



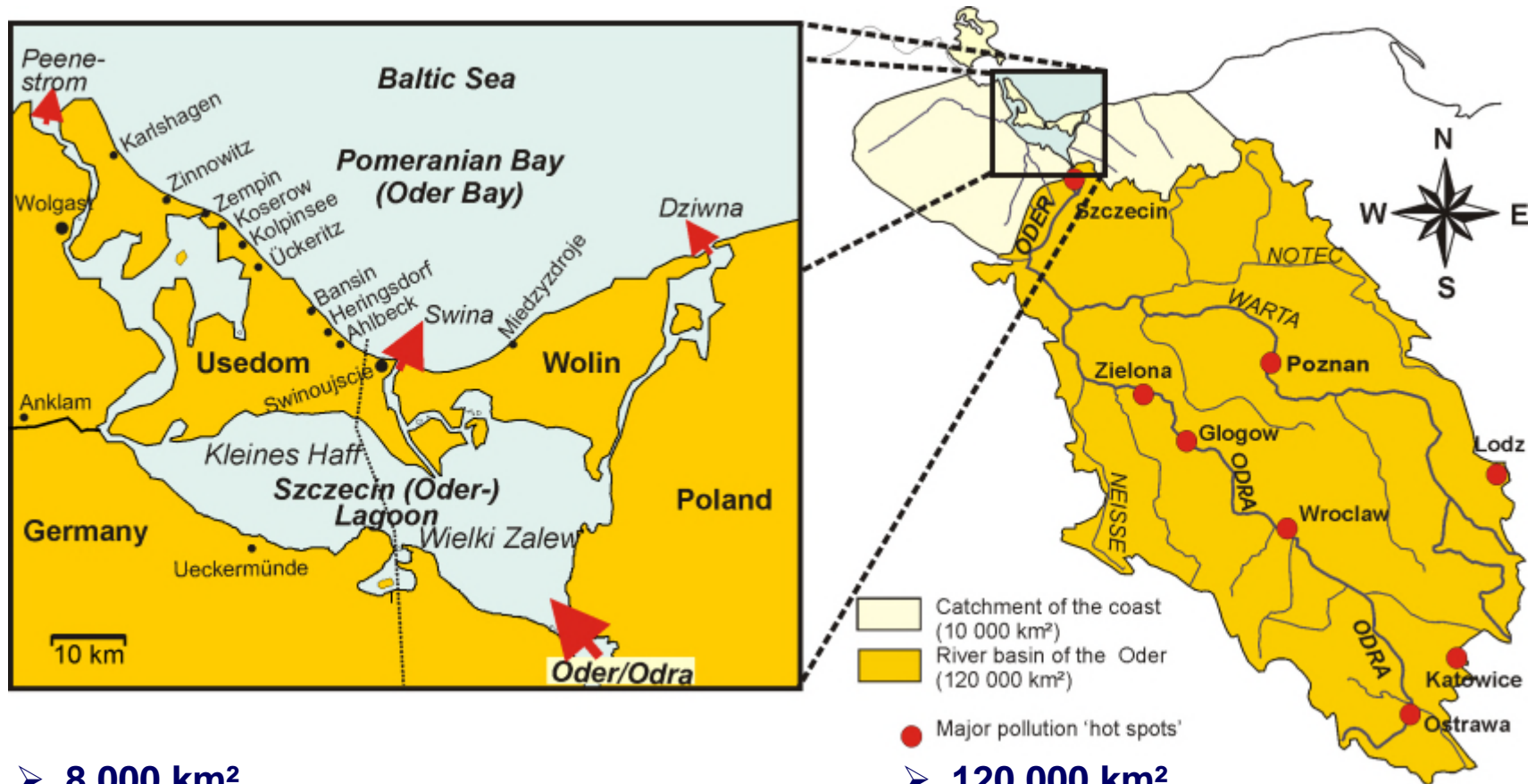
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River basin – coast interactions: The Oder (Odra) case study

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The Oder estuary and the Oder river basin

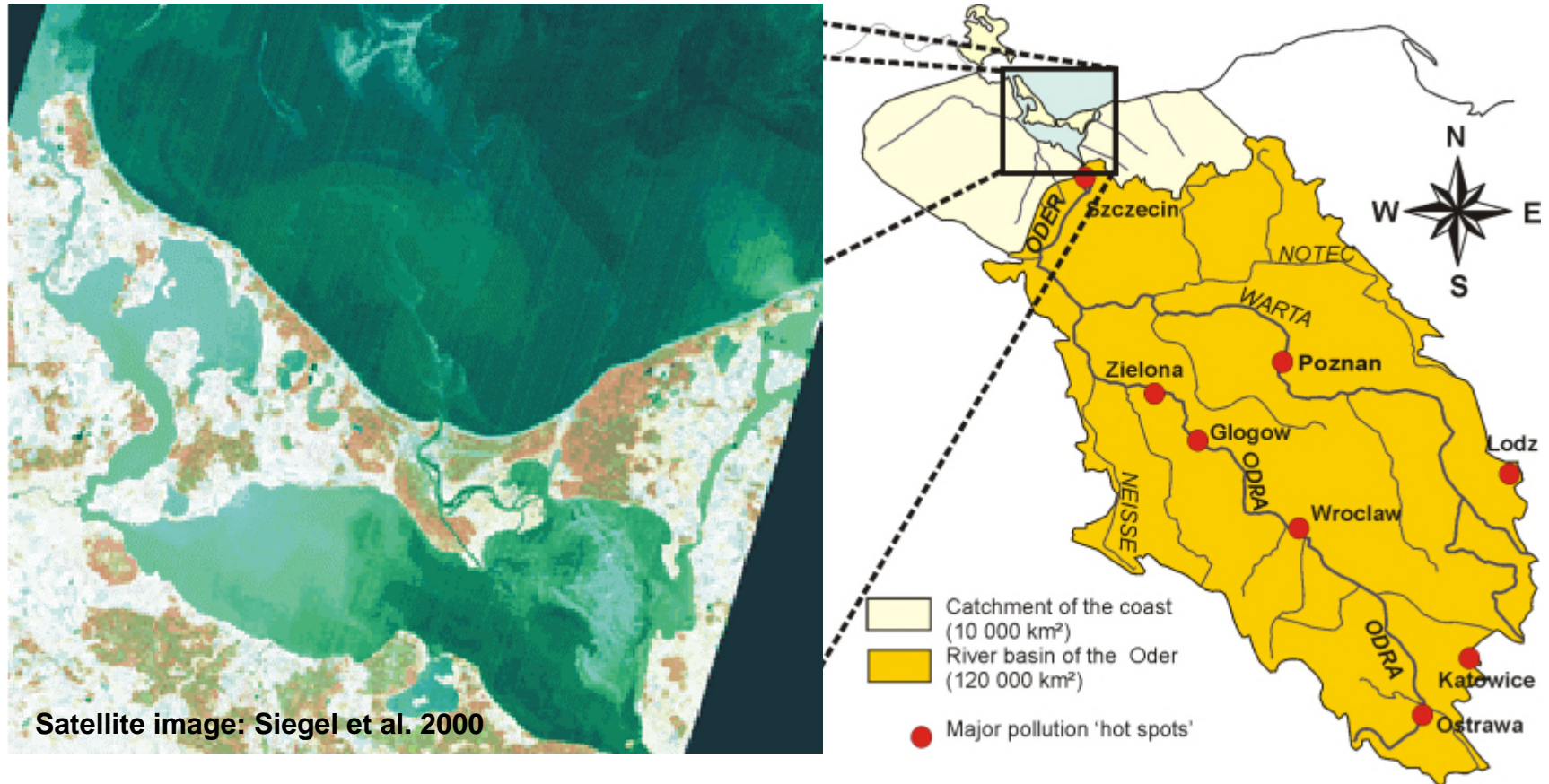


- 8,000 km²
- 840,000 inhabitants
- branches: tourism
- large areas of nature protection

- 120,000 km²
- 16 mio. inhabitants
- branches: shipping, chemical industry & agriculture

The coastal region is small compared to the Oder river basin.

River basin – coast interactions



- discharge of about 530 m³/s
- shipping channel across the lagoon links the river with the Baltic Sea

The Oder estuary region is strongly influenced by the river Oder/Odra.



Eutrophication & its impact on tourism





Eutrophication & its impact on fishery





Natural migration & alien species





Shipping/infrastructure & its impact on the river bed





Impact of the Oder river on the coast

- **High discharge of nutrients and pollutants cause severe eutrophication and poor water quality (Szczecin Lagoon/ Pomeranian Bay).**
- **Dredged river bed affects water and sediment transport.**
- **River regulations and the lack of natural retention areas increase flooding risk for coastal lowlands.**
- **Maintenance of the shipping channel has significant ecological consequences for the lagoon and the lowlands.**
- **Increasing shipping causes pollution and risk of accidents.**
- **Intrusion of alien species replaces native communities.**



Coastal Management

Coastal management depends on the management of the river basin, but:

- **Lacking awareness among regional coastal people concerning the importance of the river basin.**
- **Lacking awareness in the river basin about the coast and how it is affected by river management measures.**
- **Coast is regarded as an appendix of the river and not represented in decision making and management bodies in the river basin.**



This is why...

The project ***Research for an Integrated Coastal Zone Management in the Oder/Odra estuary region (ICZM-Oder)*** was initiated (2004-2007).

The project carries out research on river-coast interactions:

- **Impact of climate change on the river basin and the implications for the coastal waters**
- **Possible changes in land use in the river basin and the implications for the coastal waters**
- **Preparation of background documents on river basin-coast interactions**
- **Approaches towards an integrated spatial planning and management**
- **Initiation and support of a river basin-coast dialogue**
- **Environmental awareness rising on river basin – coast interactions**



Research project ICZM-Oder

- **One out of two national German ICZM case studies**
- **Involvement of 11 partner institutions**
- **Activities of the Regional Agenda 21 „Szczecin Lagoon“ provides as a basis**

Key research activities beside river-coast interactions:

- **ICZM stocktaking and evaluation according to the EC-recommendations on ICZM**
- **Recommendations towards a national ICZM-strategy**
- **Harmonisation and integration of German and Polish ICZM-tools and plans**
- **Integration of coastal waters in planning**
- **Development and application of indicators for sustainable development and ICZM**
- **Suggestions towards a sustainable tourism**

The project is a case study of LOICZ and UNEP ICARM.

Please find details under: www.ikzm-oder.de