbors
- Offshore platforms

Hazard index

- Shipping lanes (weight factor 4)
  - 2000m buffer Index 3 (h1)
  - 3500m buffer Index 2 (h2)
  - 5000m buffer Index 1 (h3)
- Ferry route (weight factor 1)
  - 2000m buffer Index 3 (h1)
  - 3500m buffer Index 2 (h2)
  - 5000m buffer Index 1 (h3)
- Ports and harbors (weight factor 1)
  - 2000m buffer Index 3 (h1)
  - 3500m buffer Index 2 (h2)
  - 5000m buffer Index 1 (h3)
- Off shore platforms (weight factor 7)
  - 2000m buffer Index 3 (h1)
  - 3500m buffer Index 2 (h2)
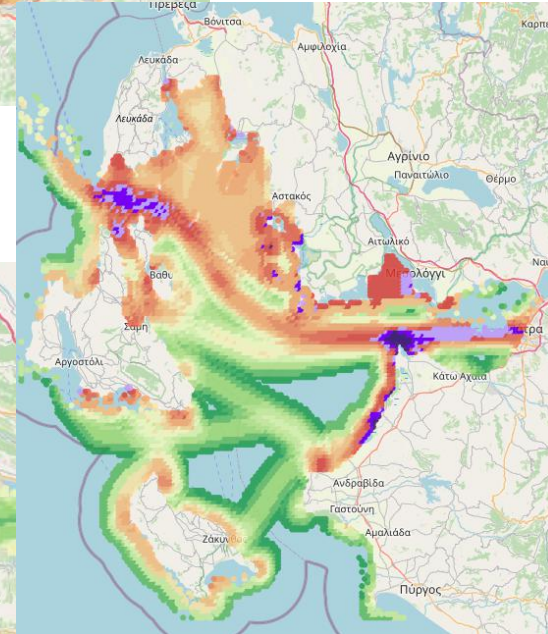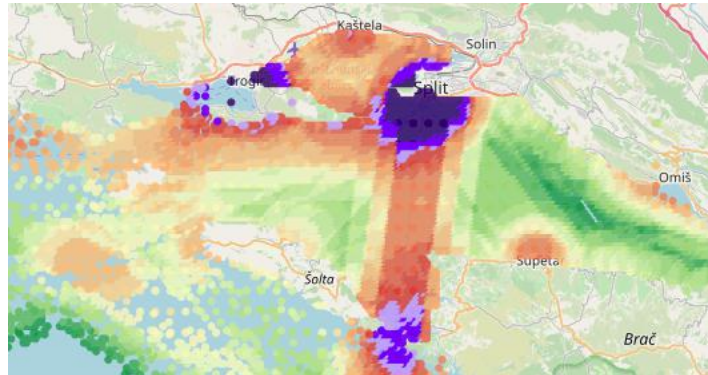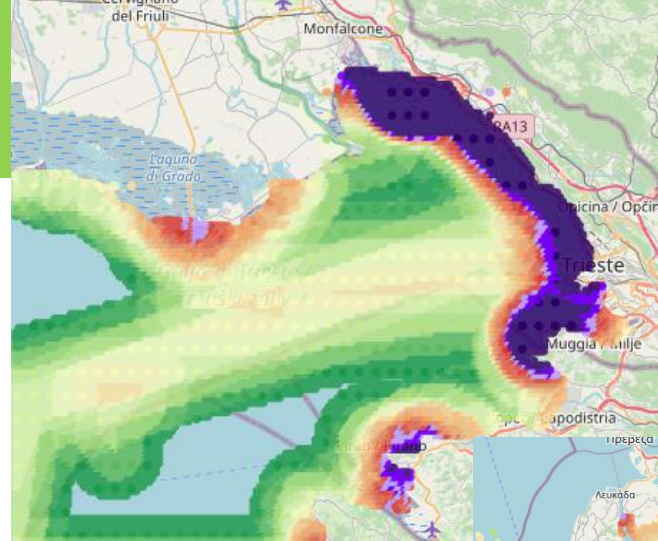 - 5000m buffer Index 1 (h3)

  htot=h1*3+h2*2+h3
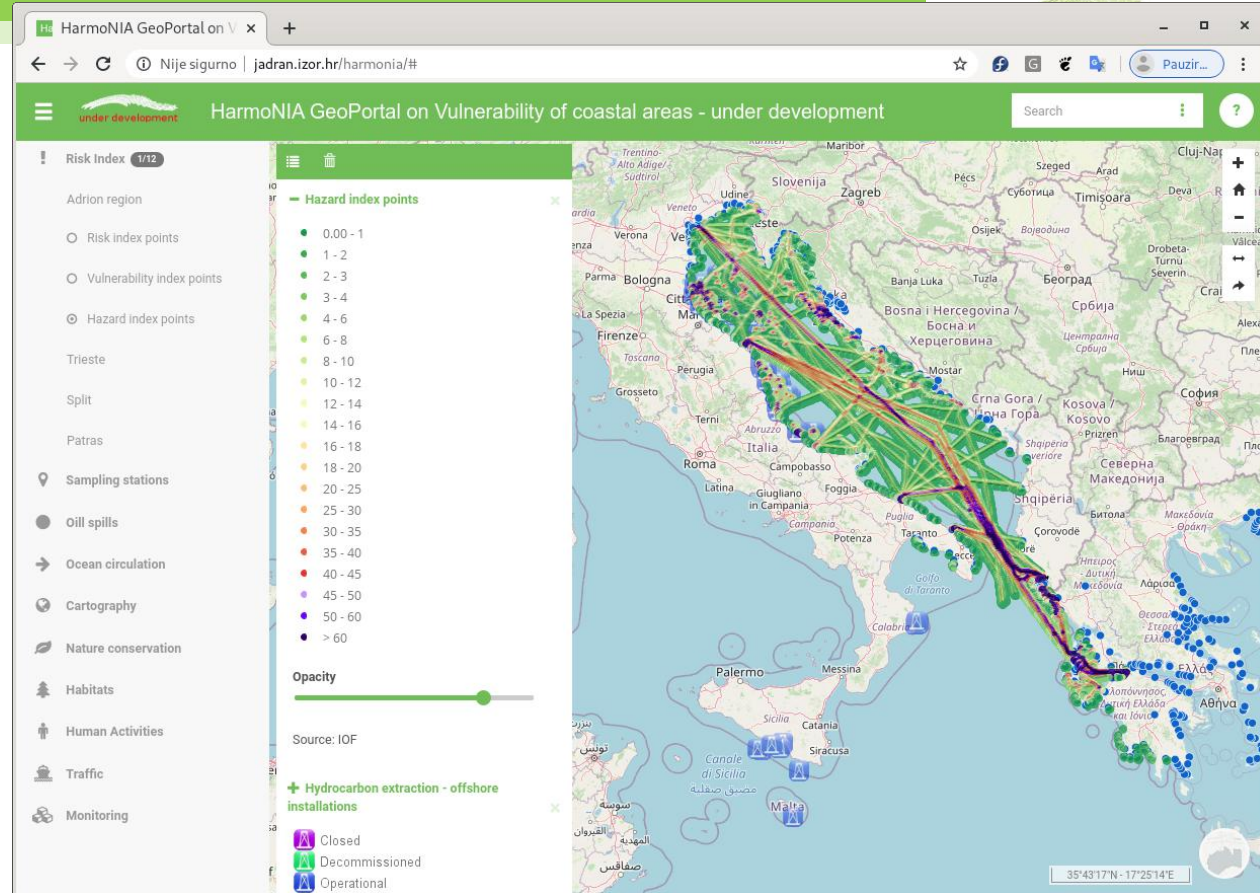
Risk index

**Hazard Index +
Vulnerability Index =
Risk Index**
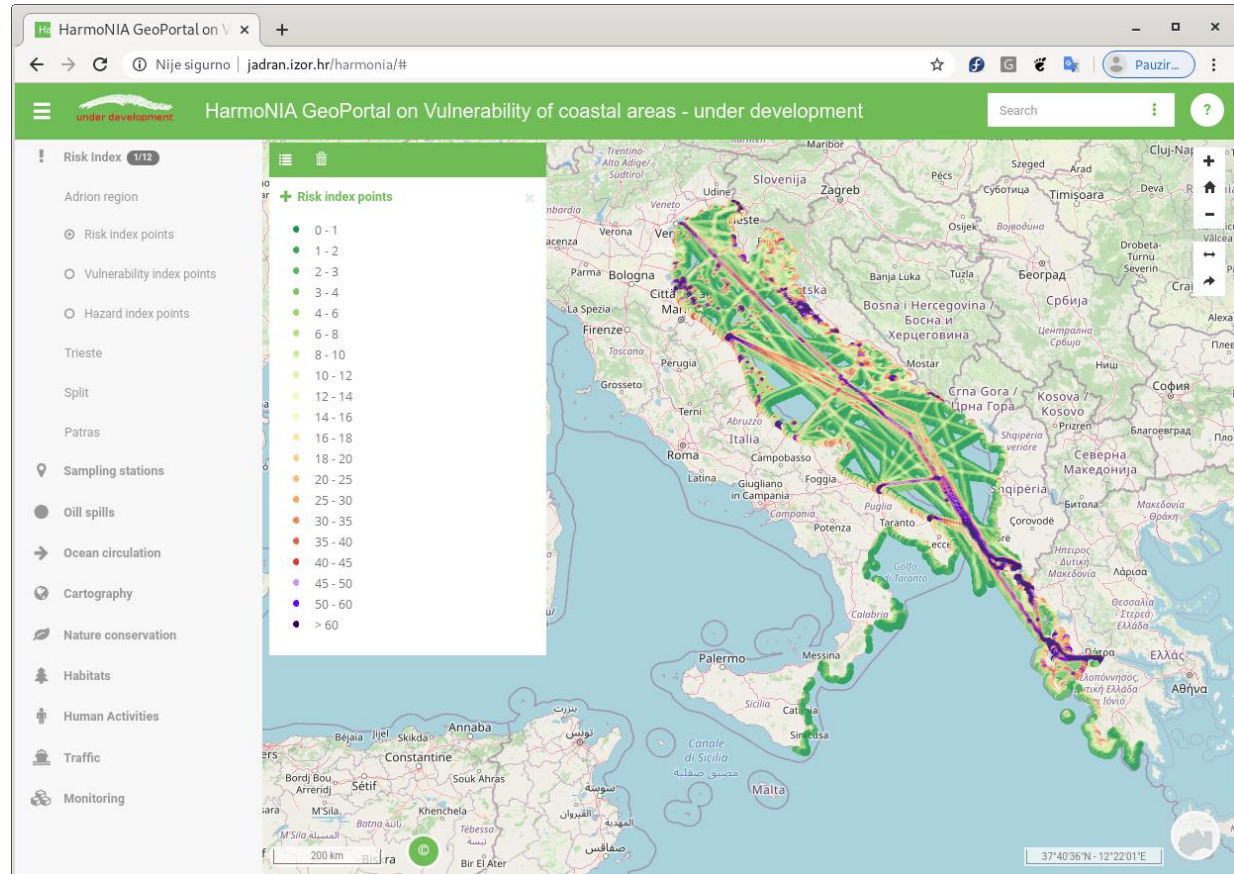
Strategy on risk assessment

- Use of hydrodynamic modeling
- Buffer method
- Hazard and Vulnarebility
- Spatial analysys
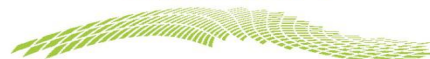- Adoptive parameters
- Accurate input layers
- Operational

Thank you for your attention!