SCREENING CHAPTER 27
ENVIRONMENT

AGENDA ITEM: SHELLFISH WATER
Directive 79/923/EEC

Country Session: The Republic of TURKEY
29 May - 02 June 2006

CONTENTS

- Legislative Framework
- Competent Authority
- Implementation
- Ongoing Studies

LEGISLATIVE FRAMEWORK

- Law No. 1380 on Fisheries
  - By-law on Fisheries
  - Circular for Regulating Commercial Fishing
  - Instruction for Bivalve Molluscs Production Areas Monitoring
- Law No. 2872 on Environment
  - By-law on Water Pollution and Control

LEGISLATIVE FRAMEWORK (CONT'D)

Instruction taking into consideration the requirements of the Directive 79/923/EEC

- Determination of the parameters and limit values for bivalve molluscs waters,
- Designation of bivalve molluscs production areas,
- Setting up a system for sampling and monitoring and,
- Laying down provisions on other parameters than those provided for this directive.

COMPETENT AUTHORITY

Ministry of Agriculture and Rural Affairs (MARA)

- Directorate-General for Protection and Control

IMPLEMENTATION

Designation of Production Areas

Bivalve molluscs production areas;

- Designated based on the directive 91/492/EEC

Parameters for bivalve molluscs waters and related limit value;

- Determined based on the directive 79/973/EEC

IMPLEMENTATION (CONT'D)

A Class Production Areas (fulfilling the requirements laid down in Chapter I (1.a) of Annex to the Directive 91/492/EEC)

I. Region : Ayvalik
II. Region : Canakkale
84 . Region : Aliaga – Caltidere
85. Region : Cesme- Dalyankoy
86. Region : Cesme – Mersin Koyu

B Class Production Areas (fulfilling the requirements laid down in Chapter I (1.b) of Annex to the Directive 91/492/EEC)

IV. Region : West Black Sea
V. Region : Middle Black Sea

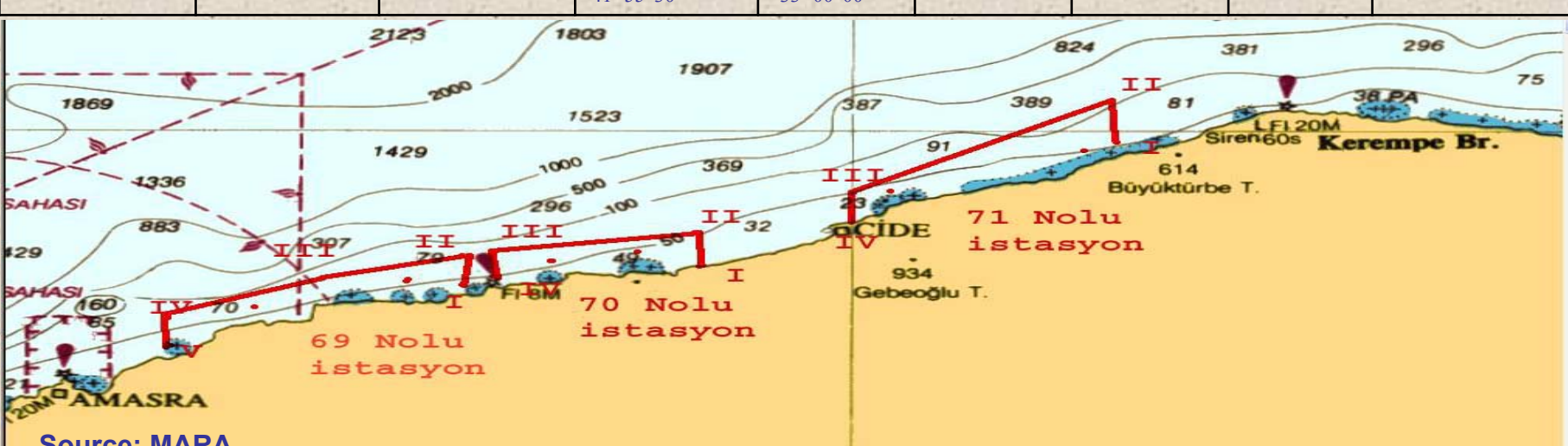
IMPLEMENTATION (CONT'D)

In 2005-2006 fishing season, monitoring system in 35 production areas in 7 regions were carried out

BIVALVE MOLLUSCS PRODUCTION AREAS OF AYVALIK REGION

Source: MARA

PRODUCTION REGION CODE	PRODUCTION REGION NAME	PRODUCTIION AREAS NAME AND NUMBER	PRODUCTION AREAS KOORDINATES		SAMPLING KOORDINATES		TYPE OF PRODUCT	RESPONSIBLE PROVINCE FOR SAMPLING
IV	West Black sea	**69 Amasra**	41 ˚50' 05" 41˚ 51' 50" 41˚ 50' 25" 41˚ 48' 10" 41˚ 46' 25"	32˚ 41' 15" 32˚ 41' 15" 32˚ 34' 45" 32˚ 27' 30" 32˚ 27' 30"	41˚ 48' 45" 41˚ 50' 25"	32˚ 31' 40" 32˚ 38' 50"	Baby clams	Bartın
IV	West Black sea	**70 Kurucaşile**	41˚ 51' 10" 41˚ 53' 10" 41˚ 52' 00" 41˚ 50' 30"	32˚ 52' 10" 32˚ 52'1 0" 32˚ 42' 50" 30˚ 42' 50"	41˚ 51' 30" 41˚ 52' 00"	32˚ 45' 30" 32˚ 49' 30"	Baby clams	Bartın
IV	West Black sea	**71 Cide**	41˚ 58' 35" 42˚ 00' 20" 41˚ 53' 40" 41˚ 55' 30"	33˚ 11' 50" 33˚ 11' 50" 33˚ 00' 00" 33˚ 00' 00"	41˚ 55' 64" 42˚ 00' 00"	33˚ 01' 33" 33˚ 10' 48"	Baby clams	Kastamonu



Source: MARA

IMPLEMENTATION (CONT'D)

Main Commercial Species of Bivalve Molluscs

- Black Mussels
- Bearded Mussels
- Oyster
- Cockle
- Clams
- Baby clams
- Donax Trunklus

IMPLEMENTATION (CONT'D)

Water and Product Quality Standards

Based on 79/923/EEC;

Parameters applicable to bivalve molluscs waters designated;

pH, temperature, salinity, solved oxygen, petroleum hydrocarbons, F. coli, cadmium, lead, copper, arsenic, mercury, zinc

In addition;

Microbiological parameters: V. parahaemolyticus**,** V. cholera

Chemical parameters: phosphate, ammonium, silicate, nitrate, and nitrite

Toxic algae

IMPLEMENTATION (CONT'D)

Parameters for product analyses:

Microbiological parameters: F. coli, E. coli, Salmonella, V.cholera and V. parahaemolyticus.

Biotoxins : (DSP, ASP, PSP)

Chemical parameters: Cadmium, Lead, Copper, Arsenic, Zinc, Mercury and radionuclide.

AGENDA ITEM: WATER QUALITY-SHELLFISH WATER

MONITORED PARAMETERS BASED ON THE DIRECTIVE NO 79/923/EEC AND LIMIT VALUES FOR THOSE PARAMETERS

Parameters To Be Analyzed	Appropriate Limits	Reference Analysis Method	Sampling And Measurement Periods
pH	7-9	- Electrometry Measured in situ at the time of g sampling	Once every two weeks
Temperature °C	The discharge of waste water from tributaries waters causing over a 3 ^{0}C difference in the temperature of the sea and inland waters and a 0.5 C^0 difference in the temperature with in a one hour time interval will not be allowed.	- Measurement by a thermometer	Once every two weeks
Salinity (%0)	- < 40 (preferably between 12-38 %)	Conductimetry Salinometry	Once every two weeks
Dissolved Oxygen	Waste water reducing the dissolved oxygen value of the receiving water below 6.0 mg/lt can not be discharged.	- Winkler method - Electrochemical method	Once every two weeks
Petroleum hydrocarbons	Hydrocarbons must not be present in shellfish water in such quantities as to: -produce a visible film on the surface of the water and/or a deposit on the shellfish, - have harmful effects on the shellfish	Visual examination	Once every two weeks
Heavy metals **Arsenic (As) mg/l** **Cadmium (Cd) mg/l** **Copper (Cu) mg/l** **Mercury (Hg) mg/l** **Lead (Pb) mg/l** **Zinc (Zn) mg/l**	 0.1 0.01 0.01 0.004 0.1 0.1	Spectrophotometer of atomic absorption preceded, where appropriate, by concentration and/or extraction	Once every six months
Faecal coliforms/100 ml	≤ 300 in the shellfish flesh and intervalvular liquid	Multi tube method (3 solutions, 5 experiment tubes)	Every sampling time
E. Coli	The amount of E. Coli present in the receiving water should be 2 EMS/100 ml. This value should not exceed 7 EMS/100 ml.	Multi tube method (3 solutions, 5 experiment tubes)	Every sampling time

IMPLEMENTATION (CONT'D)

Sampling and Monitoring for Production Areas

Sampling and measures are taken at field by Inspectors of the Ministery

Weekly and/or once every two weeks :

- pH,
- Salinity,
- Petroleum hydrocarbons,
- *E. coli*,
- *V. parahaemolyticus* ,
- Phosphate,
- Silicate,
- Temperature,
- Dissolved oxygen,
- Fecal coli,
- *V. cholera*,
- Toxic alga,
- Ammonium,
- Nitrate and Nitrite

Half-yearly:

Heavy metals (cadmium, arsenic, lead, copper, mercury, zinc)

IMPLEMENTATION (CONT'D)

Fishing season: Generally, 01 September - 01 May;

- Monitoring is begun before fishing season
- Water and product samples are taken once a week
- If result of two weekly analysis is under limit values, production area is opened to fishing

IMPLEMENTATION (CONT'D)

After opening of production areas;

- Routine monitoring is carried out
- Water and product samples are taken once every two weeks .
- If result of analysis is above limit values;
  - Production area is closed to fishing and
  - Weekly monitoring is carried out

In closed fishing season;

- Water and product samples are taken monthly

IMPLEMENTATION (CONT'D)

Analysis results:

- sent by e-mail and fax to the Provincial Directorate taking sample
- evaluated by inspector of the Provincial Directorate

If result of analysis is above limit values;

- production area is closed to fishing

Laboratories performing analysis send results to MARA

IMPLEMENTATION (CONT'D)

Prevention of Pollution

In order to prevent pollution;

- Industrial facilities are inspected at least twice a year
- Wastewater samples are taken from discharge of industrial facilities
- Legal action is taken for industrial facilities causing pollution

There are also two ongoing projects:

- Blacksea Pollution Monitoring Project
- MED POL Sea Pollution Monitoring Project

ONGOING STUDIES

Information Database

Technical works are in progress to;

- establish an electronic database
- make data available for related institutes and parties.

Legislative Studies

Technical works are still going on for alignment with 79/923/EEC

THANK YOU FOR YOUR ATTENTION