

DATA INFRASTRUCTURE AND MONITORING ACTIVITIES IN TURKEY



Sevil ÖKSÜZ

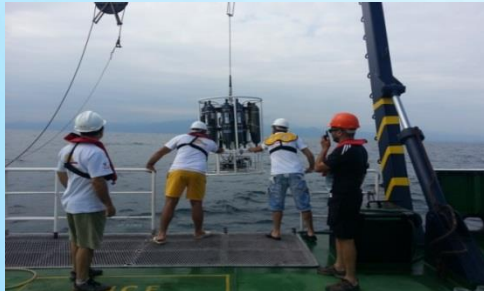
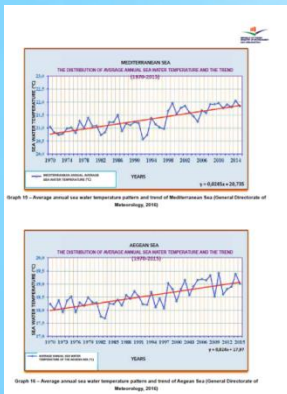
Expert

VIENNA/ 06-07 November 2018

ENVIRONMENTAL REFERENCE LABORATORY

CONTENT

- Turkey's Environmental Data Assessment, Statistics and Exchange Capacities
- Environmental Indicators
- Integrated Marine Pollution Monitoring Programme
- Marine Monitoring Components, Assessment tools and indicators

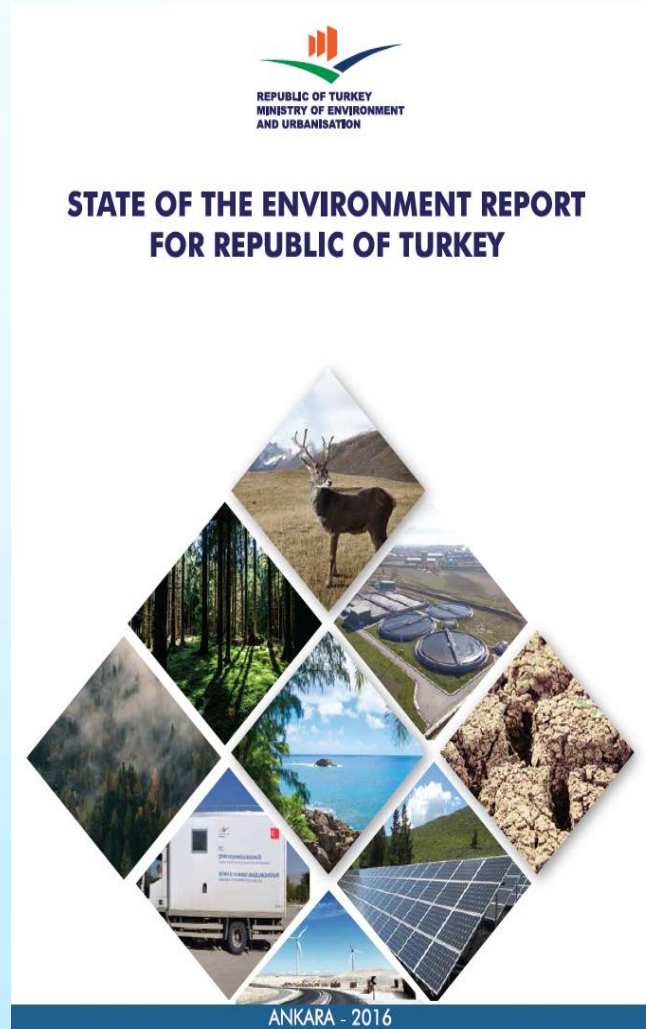


Environmental Data Assessment, Statistics and Exchange Capacities

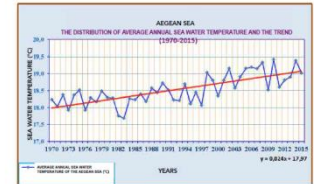
- Turkey is a party to all important international environmental conventions that provide regional and international cooperation, coordination and appropriate policy frameworks for handling environmental problems.
- Turkey has developed and implemented many strategy documents on various matters such as adaptation to climate change, reduction, conservation and sustainable use of biodiversity, erosion control and combating with desertification and afforestation. (EEA,SOER-2015, Chapter on Turkey)
- Regional Conventions on Black Sea and Mediterranean Sea protection are important political tools for Turkey attempts of protecting marine and coastal ecosystems.

Environmental Data Assessment, Statistics and Exchange Capacities

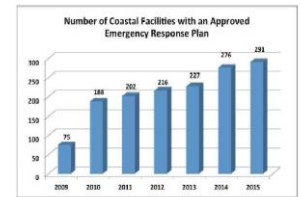
- «State of the Environment Report for Republic of Turkey» has prepared by Ministry of Environment and Urbanisation every four years with contributions of related institutions and organizations.
- Report contains some environmental inventory, data and also some statistics about state of the **air, climate change, water and wastewater management, waste, management of chemicals, nature conservation and biological diversity.**



Graph 10 - Average annual sea water temperature pattern and trend of Mediterranean Sea (General Directorate of Meteorology, 2016)



Graph 11 - Average annual:



Graph 12 - Number of Coastal Facilities with an Approved Emergency Response Plan in Turkey (Ministry of Environment and Urbanisation, 2016)

When the Project for Establishing Emergency Response Centers is completed, a system of emergency response to pollution of marine environment by oil and other harmful substances will have been established for Turkey and possible environmental harms will be minimized. Additionally, thanks to the system that ensure maximum benefit from international compensation funds accessed by Turkey against possible risks, use of national budget and resources will be minimized.

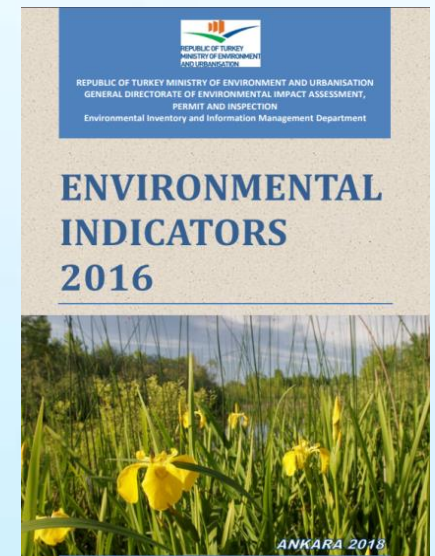
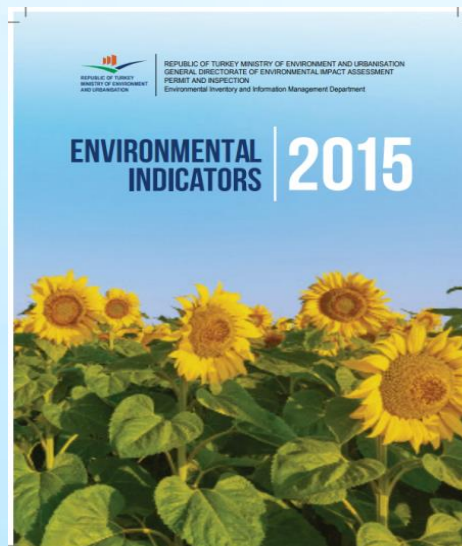
Moreover, the Ministry of Environment and Urbanisation also ensured preparation of risk assessment and emergency response plans for coastal facilities operating within the scope of the Law in a way to integrate these plans into national and regional plans. In the first stage, high-risk coastal facilities were identified and approval process of their emergency response plans were completed. In the second stage, medium-risk coastal facilities were determined, but the process for approval of their emergency response plans still continues. As it can be seen in Graph 12, the number of coastal facilities with an approved emergency response plan reached 291 as of the end of 2015.

"The Communiqué on Selection of Companies/Institutions/Organizations that can provide Emergency Response Services for Pollution of Marine Environment by Oil and Other Harmful Substances" was prepared under the coordination of the Ministry of Transport, Maritime Affairs and Communications in cooperation with the Ministry of Environment and Urbanisation and 11 companies/institutions/organizations have been authorized within the scope of the communiqué. Coastal facilities can fulfil the economic, material and personnel requirements of their approved emergency response plans and they can also apply service procurement.

Also, nationally and internationally-recognized trainings and drills are organized in coastal facilities that are an approved plan. In this way, the national capacity for being prepared for pollution of marine environment by oil and other harmful substances has improved.

Yearly Prepared Environmental Indicators...

- Ministry of Environment and Urbanization—has been prepared of the «**Environmental Indicators**» booklet every year since 2006 ;
- The main purpose of the «**Environmental Indicators**» is to represent the relationship between the environment and the sectors and to monitor the activities that have environmental impacts in a sequence and to monitor the results of the implemented environmental policies and strategies. It also aims to assist in determining plans, programmes and policies, preparing legislations and providing information.



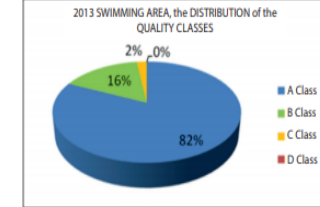
Environmental Indicators

- Booklets have been developed and become more detailed since the very first booklet
- “Environmental Indicators 2006” consisting of 11 headings with 24-indicators was published
- Currently is prepared to 15 headings and 69 indicators
- Environmental Indicators Booklets are published on the Ministry’s web site and open to public both Turkish and English.

5- WATER- WASTEWATER

2013 QUALITY ANALYSIS RESULTS OF SWIMMING WATER

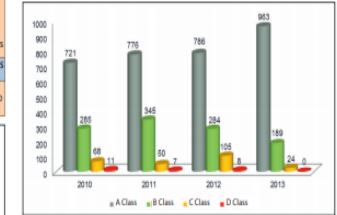
YEAR	THE NUMBER OF MONITORED SWIMMING AREAS	MONITORED PARAMETERS AND TOTAL ANALYSIS VALUES			SWIMMING AREAS THAT MEETS THE MANDATORY REQUIREMENTS			SWIMMING AREAS THAT DOES NOT MEET THE MANDATORY REQUIREMENTS		
		TOTAL COLIFORM	FECAL COLIFORM	FECAL STREPTOCOCCUS	CLASS A	CLASS B	CLASS C	CLASS D	CLASS D	CLASS D
2013	34	1.208	12.790	12.790	963	189	24	0	0	



Source: Ministry Of Health, Public Health Institution of Turkey
Note: According to By-law on Swimming Water Quality following qualities represents Class A Very Good/Excellent, Class B good Quality, Class C Best Quality and Class D Very Bad Quality/Needs to be banned.

As a result of the evaluations, 82% of the 1208 of swimming areas is categorized as Class A, 16% Class B and 2% Class C.

COMPARING SWIMMING AREAS WITH REGARDS TO QUALITY CLASSES 2010-2013



Source: Ministry Of Health, Public Health Institution of Turkey

Comparing the results obtained throughout years, it is seen that water quality is getting better.

Analysis results about swimming water analyzes are automatically controlled and evaluated on the geographic information system by the Ministry of Health^[1]

38

Çevresel Göstergeler Kitapçığı

Çevresel Göstergeler, çevremizin içinde bulunduğu karmaşık durumu tüm paydaşların anlayabileceği en basit ve sade haliyle anlatan önemli bir araçtır.

Çevresel göstergelerin önemli bir işlevi, çevre problemleriyle farklı detaylarda ilgilenen toplumun, çeşitli kesimleri arasında ortak bir dil oluşturmasıdır. Dünyanın pek çok ülkesinde çevresel göstergeler; karar verme süreçlerinde, çevresel konularda kamu bilincinin artırılmasında ve çevre politikalarının sonuçlarının izlenmesinde fikir oluşturmaya katkı sağlamaktadır.

Ülkemizde de çevresel göstergeler kitapçığı Bakanlığımız koordinasyonunda ve diğer ilgili kamu kurum ve kuruluşların katkısıyla her yıl yeni çevresel konular da ilave edilerek hazırlanmakta yararlanıcıların bilgisine sunulmaktadır.

2006 yılından beri hazırlanan çevresel göstergeler kitapçıkları öncelikli çevre sorunları konularında rehberlik etmiş, karar alıcıların, araştırmacıların, istatistik-verilerin kullanıcıların ve tüm çevreyle ilgili paydaşların çevrenin gidipgitisi hakkında fikir edinmesine ipik tutması hedeflenmiştir.

Çevresel göstergelere veri ve değerlendirmeleri yıllara göre içeren kitapçık her yıl Türkçe ve İngilizce olarak hazırlanmaktadır.

“Çevresel Göstergeler” hakkında daha detaylı bilgiye <http://cevreselegostergeler.csib.gov.tr/> adresinden ulaşabilirsiniz.



Environmental Data Assessment, Statistics and Exchange Capacities

- **Turkish Statistical Institute (TUIK):** to compile, evaluate, analyze and publish national statistics in the fields of different areas also environmental data.
- As an example; drinking water networks and water treatment plants, municipal wastewater statistics, municipal waste statistics has been published since 1995.
- Variable selection of statistical data in the web site of institute and data can export TUIK's web site as html, cvs, excel, xml and pdf formats.

Statistics is the key of understanding the past,
governing today and planning the future

Home | About Us | Publications | Information Request | FAQ | Site Map

Press Releases
Main Statistics
Statistical Indicators
Statistics by Theme
Databases
Official Statistics Portal
National Data Release Calendar
MetaInfo

Previous 1 2 3 4 5 6 Next

Latest Press Releases

Sectoral Confidence Indices, October 2018

Seasonally adjusted confidence index decreased in services and retail trade sectors while increased in construction sector , 25/10/18

Key Indicators	
Consumer Price Index-Annual (%) September 2018	24,52
Unemployment Rate (%) July 2018	10,8
GDP Growth Rate (%) 2. Quarter 2018	5,2
Industrial Production Index-Annual (%) August 2018	1,7
Total Population 2017	80.810.525

Public Announcements
All Public Announcements

Announcements
All Announcements

Press Room | User Survey | Contact Us | Library | Legal Notice | Social Media

© www.tuik.gov.tr (27-41)

INTEGRATED MARINE POLLUTION MONITORING PROGRAMME-TURKEY

Since the beginning of the 2000s; National Marine Pollution Monitoring Programme (Ministry of Environment and Urbanization funded) aims to;

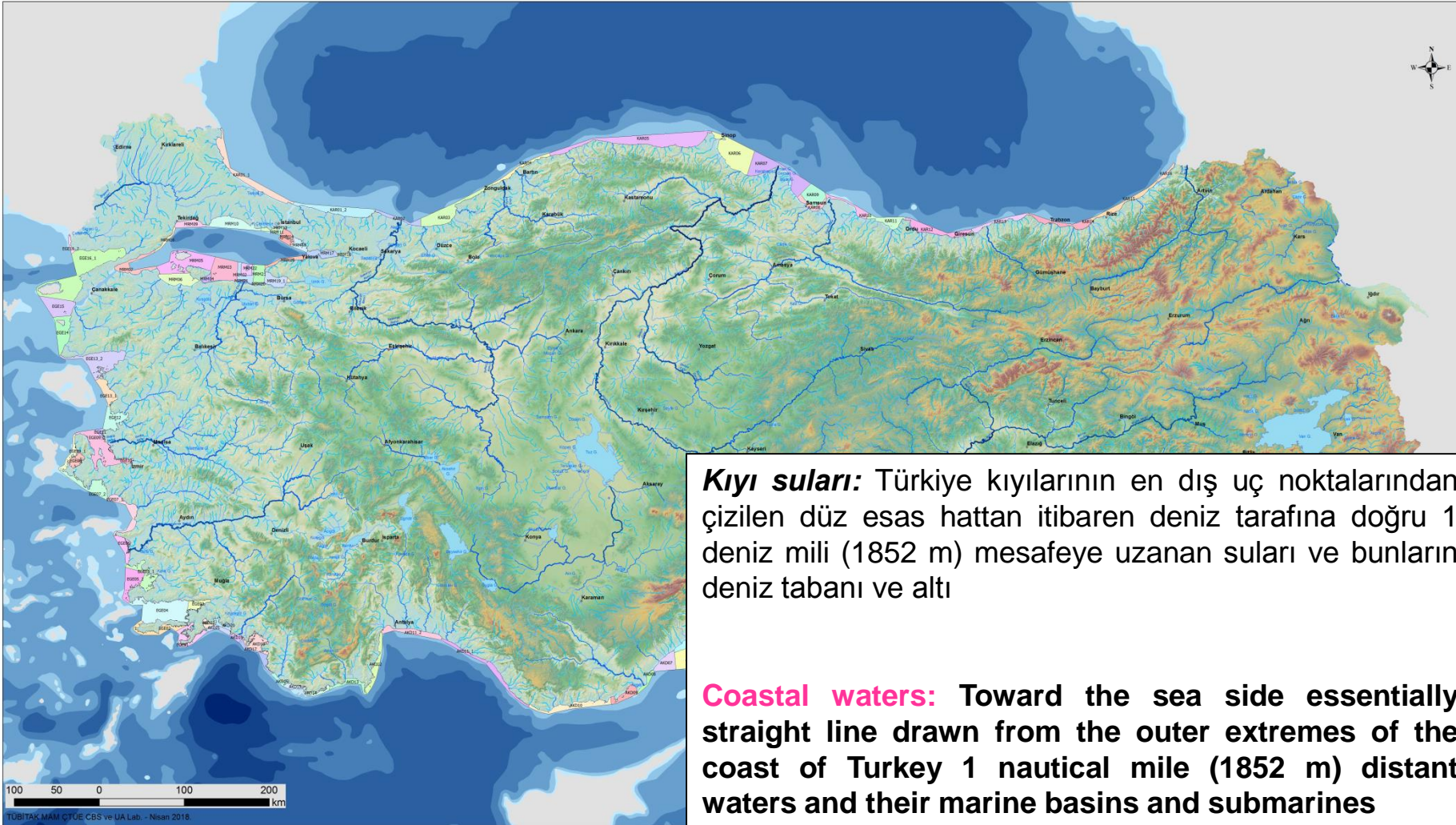
- provide information for marine and coastal water management strategies
- evaluate the pressures and effects stemming from human activities,
- identify national marine monitoring system and coastal management policies and strategies and the setting up of the impacts of the measures taken,
- provide regional and international reporting obligations

INTEGRATED MARINE POLLUTION MONITORING PROGRAMME - TURKEY

- Ongoing monitoring activities ;
- Black Sea; Meditterrenian Sea, Marmara Sea are involved. Totally **353** stations are monitored. Programme is based on Regional Conventions (BSIMAP, IMAP), EU Directives (WFD, MFSD), National Legislation
- Chemical, ecological and hydromorphological assessments are carried out acc. to designated marine assessment units and water bodies
- Monitoring results have evaluate within pressure and impact analyzes and data have been reported to MEDPOL, EEA, Black Sea Commission, TURKSTAT and related public institutions
- QA/QC assurance obtained by certified reference material and intercalibration tests.

INTEGRATED MARINE POLLUTION MONITORING PROGRAMME –TURKEY

Marine Assesment Units of Turkey-in line MSFD



MONITORING COMPONENTS

According to descriptors of MSFD and GES

- **Descriptor 1.** Biodiversity (Alien species together)

Plankton, Macro Flora, Macrozoobenthos and fish

- **Descriptor 3.** Commercial seafood

- **Descriptor 4:** Food network

- **Descriptor 5:** Eutrophication

- **Descriptor 6:** Sea Basin Integrity

- **Descriptor 7:** Hydrographic Features

- **Descriptor 8&9:** Pollutants

Sediment and biota pollution monitoring , Radioactivity

- **Descriptor 10: Marine litters**

Microplastics, Sea bottom macro marine litter, Digested litter

- **Offshore Monitoring**

➤ **our marine monitoring system contains indicators mostly can be linked H2020 Indicators 5.1**

(5.1 Nutrient concentrations in transitional, coastal and marine waters)

Advanced Monitoring Activities:

Real Time Monitoring

Satellite Views

Coastal Ecosystem and Landscape

Monitoring of Microbial Pollutants

ASSESSMENT TOOLS AND INDICATORS

- **Developed according to Regional Conventions (IMAP and BSIMAP), WFD, MFSD, National Legislation, EU Directives, and « National Standardization of Marine Monitoring Project» (2015-2016) Marine Monitoring Guidelines Covers**

Indicators:

- Concentration of Nutrient Components
- Concentration of Chlorophyl-a
- Oxygen level- deep Oxygen level
- Phytoplankton species irruption,biomass, species, variety indexes (F, D, d, J', H')
- Irruption of toxic groups
- Selective Phytoplankton groups irruption(diatom/flagellate)
- Zooplankton species irruption,biomass, species, variety indexes
- Macroalg species irruption
- Selective Macroalg groups irruption((R/C)
- Ecological evaluation index (EEI)
- Macrozoobentos species irruption,biomass, species, variety
- AMBI-M-AMBI, BENTIX, MEDOCC, TUBI (2015)
- Fish species irruption,biomass, species, variety ,
- Pollution Concentrations (sediment ve biota)
- Microplastics amount classification (marine water, sediment)
- Marine Litters

Evaluation Tools:

- National Regulations,
- WFD- 5th Class: Ecological quality (OOAO)
- Chemical Quality Claasification
- Trend Analyze
- Sediment ERL, ERM, ZF
- Biota Turkish Food Codex, WHO, 2013/39/EU Annex-I , EC/1881/2006
- TRIX , BEAST
- Nutrients proportion
- Pressure and Impact index: LUSI/LUSIVaI indeksleri, MA-LUSI indeksi

THANK YOU.....

Contact Us:

Environmental Reference Laboratory
Haymana Yolu 5. Km
Gölbaşı/Ankara/TURKEY

Tel: +90 312 498 21 50

laboratuvar@csb.gov.tr



Photo: James Watt