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This project is co-financed by the European Union and the Republic of Turkey

Türkiye'de Deniz Stratejisi Çerçeve Direktifi Kapsamında Kapasite Geliştirme Projesi
Capacity Building Project on Marine Strategy Framework Directive in Turkey

Descriptor 8 - Contaminants in the environment -

Ben van de Wetering
The Netherlands



Denizlerimizin geleceği bizim ellerimizde *The future of the seas is in our hands*



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The MSFD and Contaminants

- Pollution by contaminants is one form of pollution of the marine environment
- Preventing and reducing inputs to the marine environment, with a view to **phasing out pollution**, is clearly stated as one of the main objectives of the MSFD, in line with international commitments at global and regional level



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Two components of EU legislation for measures against chemical pollution

- the selection and regulation of substances of EU-wide concern (the priority substances)
- the selection by Member States of substances of national or local concern (river basin specific pollutants) for control at the relevant level





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Sources of contaminants

- Contaminants can arise from anthropogenic sources such as land-based industrial activity, pollution by ships, atmospheric deposition, oil, gas and mineral exploration and exploitation
- however, natural oceanographic and geological factors, incl. geothermal activity, can sometimes give rise to elevated levels of some contaminants (such as heavy metals)



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Article 16 of the WFD (2000/60/EC) requires

- establish a list of **priority substances**, these to be selected from amongst those presenting a significant risk to or via the aquatic environment at EU level
- select a subset of **priority hazardous substances**
- implement **measures** to reduce emissions, discharges and losses of all the substances and to phase out the emissions, discharges and losses of priority hazardous substances



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Requirements for the chemical status of surface waters including marine waters

- The Environmental Quality Standard Directive (EQS) establishes a maximum allowable concentration for priority substances and certain other pollutants
- The EQS is based on the lowest toxic effect observed for aquatic organisms during testing in the laboratory with standard organisms





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Descriptor 8 - Assessment

- **Assessment** of achievement of Good Environmental Status (GES) should be based upon monitoring programmes covering the **concentrations** of chemical contaminants and also biological measurements relating to the **effects of pollutants** on marine organisms in each of the assessment regions



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Core elements of assessments

- **Concentrations of contaminants** in water, sediment and/or biota are below environmental target levels identified on the basis of eco-toxicological data
- **Levels of pollution effects** are below environmental target levels representing harm at organism, population, community and ecosystem levels
- **No increase** of concentrations of contaminants in water, sediment and/or biota, and the occurrence and severity of pollution effects





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Monitoring programmes for contaminants

- Selection of substances, species and biological effects should be made specific for each assessment region
- measurements should be made in environmental matrices, i.e. water, sediment, and the tissues of biota
- quantification of biological effects should be made at different levels of biological organisation



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Descriptor 8 - links to other Descriptors

- [Descriptor 9](#), which aims at ensuring that “**contaminants in fish and other seafood for human consumption** do not exceed levels established by Community legislation or other relevant standards“. Contaminants in marine organisms – even tiny organisms at the bottom of the food chain – can find their way to the top of the marine food chain and eventually to our plates
- [Descriptor 10](#) which says that **marine litter**, which may release, cumulate or transport contaminants, should not cause harm to the coastal and marine environment. Achieving the goal of Descriptor 10 will also contribute to ensuring that contaminants are at a level not giving rise to pollution effects
- [Descriptors 1, 4](#) and [6](#) as chemical pollution may affect biodiversity (e.g. species and habitat condition), the integrity of food webs and sea-floor ecosystems



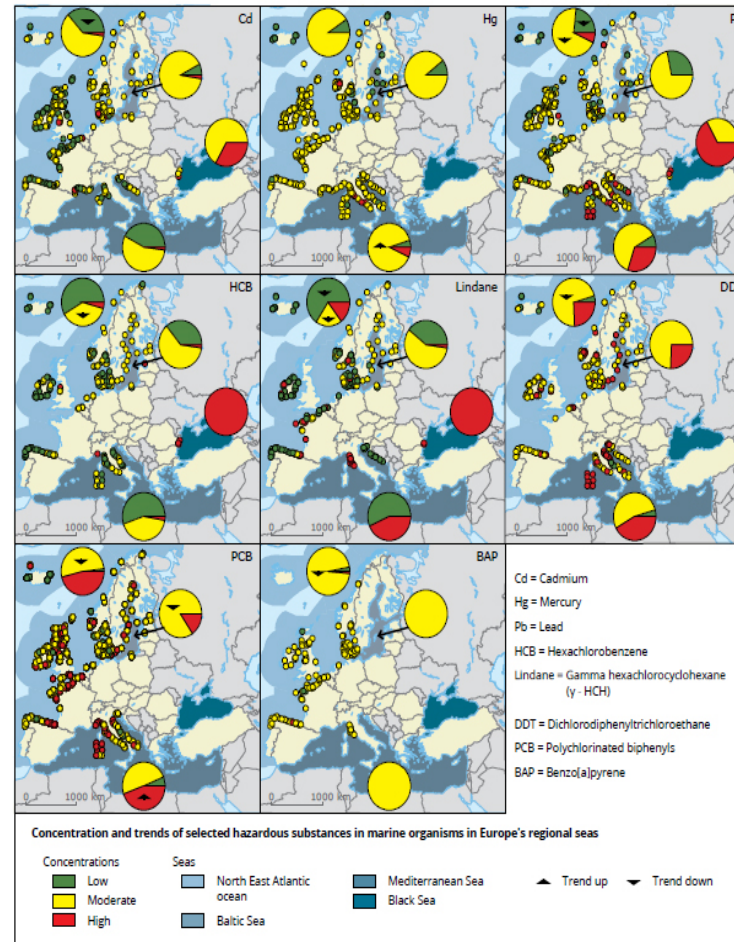


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Figure 4.11 Aggregated assessment of hazardous substances in biota measured in the North East Atlantic, Baltic Sea and Mediterranean Sea, 1998-2012



Source: EEA, 2015d.



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Worthwhile reading

- [EU - Strategies against chemical pollution of surface waters](#)
- [EU - Descriptor 8: Contaminants](#)
- [EEA - The State of Europe's Seas](#)



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Thank you for your attention



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