

Other Substances

As concern about levels of some priority hazardous substances decreases due to effective measures, new substances that warrant further investigation are constantly being identified.

How are these results reported & used?

- Reports published by the Marine Institute are available from the MI and downloadable from The Marine Institute's web site - www.marine.ie/frc/environ/
- Used by DoMNR in preparing export licenses
- Submitted to the EU and the Food Safety Authority of Ireland (FSAI) in fulfilment of legislative Food Safety monitoring requirements
- Submitted to the International Council of the Seas (ICES) databank in Copenhagen where they are available to a wide variety of regulatory agencies such as the EU, European Environmental Agency (EEA) and OSPAR
- OSPAR use the results to assess the quality of the North East Atlantic region and take action needed for marine protection
- Key elements of national and international marine environmental quality assessment reports such as Marine Quality Status Reports and EPA's state of the environment reports. www.ospar.org
- "Ireland's Coastal and Marine Environment: an Environmental Assessment" MI 1999 - www.marine.ie/qsr/
- "EPA Millennium report. State of Ireland's Environment" EPA 2000 - www.epa.ie



More detailed information on this topic as well as similar leaflets on other Marine Institute Monitoring Programmes are also available

Marine Institute's Monitoring Programme for Veterinary Residues & Environmental Contaminants in Farmed Finfish (*Information Leaflet available*)

Monitoring Nutrient Levels and Trends in Irish Coastal Waters

Monitoring Contaminants in Sediments

See also www.marine.ie/frc/environ/

Marine Biotoxins in Shellfish and Toxic Phytoplankton (*Information Leaflets available*)

See also www.marine.ie/frc/toxins/

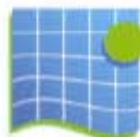
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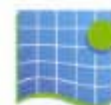
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MONITORING THE MARINE ENVIRONMENT

Marine Institute's Monitoring Programme for Contaminants in Fish and Shellfish



Information Leaflet



Marine Institute
Foras na Mara

*Marine Environment &
Health Services Division*

What do we monitor?

The Marine Institute (MI) monitors the levels of priority hazardous substances in a range of commercial fish species landed at Irish ports and also in shellfish from selected sites around the Irish coast.

What are priority substances?

International organisations such as the European Commission, the World Health Organisation (WHO), and the Oslo Paris Commission (OSPAR) identify substances that require priority action. These are substances that have been identified as being of particular concern for the marine environment and/or consumers of foodstuffs (for example mercury)



Why do we monitor?

There are two reasons for monitoring:

- 1.) Food safety monitoring is concerned with ensuring that levels of contaminants are below those deemed safe for consumers of seafood products. This monitoring complies with a range of EU law as well as national requirements.
- 2.) Protection of marine habitats/ecosystems. Pollution may adversely affect the health of our seas and ultimately limit our ability, or that of future generations, to use the seas as a sustainable resource. Monitoring is designed to

assess levels, distribution and trends of contaminants.

Levels in fish and shellfish are a good indicator of the levels in the marine environment as a whole. This monitoring is part of Ireland's contribution to the Oslo Paris (OSPAR) convention on the protection of the North East Atlantic.

What substances does the MI monitor?

The primary substances monitored are

- **Heavy metals** – mercury, cadmium, lead, copper, chromium, and zinc
- **Polychlorinated biphenyls (PCBs)** primarily originating from used transformer oils
- **Persistent organochlorine pesticides** such as DDTs
- **Organotins** Marine antifoulants.

Organochlorine pesticides and PCBs are man-made and do not occur naturally in the environment. Heavy metals do occur naturally and some play an important role in sustaining life. However, pollution may elevate concentrations to harmful levels. As well as their inherent toxicity, many of these substances have a tendency to 'bioaccumulate' and are extremely slow to breakdown or dissipate.

Indeed the environmental behaviour of some substances can result in serious marine pollution issues manifesting at locations very remote from their main source, and contamination may remain long after use of these substances has been discontinued.

Who benefits from monitoring?

- 1) The *consumer* is independently assured that Irish Seafood is safe to eat and is kept informed of risks.
- 2) *Irish fishing and aquaculture industries*
 - The clean, uncontaminated nature of Irish Seafood, as demonstrated by monitoring,

- adds value and is a marketing aid.
 - Monitoring results are used to gain export licenses for Irish fishery products
 - Early warning of pollution threats
 - Protection of the marine ecosystems, which may directly or indirectly impact on fish stock levels and/or aquaculture viability.
- 3) *Organisations responsible for taking measures to protect the environment or consumers.* (e.g. European Environment Agency (EEA), OSPAR, Food Safety Authority of Ireland
 - Identify problems that need to be addressed
 - Can track effectiveness of measures to reduce inputs of contaminants.
 - 4) *Everybody* who values the health of our seas.

