



WITH THE CONTRIBUTION OF THE LIFE FINANCIAL
INSTRUMENT OF THE EUROPEAN UNION
LIFE16ENV/IT/000488 - LIFE PHOENIX



Perfluorinated compounds
HOListic **E**Nvironmental
Interinstitutional **eX**perience

lifephoenix.eu

Webinar - 24 February 2021

Integration of data in health, environment and climate issues



Luca Lucentini
Director of section water quality and health
National Institute of health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The enjoyment of the highest attainable standard of health is one of the **fundamental rights** of every human being without distinction of race, religion, political belief, economic or social condition.

The **health of all peoples** is fundamental to the attainment of **peace and security** and is dependent on the fullest co-operation of individuals and States.

The achievement of **any State** in the promotion and protection of **health** is of value to **all**.

Unequal development in different countries in the promotion of health and control of diseases, especially communicable disease, is a **common danger**.

Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development.

Informed opinion and **active co-operation** on the part of the public are of the utmost importance in the improvement of the health of the people.

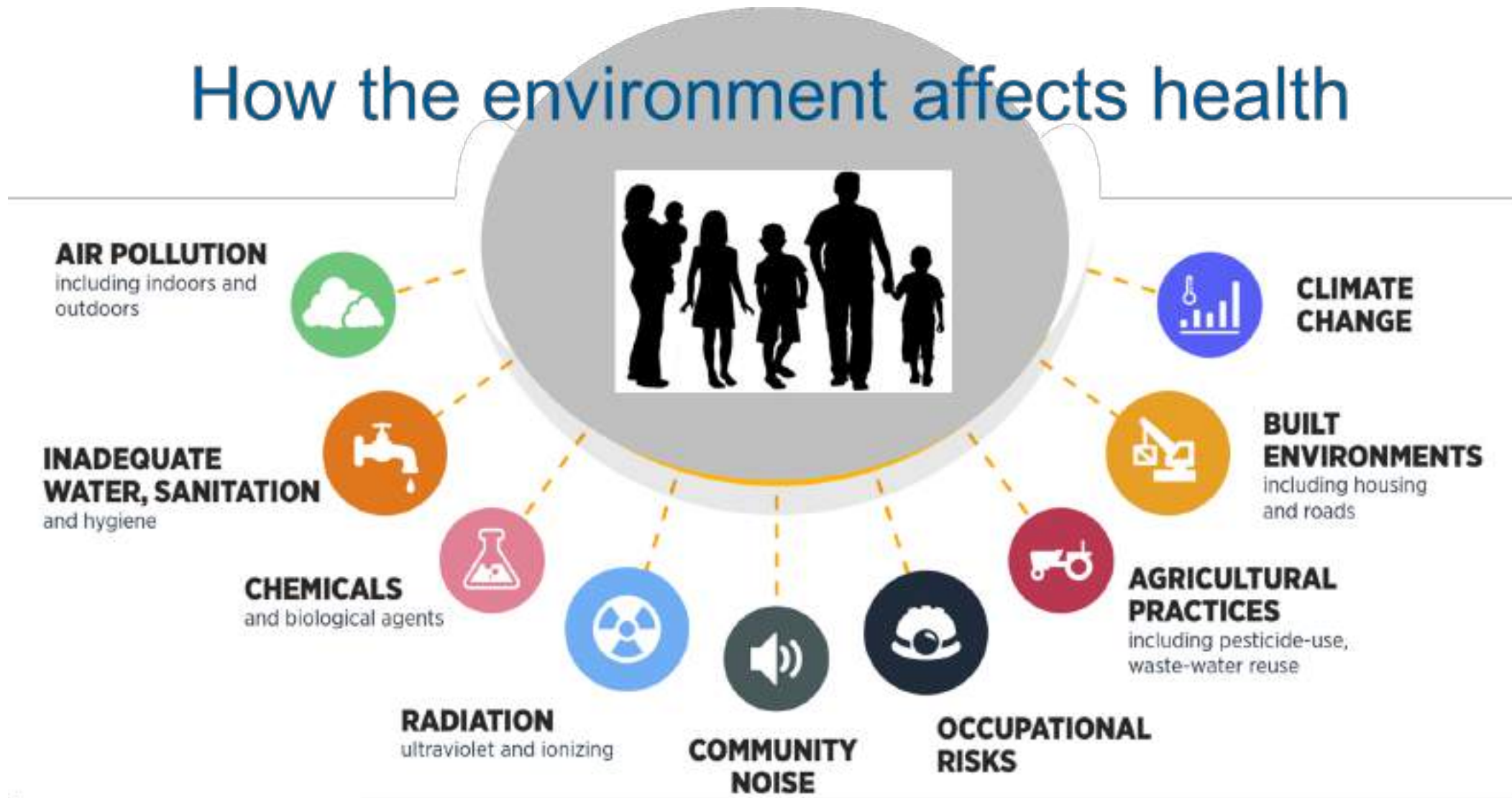
Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.

CONSTITUTION OF THE WORLD HEALTH ORGANIZATION, 1948

Why health «specialists» are interested in **environment** and **climate**?

Environmental health addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. (http://www.searo.who.int/topics/environmental_health/en/)

How the environment affects health



HEALTH IN THE SDG ERA



World Health Organization

www.who.int/sdgs

SUSTAINABLE DEVELOPMENT GOALS

FINANCED PROJECT MINISTRY OF HEALTH GENERAL DIRECTIVE SANITARY PREVENTION

IMPACT OF CLIMATE CHANGE ON HUMAN HEALTH WITHIN THE "PLANETARY HEALTH" VISION



AIMS:

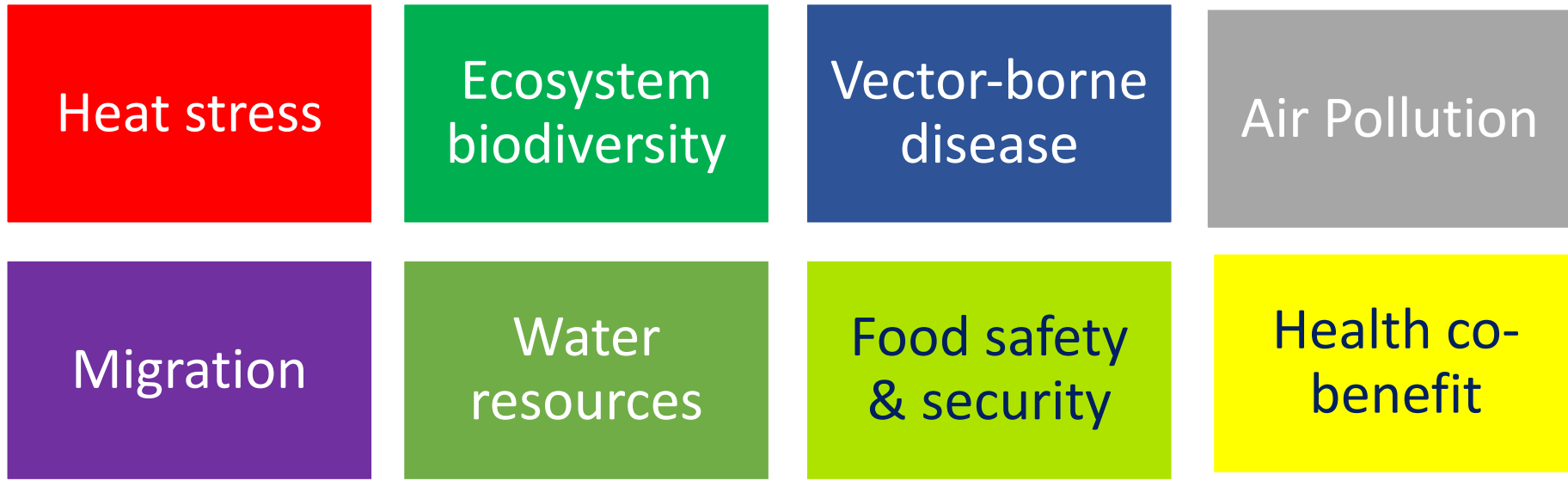
To support decisions regarding the Italian presidency of the G7 Health (2017) to define the strategy to adapt to the effects of climate change on human health and the planet, according to the *vision Planetary Health*

To improve the knowledge for impact analysis and vulnerability of fragile Italian areas:

- Strategy for prevention and adaptation towards negative effects of CC on health
- assessment of 'effectiveness of strategies
- proposal of 'Italy as a *pilot country* for the impact assessment of climate change on human health
- *Vision: 5-30 years*

WHO UNFCCC Country on Environmental health and climate in Italy:

Expanded to 8 key thematic areas



Emphasizing country progress, action & opportunities

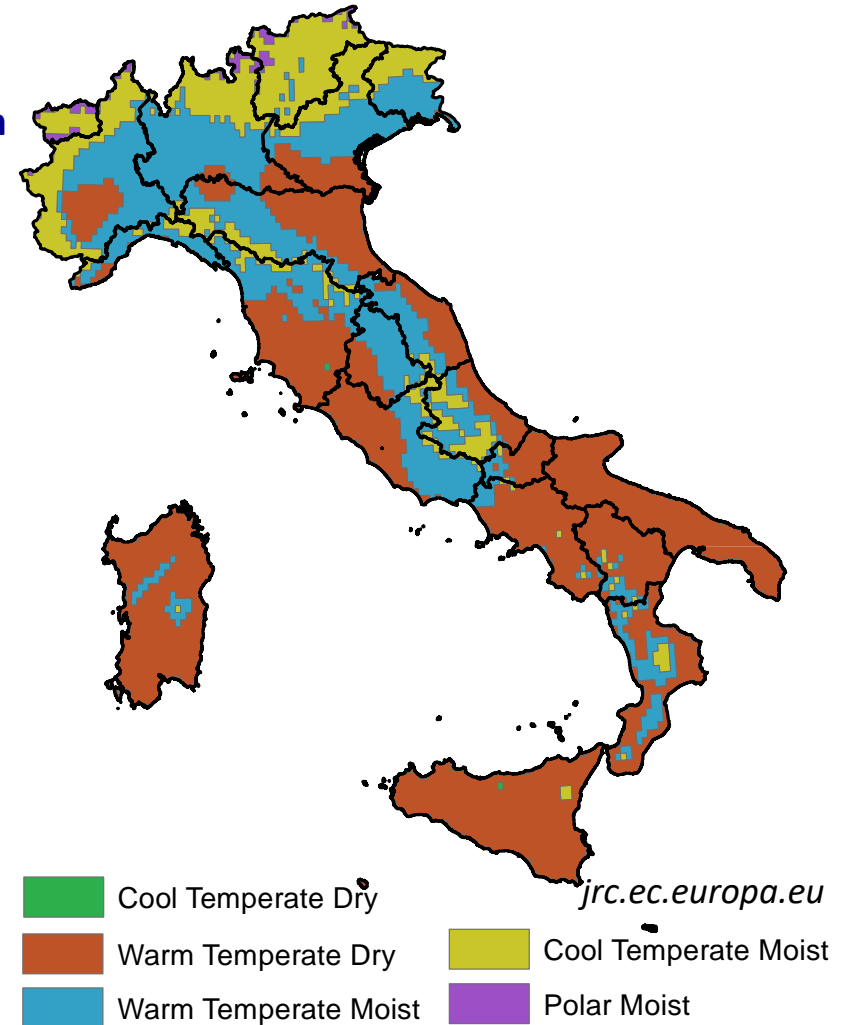
Provides **first example of ‘best practices’** by outlining ❖ **specific strategies and surveillance systems in place to protect human health from climate impacts**

Italy: a living lab on climate and environmental changes

- ✓ located in the **middle of the Mediterranean basin**
- ✓ **continental northern sector, peninsular central-southern sector, two large islands and archipelagos, minor islands**
- ✓ **heterogeneous climate** which leads to differences in the immediate risks posed by CC throughout the country
- ✓ impacts of CC and environmental changes **are already exacerbating** existing infrastructural deficiencies, post-industrial pollution phenomena (e.g., soil, water) and the intrinsic hydro-geological and seismic vulnerability of the country

DEMOGRAPHIC ESTIMATES

Population (2017)	60,579,000
Population growth rate (2017)	0%
Population living in urban areas (2017)	69.3%
Population age average, years (2017)	44.9
Population 65 years or over (2017)	22,3%
Economic & development indicators	
GDP per capita (current US\$, 2016)	30,527
Expenditure on health % of GDP (2014)	9.3%
Average annual HDI growth, 2010–2015 (%)	0.34



- ✓ acute CC (“direct”) have severely impacted natural disasters
- ✓ long-term CC (“indirect”) are affecting our coastal areas, cities and water sources

WATER RESOURCES AND HEALTH

KEY IMPLICATIONS FOR HEALTH

Crisis on water access and safely managed water supply in several Italian regions (6/20 Italian regions calling for a “*state of emergency*” in summer 2017)

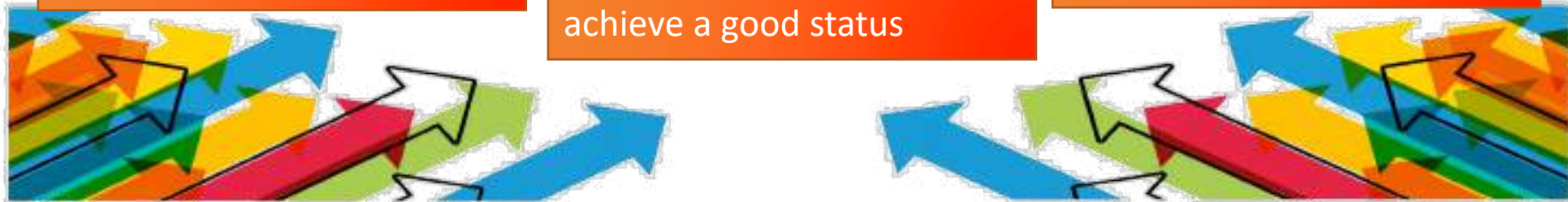
Aquatic ecosystems and groundwater resources seriously impacted

Saline intrusion, turbidity, algal blooms, water scarcity causing lower potential of dilution of pollutants in aquifers and bioaccumulation of contaminants

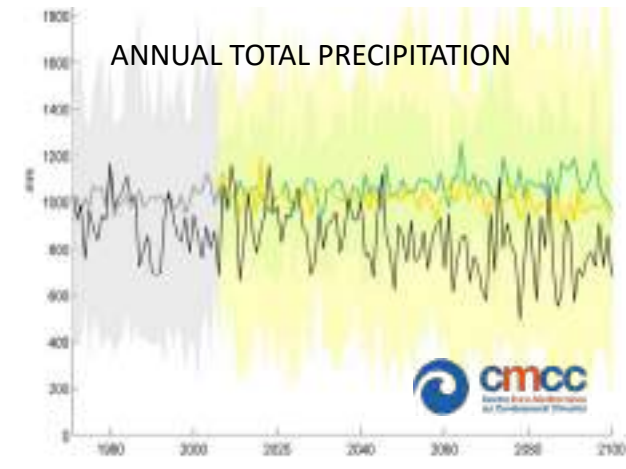
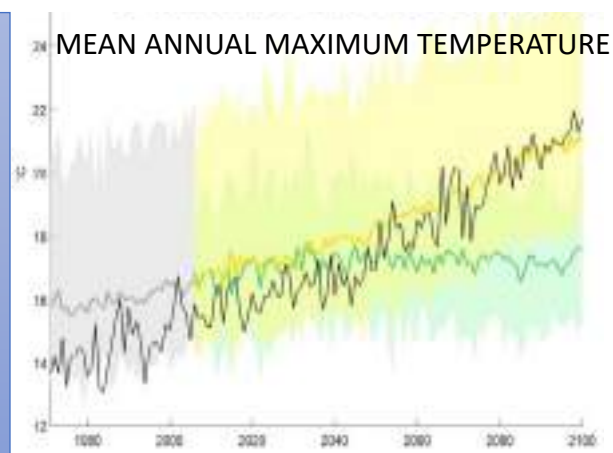
No sufficient water level in rivers and lakes failing to achieve a good status

Diseases due to lack of water for human consumption, sanitation and hygiene in emergency circumstances

Depletion of water quality and possible health impact (non communicable and communicable diseases)



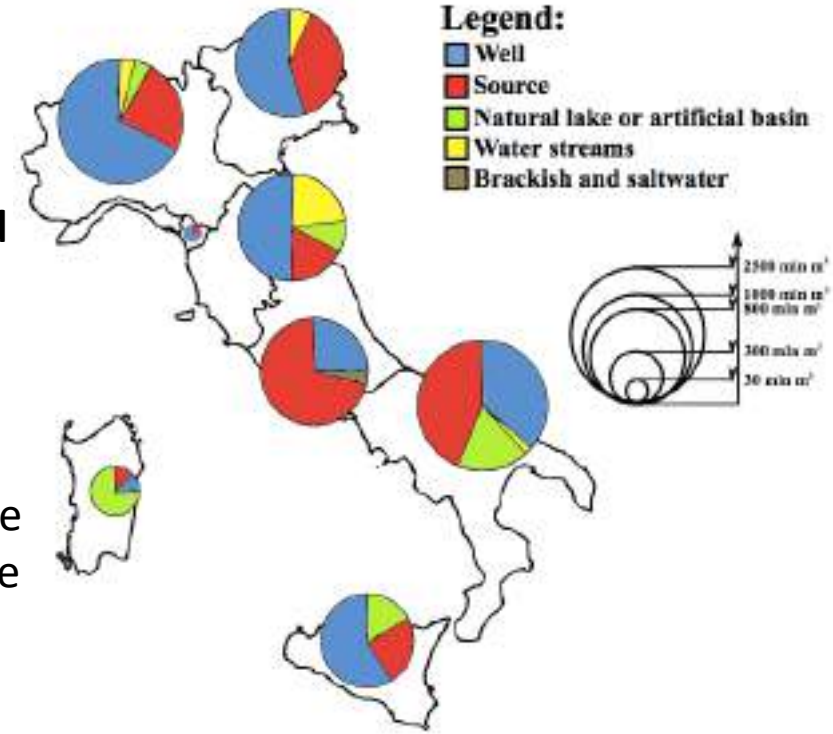
- ✓ current and future scenario
- ✓ ↓precipitation ↑temperatures
- ✓ ↑sea water level
- ✓ over-exploitation of water resources
- ✓ gaps in management & investments



WATER RESOURCES AND HEALTH

WATER RESOURCE STRATEGY

- ✓ to promote **natural water conservation, reclaimed water reuse**, leakage control and **investments in water sector**
- ✓ harmonization and updating of **legislative water quality and parameters**
- ✓ strategy to **aggregate** the fragmentized surveillance authorities and water management companies, the latter also by using economic instruments
- ✓ to promote **water-use efficiency** across all sectors
- ✓ to strengthen **capacity building regarding climate adaptation in water management** (flood and drought control)
- ✓ to increase **resilience of water supply chain and sanitation systems**
- ✓ to support the adoption and implementation of **risk based approach in water and sanitation sector (i.e., water safety plans, sanitation safety plans)**, including waterborne diseases risk assessment and management, early warning systems
- ✓ to support the development and up-scaling of **technologies and methods** to ensure safe drinking water in sufficient quality and quantity (e.g., desalination technologies for contingency water supply)



ATTI PARLAMENTARI
XVIII LEGISLATURA

CAMERA DEI DEPUTATI

Doc. XXVII
n. 18

PROPOSTA DI PIANO NAZIONALE
DI RIPRESA E RESILIENZA

Presentata dal Presidente del Consiglio dei ministri
(CONTE)

Trasmessa alla Presidenza il 15 gennaio 2021

Health, environment and climate plan

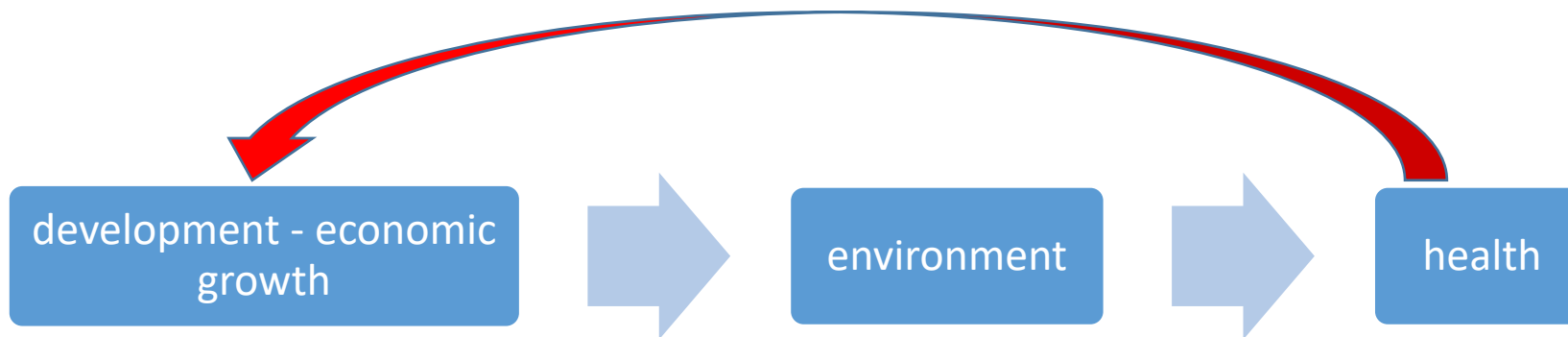


What:

- **designing** a new structure in institutional architecture
- **manage** the health-environment-climate issue in an integrated and intersectoral way

How:

- **synergy** with the economic and social development of the country
- **prospect** of a new *Governance* in support of the principle of equity for the new generations



From recovery/remediation/response (emergency) to prevention (sustainability)

The Vision



WHO Global Strategy on Health, Environment and Climate Change

The transformation needed to improve lives and wellbeing sustainably through healthy environments



World Health Organization



World Health Organization

Regional Office for Europe



EUROPEAN ENVIRONMENT AND HEALTH PROCESS



UNECE



UN

Better Health. Better Environment. Sustainable Choices.



Industry/
services



Housing



Energy



WASH



Health



Labour



Land use
planning



Agriculture and
food items



Transport



IL GREEN DEAL
EUROPEO

The health sector will play leadership and coordination roles, working together with other sectors with relevance to health, environment and climate change to improve lives

Key sectors fully integrate health into their decision-making process and maximize societal welfare



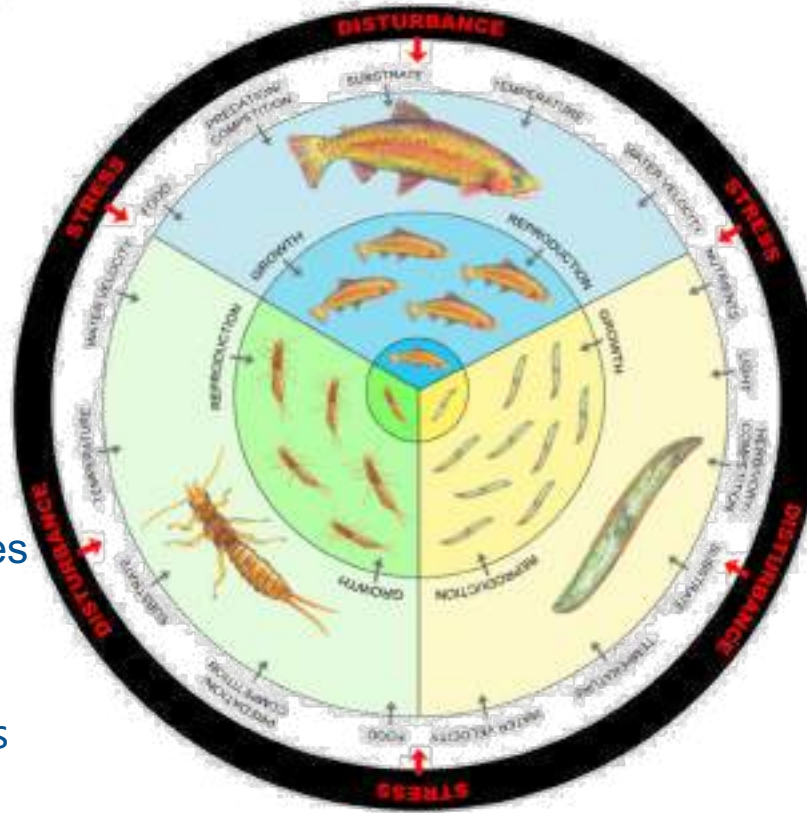
Health data

- ✓ Behavioral Risk Surveillance
- ✓ National Ambulatory Medical Care data
- ✓ National Hospital Discharge Survey
- ✓ National Health and Nutrition Survey
- ✓ National Cancer Registries
- ✓ Asthma Data Surveillance
- ✓ Childhood Lead
- ✓ Poisoning Data
- ✓ Survey of Occupational Injuries/Illnesses
- ✓ ...

Biomonitoring Data

- ✓ National data on Biochemical Indicators of Diet and Nutrition
- ✓ National Health and Nutrition Examination Survey
- ✓ National Report on Human Exposure to Environmental Chemicals

Some possible nationally data systems with relationship to environmental public health



Bioindicators: Organisms used to measure Environmental Impacts



Environmental Data

- ✓ Air
 - Acid Rain Emissions Tracking
 - National Emission Inventory
- ✓ Ambient Water Data
 - Beaches Environmental Assessment and Coastal Health
 - Watershed Assessment, Tracking & Environmental Results
 - Bathing water monitoring
- ✓ Drinking Water Data
 - Drinking Water Information system
-
- ✓ Geological Survey and model
- ✓ Climate data and trends/models/scenarios



One health

One Health Approach recommended for Pandemic Preparedness

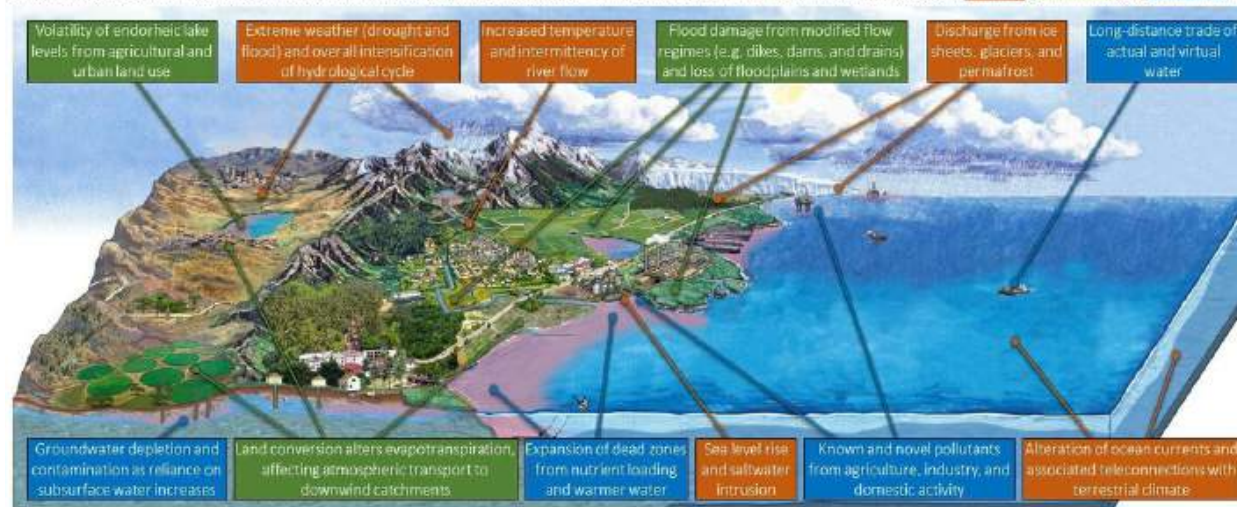
*International Ministerial Conference on Avian and
Pandemic Influenza, 2007*

THE LANCET
**Calling for a COVID-19
One Health Research
Coalition**
Vol 395 May 16, 2020

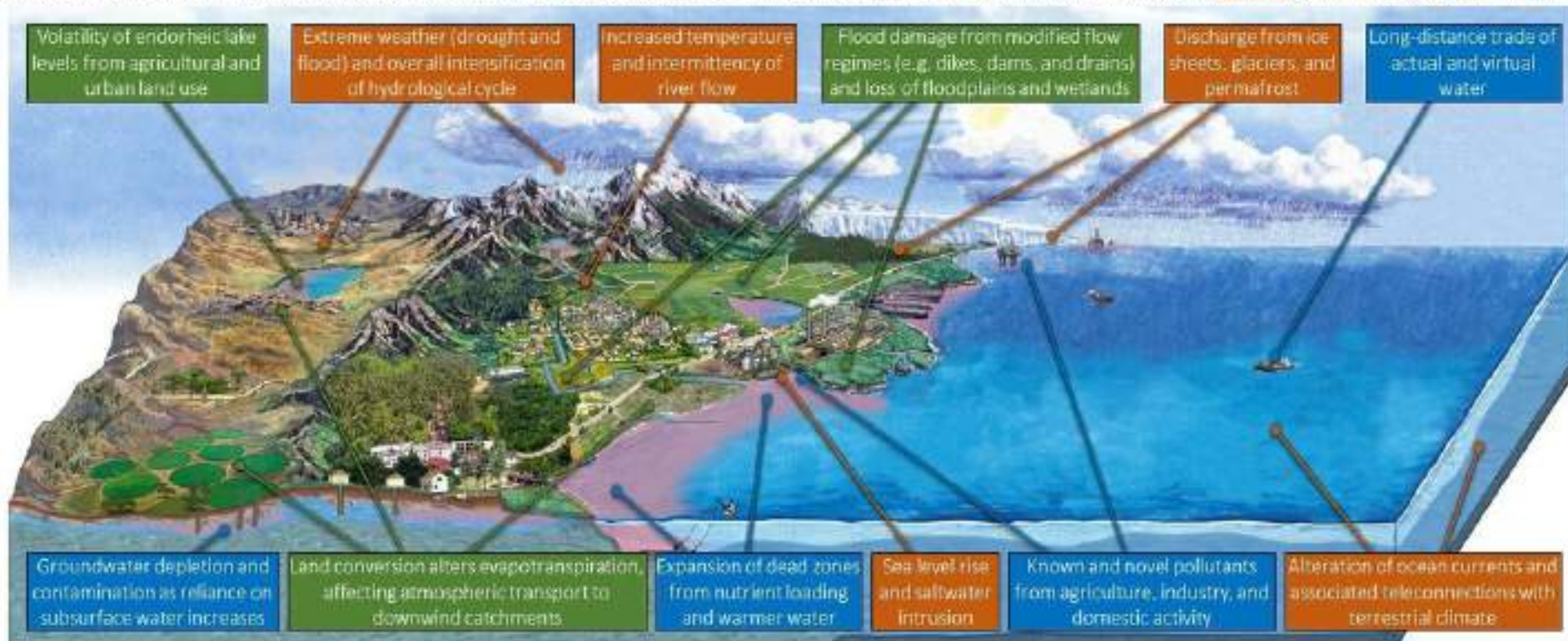




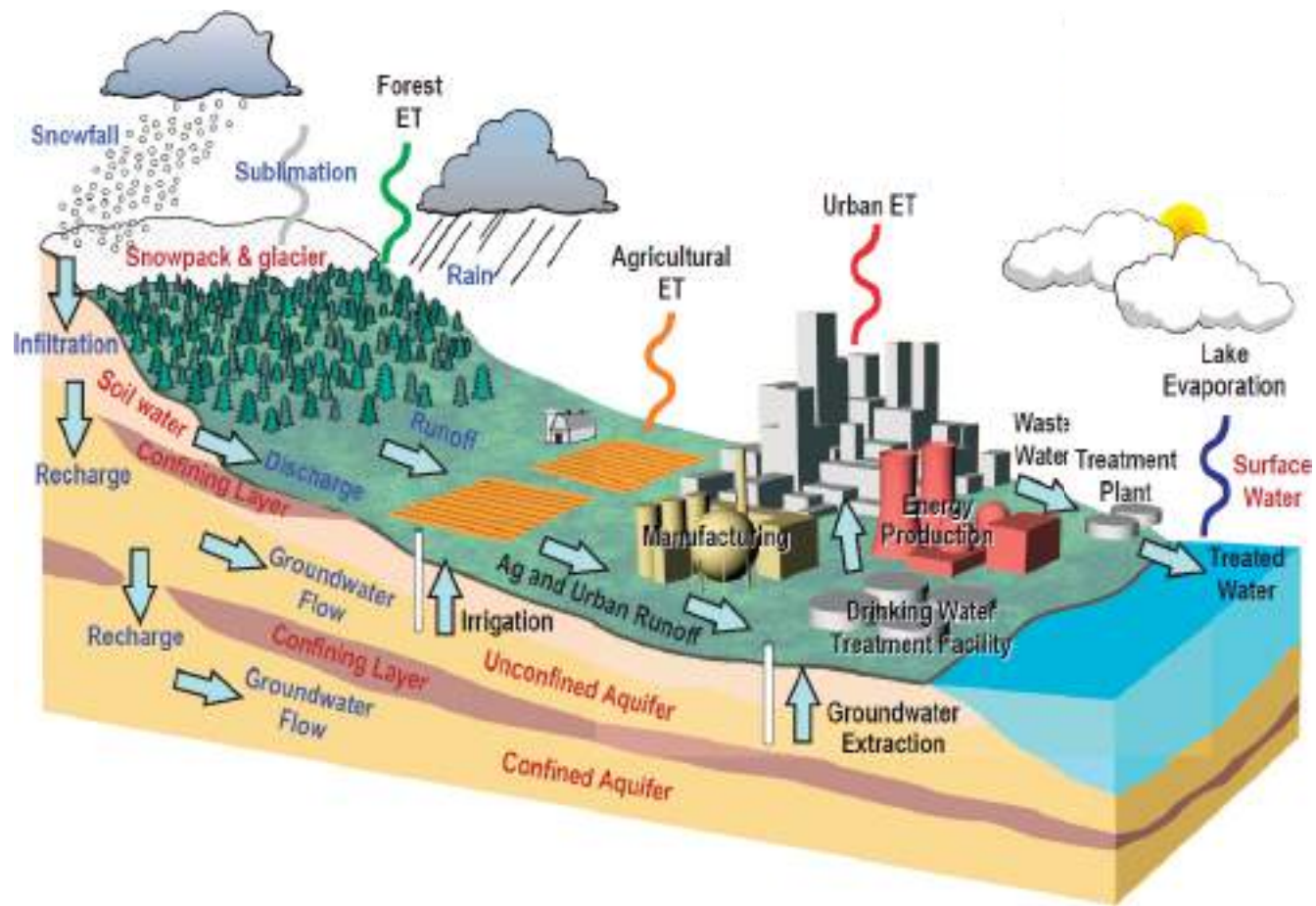
Some consequences of human interference with the water cycle. Consequences are colored by primary cause: human changes in **climate**, **land cover**, or **water use**.



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ONE WATER



The EU Water Policy

Water and water pollution were among the first environmental concerns in the EU



first pieces of EU water legislation were accepted by the European Council as early as 1973



European water legislation has taken a leading and innovative role in the design of national water policy in many EU Member States



The EU Water Policy

- Directives and Decisions laying down water quality objectives for specific types of water (e.g. the Surface Water, Fish Water, Shellfish Water, Bathing Water and Drinking Water Directives)
- additional Directives, including the Nitrates Dir, the Urban Waste Water Treatment Dir, the Integrated Pollution Prevention and Control (IPPC) Dir
- problem-by-problem basis
- complex picture of water Directives with differing methodologies, definitions and aims.
- Incomplete effectiveness

1975 - 1991

Current water policy

- New, more co-ordinated EU water legislation
- adoption of the Water Framework Directive (WFD) 2000/60/EC.



The EU Water Policy



High level of protection,
(considering diversity of situations in the various regions)

Precautionary principle

Preventive action

Rectification of pollution at source

Polluter pays principle

Integration of environmental protection into other Community policies (e.g. agriculture, transport and energy)

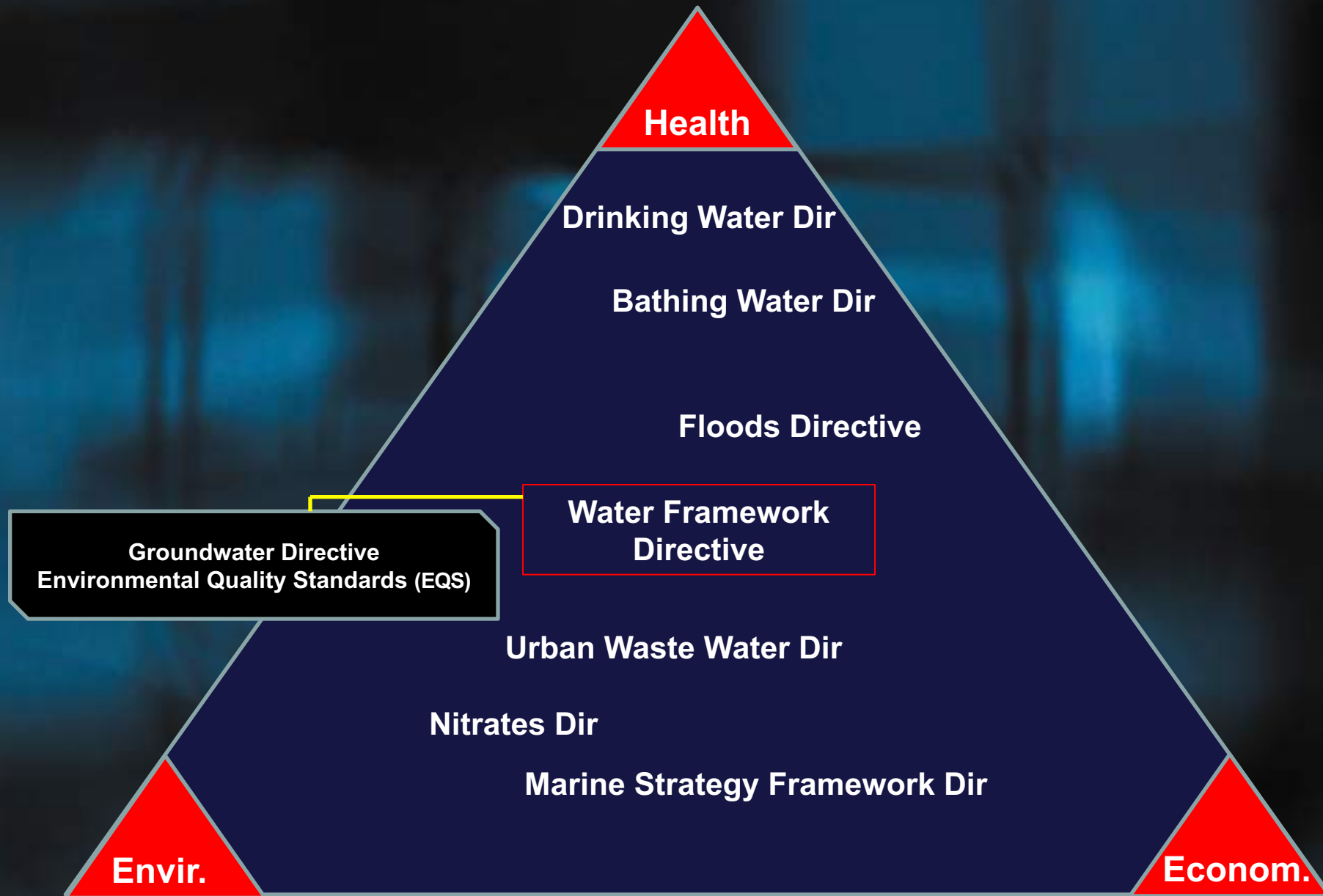
Promotion of sustainable development

The EU Water Policy



- ✓ 25 Directives and other Decisions covering the various aspects of water management
- ✓ last major impetus towards a sustainable management of the EU's water resources was made in 2000 with the development of the Water Framework Directive (WFD), which combines many of the previous directives and regulations and fundamentally redefines the approach to water resources management

Objectives and impact of EU Water legislation



Human Health

Drinking Water Directive
(dir 98/83/EC)

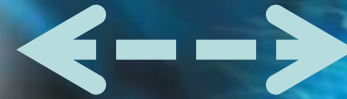


Environmental
Health

Catchment

Water bodies
(supply)

Water Company

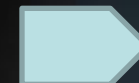


Sewage

Water bodies
(discharge)

Water Framework Directive
(dir 2000/60/EC)

Environmental quality



DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2020 on the quality of water intended for human consumption



PFAS Total	0.50	µg/l	PFAS 'Total' means the totality of per- and polyfluoroalkyl substances. This parametric value shall only apply once technical guidelines for monitoring this parameter are developed in accordance with Article 11(7). Member States may then decide to use either one or both of the parameters 'PFAS Total' or 'Sum of PFAS'.
Sum of PFAS	0.10	µg/l	Sum of PFAS means the sum of per- and polyfluoroalkyl substances considered a concern as regards water intended for human consumption listed in point 3 of Part B of Annex III. This is a subset of 'PFAS Total' substances that contain a perfluoroalkyl moiety with three or more carbons (i.e. -C ₃ F ₇ -, n ≥ 3) or a perfluoroalkyl-ether moiety with two or more carbons (i.e. -C ₂ F ₄ OC ₂ mF ₂ -, n and m ≥ 1).



Article 10
Risk assessment of domestic distribution systems



Article 8
Risk assessment and risk management of the catchment areas for abstraction points of water intended for human consumption



Article 9
Risk assessment and risk management of the supply system





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THANK YOU