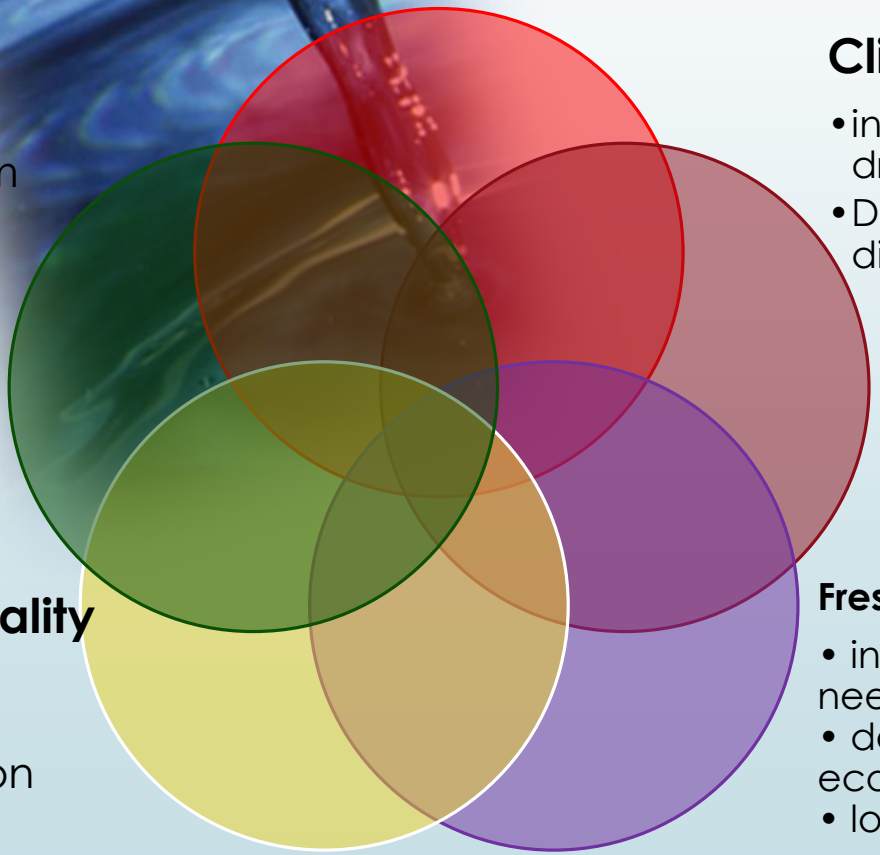
MICROINQUINANTI E CONTAMINANTI EMERGENTI
Testimonianze Soluzioni e Prospettive
11 e 12 Giugno – Aula Rogers, c/o Politecnico di Milano

Stato delle conoscenze dei problemi sanitari delle acque destinate al consumo umano

Valentina Fuscoletti
Istituto Superiore di Sanità
DAMSA - Rep. Qualità delle Acque e Salute

HEALTH RISKS AROUND THE WATER CYCLE



Coasts and oceans

- sewage discharges /pollution from rivers
- shellfish and fish contamination
- polluted bathing waters
- persistent organic pollutants
- radioactive substances

Agriculture

- increased risk of disease vectors (malaria and schistosomiasis) from unsafe irrigation
- irrigation with unsafe wastewater
- agro-chemical pollution of drinking water sources

Climate change

- increased floods and droughts
- Distribution of insect disease vectors

Downstream water-quality

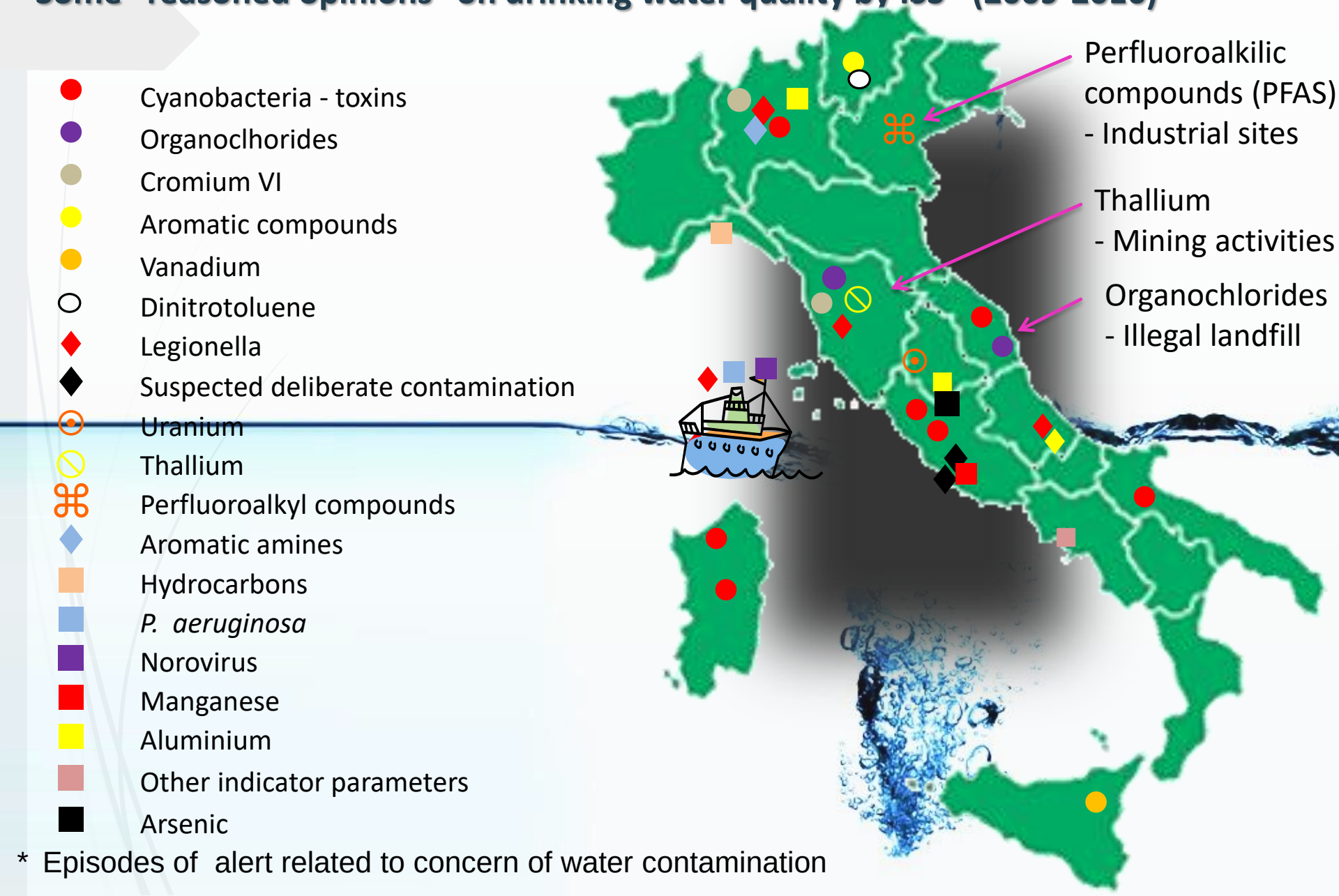
- sewage pollution and infectious diseases
- nutrients, eutrophication and algal toxins
- chemical pollutants

Freshwater scarcity

- insufficient water for basic needs
- degraded aquatic ecosystems
- loss of biodiversity
- lack of water for irrigation and food production

… It is everything under control?

Some “reasoned opinions” on drinking water quality by ISS* (2009-2016)



* Episodes of alert related to concern of water contamination

EVOLUTION OF PREVENTION

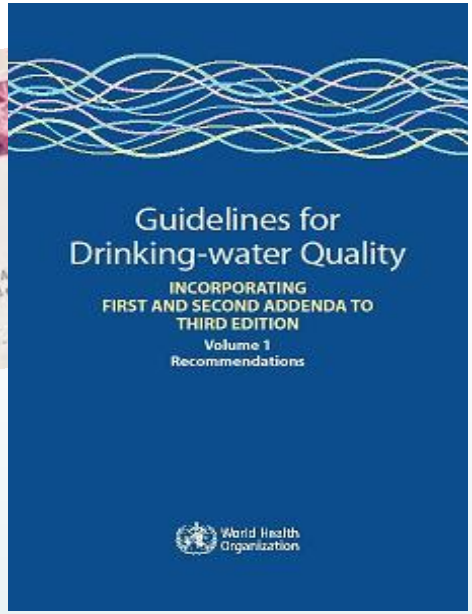
-1956 series of expert consultations culminating in a meeting in 1956 in Geneva

1958: International Standards for Drinking-Water published

1958, 1963, 1971: revisions of International Standards for Drinking-Water

1984: 1 ed. WHO Guidelines for Drinking-Water Quality (GDWQ) superseeded the International Standards

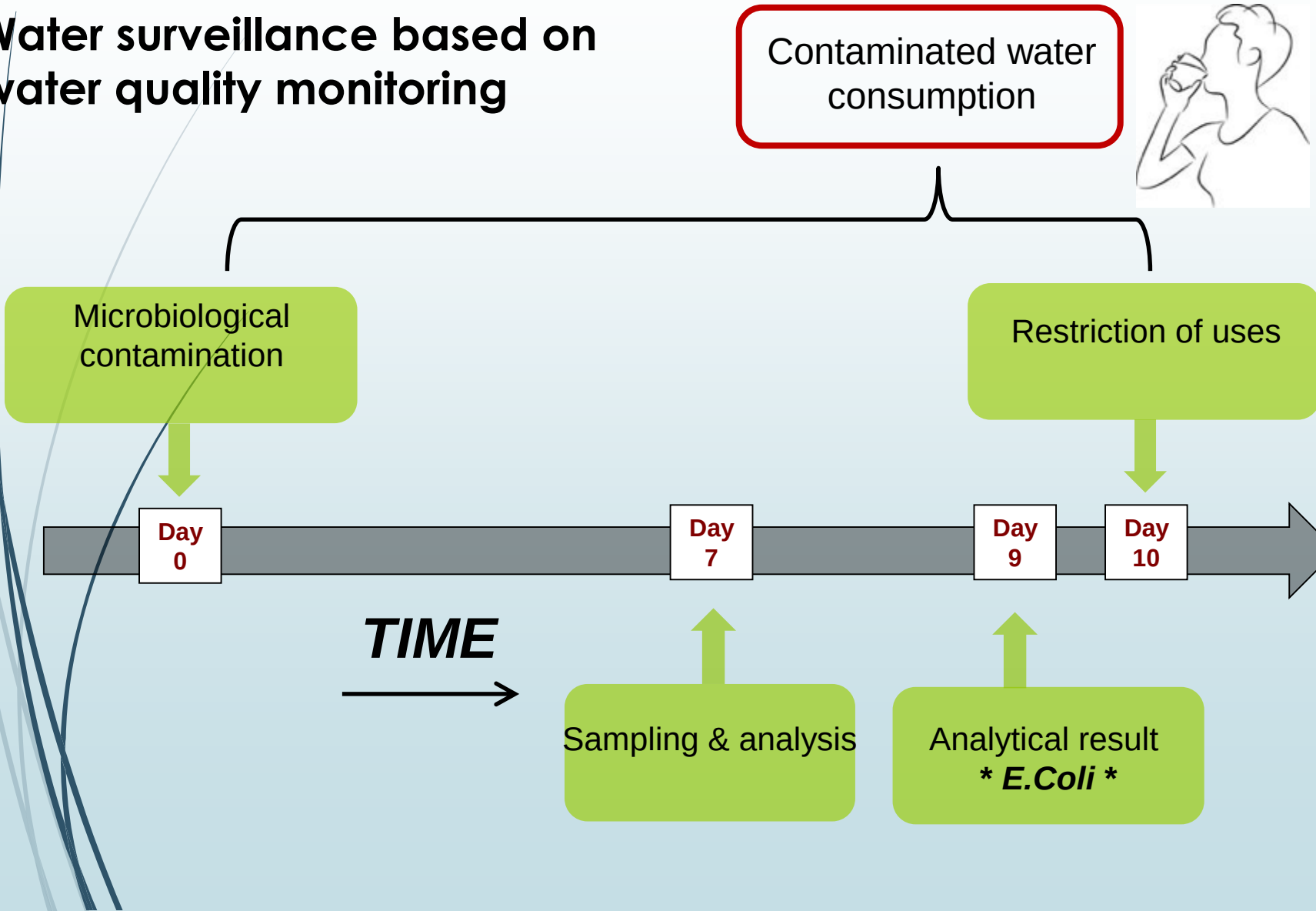
Basis for the development of national standards



2004: WATER SAFETY PLANS (WSP): The most effective means of consistently ensuring the safety of a drinking-water supply is through the use of a comprehensive risk assessment and risk management approach that encompasses all steps in the water supply from catchment to consumer.

Why WSP?

Water surveillance based on water quality monitoring



Why WSP?

Water contaminated consumption

Waste disposal/pollution from (historical) industrial sites

Migration of polluttans to the water sources

Measures to MITIGATE the human exposure

year 0

year 10

year 40

TIME

Identification of (emerging?) contaminants following (special) monitoring programs

Water surveillance based on water quality monitoring