



**Research Project MESESA:
ENVIRONMENT, SECURITY AND
HEALTH
(PID2021-122143NB-I00)**



JEAN MONNET SUMMER SCHOOL EU4GH

**ENVIRONMENT AND HEALTH IN THE EU: BATHING WATER QUALITY AS
A TEST CASE**

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Bathing waters regulation: an example to be considered

<https://www.eea.europa.eu/data-and-maps/explore-interactive-maps/state-of-bathing-waters-in-2023>



Bathing Water Directive is a key to improve water quality in general, and the health impact in particular since it lays down quality standards for the protection of public health and the environment, and obliges Member States to take measures to ensure that bathing waters conform to these standards.



- Initial regulation: **Directive 76/160/CEE of the Council concerning the quality of bathing water (8/12/1975);**
- “Whereas, in order to protect the environment and public health, it is necessary to reduce the pollution of bathing water and to protect such water against further deterioration;
- Whereas surveillance of bathing water is necessary in order to attain, within the framework of the operation of the common market, the Community's objectives as regards the improvement of living conditions, the harmonious development of economic activities throughout the Community and continuous and balanced expansion;” (...)
- “Whereas public interest in the environment and in the improvement of its quality is increasing; whereas the public should therefore receive objective information on the quality of bathing water;”
 - Article 4.1 of the Directive:
“Member States shall take all necessary measures to ensure that, within 10 years following the notification of this Directive, the quality of bathing water conforms to the limit values set in accordance with Article 3 “.

Bathing water is...article 1...

1 . This Directive concerns the quality of bathing water, with the exception of water intended for therapeutic purposes and water used in swimming pools.

2. For the purposes of this Directive:

- (a) 'bathing water' means all running or still fresh waters or parts thereof and sea water, in which :
- bathing is explicitly authorized by the competent authorities of each member State, or
 - bathing is not prohibited and is traditionally practised by a large number of bathers;”.

Obligations under the Directive:

Member States must report monitoring results to the Commission by 31 December of each year.

The Commission compiles all these data into its annual report, which is published before the next bathing season.

The competent authorities must adopt new methods to actively inform the public about bathing water quality.

The best medium will be Internet: bathing zone profiles, maps, water quality monitoring, action programmes (on local, regional and national sites).

Advanced regulation, control of 19 parameters (physical, chemical and biological)

Nothing is perfect; that objective has been “plagued by a long history of noncompliance on the part of Member States, a history which includes years of delay by Member States, multiple enforcement actions before the European Court of Justice (ECJ) and several adverse judgments against individual Member States” (L.W. GOODRICH, “Implementing Environmental Law in the European Union: Lessons from the Bathing Water Directive”, 16 *Georgetown International Environmental Law Review* (winter 2004), pp. 301-321, p. 302).

The Directive lays down quality standards to protect the public health and the marine environment, obliges Member States to take measures necessary to conform to these standards and prescribes a surveillance strategy.

ENFORCEMENT ACTIONS BEFORE THE EUROPEAN COURT OF JUSTICE CONCERNING THE FIRST DIRECTIVE

Case	Concerned State	Judgment	Violations	Reference Reports
C-56/90	United Kingdom	14.7.1993	Art. 3	1993, I, 4109
C-92/96	Spain	12.2.1998	Art. 4.1	1998, I, 505
C-198/97	Germany	8.6.1999	Arts. 4.1 & 6.1	1999, I, 3257
C-307/98	Belgium	25.5.2000	Art. 4.1	2000, I, 3933
C-147/00	France	15.3.2001	Arts. 3, 4, 5, 6 & Annex	2001, I, 2387
C-368/00	Sweden	14.6.2001	Arts. 4.1 & 6.1	2001, I, 4605
C-427/00	United Kingdom	13.11.2001	Art. 3 & Annex	2001, I, 8535
C-268/00	Netherlands	19.3.2002	Arts. 4.1 & 6.1	2002, I, 2995
C-226/01	Denmark	30.1.2003	Arts. 4.1 & 6.1	2003, I, 1219
C-278/01	Spain	25.11.2003	Judgment C-92/96	2003, I, 14141
C-272/01	Portugal	15.7.2004	Art. 3, 4.1 & Annex	2004, I, 0000
C-26/04	Spain	15.12.2005	Dir. 76/160/CEE	2005, I, 11059

Freshwater	Belgium	Denmark	Finland	France	Germany	Greece	Italy	Netherlands	Portugal	Spain	Sweden
Years	91-04	92-04	96-04	92-04	92-04	91-04	91-04	91-04	94-04	91-04	96-04
Total	129	138	419	2728	2645	6	990	989	89	535	770
Suppressed	57	27	134	1322	1084	2	211	439	16	365	358
% Suppressed	44.18	19.57	31.98	48.46	40.98	33.33	21.31	44.39	17.98	68.22	46.49

Coastal Waters	Denmark	Finland	France	Germany	Greece	Italy	Netherlands	Portugal	Spain	Sweden
Years	92-04	96-04	92-04	92-04	91-04	91-04	91-04	92-04	91-04	96-04
Total	1390	140	2255	714	2168	5931	134	441	2136	543
Suppressed	252	37	383	324	203	1047	52	41	310	161
% Suppressed	18.13	26.43	16.98	45.38	9.36	17.65	38.81	9.3	14.51	29.65

DIRECTIVE 2006/7/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL CONCERNING THE MANAGEMENT OF BATHING WATER QUALITY AND REPEALING DIRECTIVE 76/160/EEC (15/02/2006)

In 2001, the European Commission began the process of reviewing this old legislation in order to increase the rigor of the Directive. The proposed changes in bacteriological sampling reflects the scientific advances that have been achieved in recent years. “This Directive should use scientific evidence in implementing the most reliable indicator parameters for predicting microbiological *health risk* and to achieve a high level of protection. Further epidemiological studies should be undertaken urgently concerning the *health risks associated with bathing*, particularly in fresh water”.

In the new directive emphasis is shifted from bathing water quality *monitoring* to bathing water quality *management*.

TOGETHER WITH...

“On 17 February 2005 the Community ratified the UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the Åarhus Convention). It is therefore appropriate for this Directive to include provisions on *public access to information* and to provide for *public participation* in its implementation”.

ART. 1

“This Directive shall apply to any element of surface water where the competent authority expects a large number of people to bathe and has not imposed a permanent bathing prohibition, or issued permanent advice against bathing (hereinafter bathing water). It shall not apply to:

- (a) swimming pools and spa pools;
- (b) confined waters subject to treatment or used for therapeutic purposes;
- (c) artificially created confined waters separated from surface water and groundwater”.



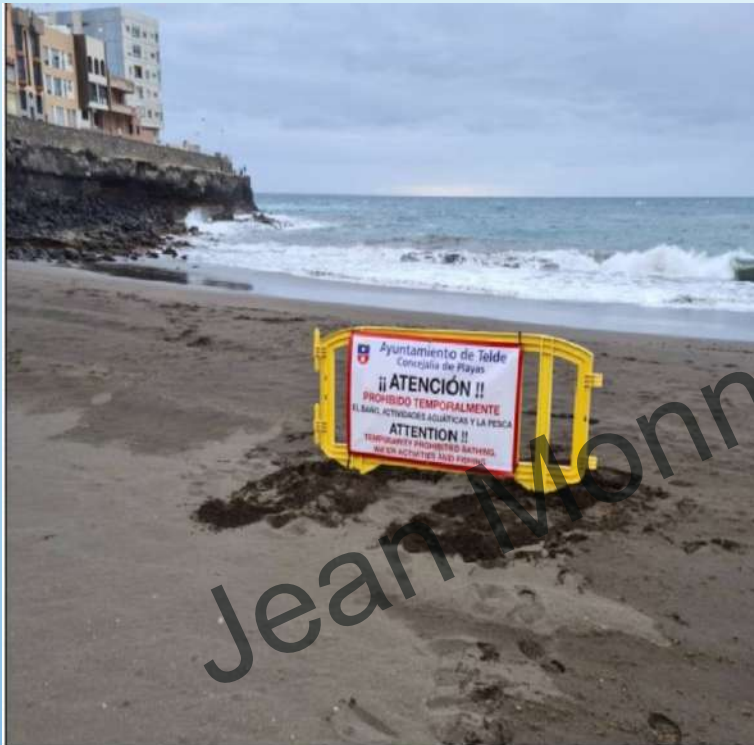
The new Directive is shifting the effective interventions from sewage treatment and outfall management to the management of bathing beaches. This is expected to be achieved through a series of measures consisting of **classification of bathing waters, monitoring their quality status, establishment of bathing water profiles, timely identification of health risks and encouragement of public information and participation.**

The 2006 Directive clearly intends to impose microbiological standards for coastal recreational waters aiming to be as protective of human health as reasonably possible.

CLASSIFICATION OF BATHING WATERS

- Following article 5.1 this classification will be: (a) 'poor'; (b) 'sufficient'; (c) 'good'; or (d) 'excellent'.
- Article 5.4 (b) says that: "If a bathing water is classified as 'poor' for five consecutive years, a permanent bathing prohibition or permanent advice against bathing shall be introduced. However, a Member State may introduce a permanent bathing prohibition or permanent advice against bathing before the end of the five-year period if it considers that the achievement of 'sufficient' quality would be infeasible or disproportionately expensive".

MEASURES TO BE ADOPTED (CYANOBACTERIAL RISKS, MACROALGAE, PHYTOPLANKTON, POLLUTION...)



“When the bathing water profile indicates a potential for cyanobacterial proliferation, appropriate monitoring shall be carried out to enable timely identification of health risks”.

Information to the public is needed.

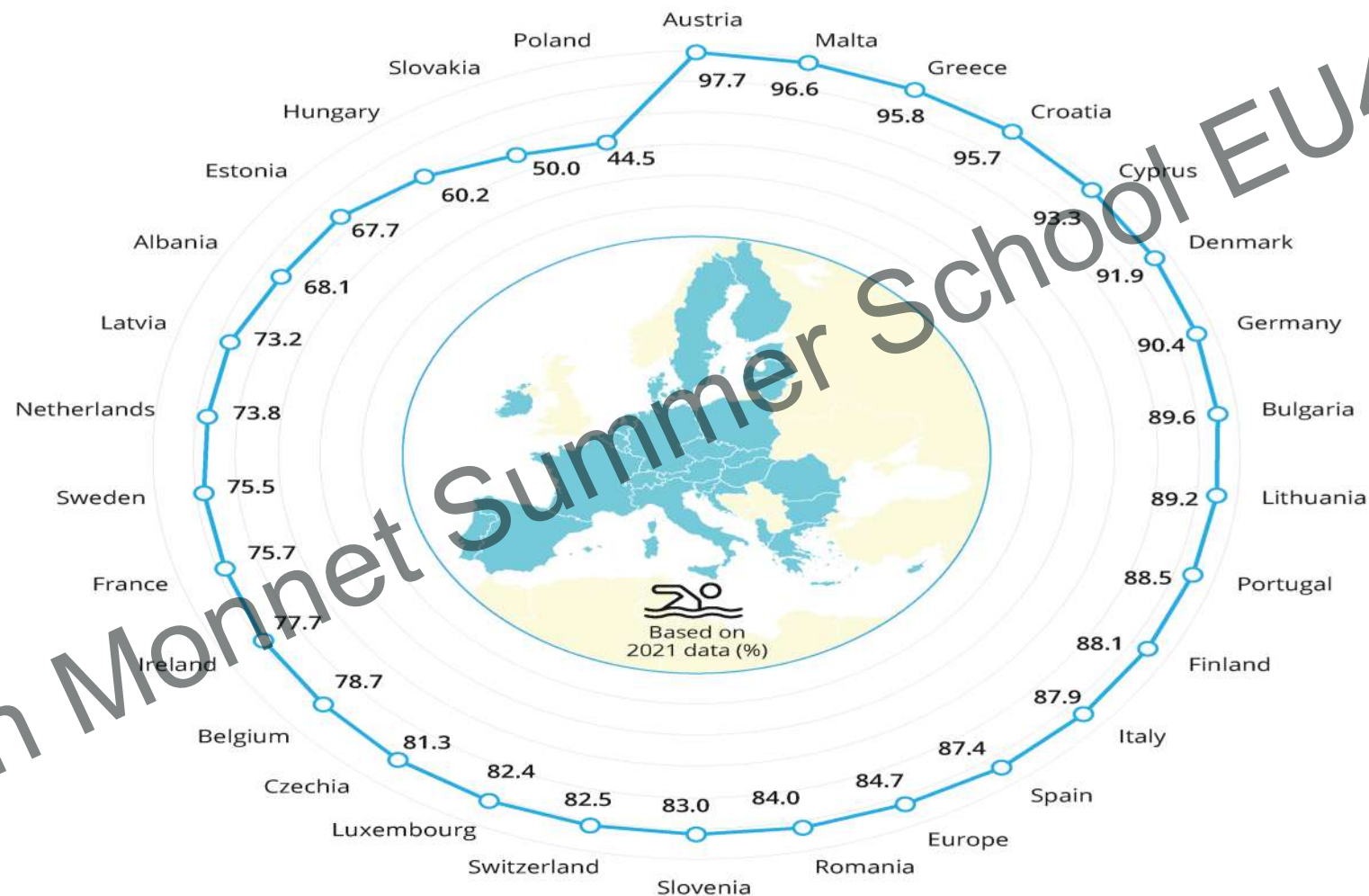
But compliance to the 2006/7/EC European Union microbiological bathing water quality criteria does not safeguard against the possibility of the presence of *Salmonella* or *C. albicans* in bathing coastal waters

BATHING WATER QUALITY REPORT 2021

Bathing water quality in the EU remains high. Since the adoption of the Bathing Water Directive in 2006, the share of excellent sites has grown continuously; in 2021, it represented 84.8% of bathing sites in the EU. The minimum water quality standards were met at 95.2% of sites.

- The quality of coastal sites is generally better than that of inland sites. In 2021, 88.0%, of EU coastal bathing sites were classified as being of excellent quality compared to 78.2% of inland sites.
- The share of poor-quality sites has dropped since 2013. In 2021, poor bathing waters constituted 1.5% of all sites in the EU, compared to 2% in 2013. This shows improvements in the management of poor bathing sites in Europe.
- The share of excellent bathing water has been stable in recent years. In the period 2015-2021, the share of bathing water having an excellent status in Europe has been stable at 85-88% for coastal bathing water; and at 77-81% for inland bathing water.
- The number of bathing waters in Europe has decreased from 2020 by 417 (1.9%) amounting to 21,859 bathing sites in 2021. Compared to 2020, there is no longer information about 640 bathing sites in the UK as it is no longer reported. 223 new bathing sites have been identified in 2021 in the EU countries.

Proportion of bathing waters with excellent quality in European countries in 2021

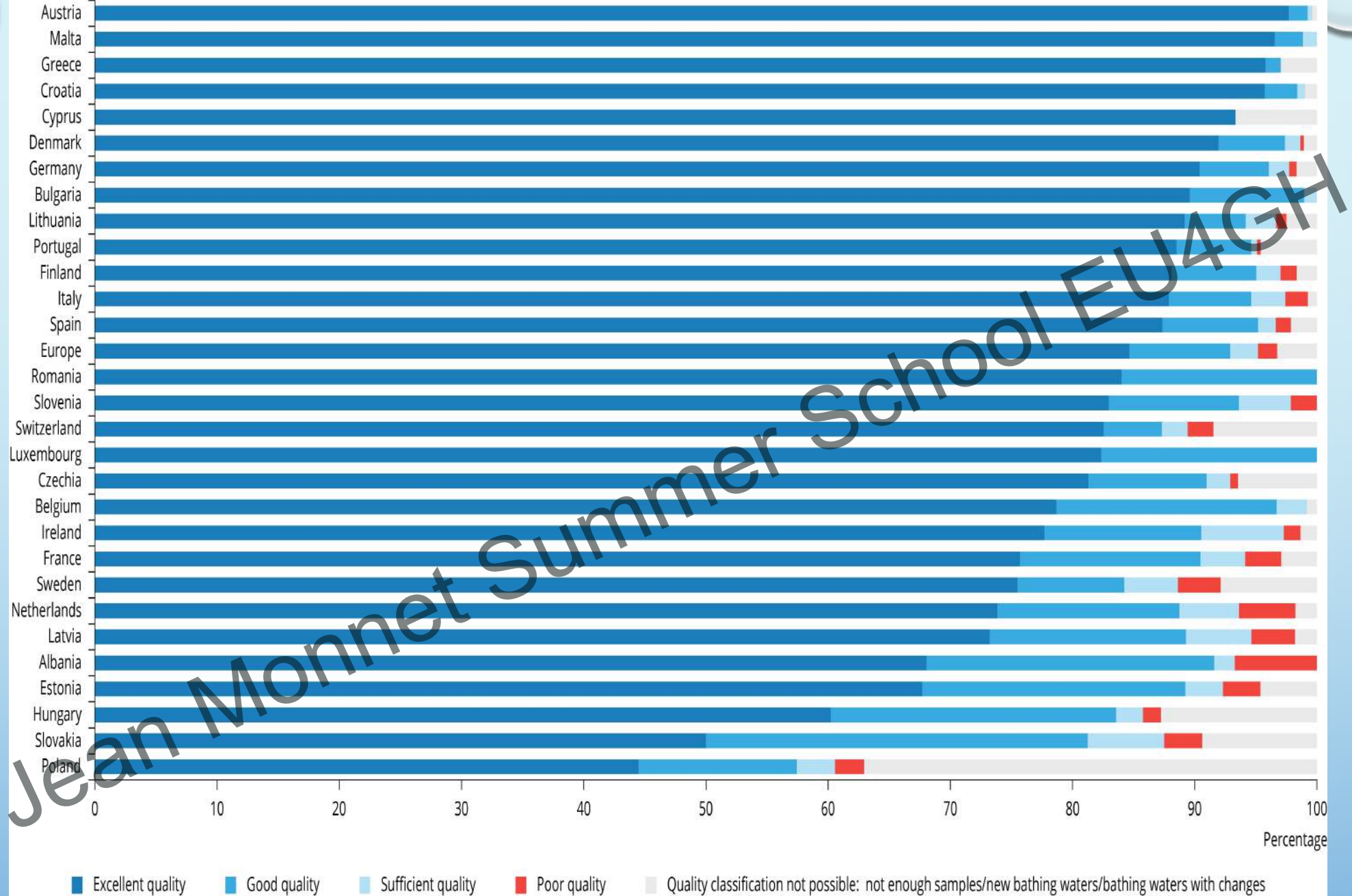


POSITIVE IMPACT OF THE DIRECTIVE

Out of 21,859 bathing sites in Europe in 2021, 84.7% were of excellent quality (Figure 1). In four countries, 95% or more, of bathing waters were of excellent quality: Austria, Malta, Croatia and Greece. Additionally in Malta, Bulgaria, Romania and Luxembourg, all assessed bathing water sites were of at least sufficient quality in 2021.

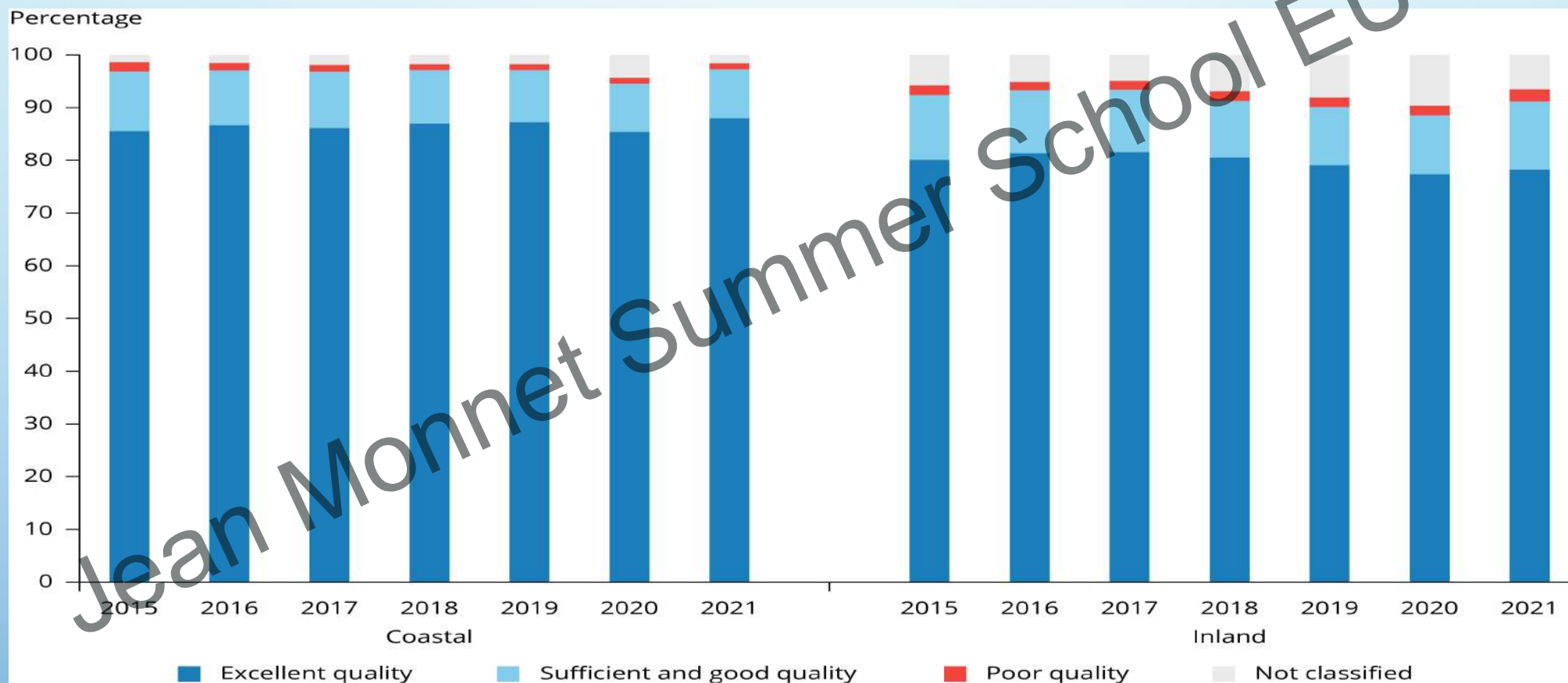
The percentage of European bathing waters achieving at least 'sufficient' quality (the minimum quality standard set by the Directive) increased from just 74% in 1991 to over 95% in 2003 and has remained quite stable since then.

One of the main requirements of the Directive is to ensure that all bathing water sites were at least of 'sufficient' quality by 2015. In the 2021 bathing season, this minimum quality standard was met by 95.2% of all EU bathing water sites.



IN THE PERIOD 2015-2021, THE SHARE OF BATHING WATERS HAVING AN EXCELLENT STATUS IN EUROPE HAS BEEN STABLE AT 85-88% FOR COASTAL BATHING WATERS; AND AT 77-81% FOR INLAND BATHING WATERS (FIGURE 3). THE QUALITY OF COASTAL SITES IS GENERALLY BETTER THAN THAT OF INLAND SITES DUE TO THE HIGHER SELF-PURIFICATION CAPACITY OF COASTAL AREAS. MOREOVER, MANY CENTRAL EUROPEAN INLAND BATHING WATER SITES ARE SITUATED ON RELATIVELY SMALL LAKES AND PONDS AS WELL AS RIVERS WITH A LOW FLOW, WHICH, ESPECIALLY IN THE SUMMER, ARE MORE SUSCEPTIBLE THAN COASTAL AREAS TO SHORT-TERM POLLUTION CAUSED BY HEAVY SUMMER RAINS OR DROUGHTS.

COASTAL AND INLAND BATHING WATER QUALITY IN THE EU BETWEEN 2015 AND 2021

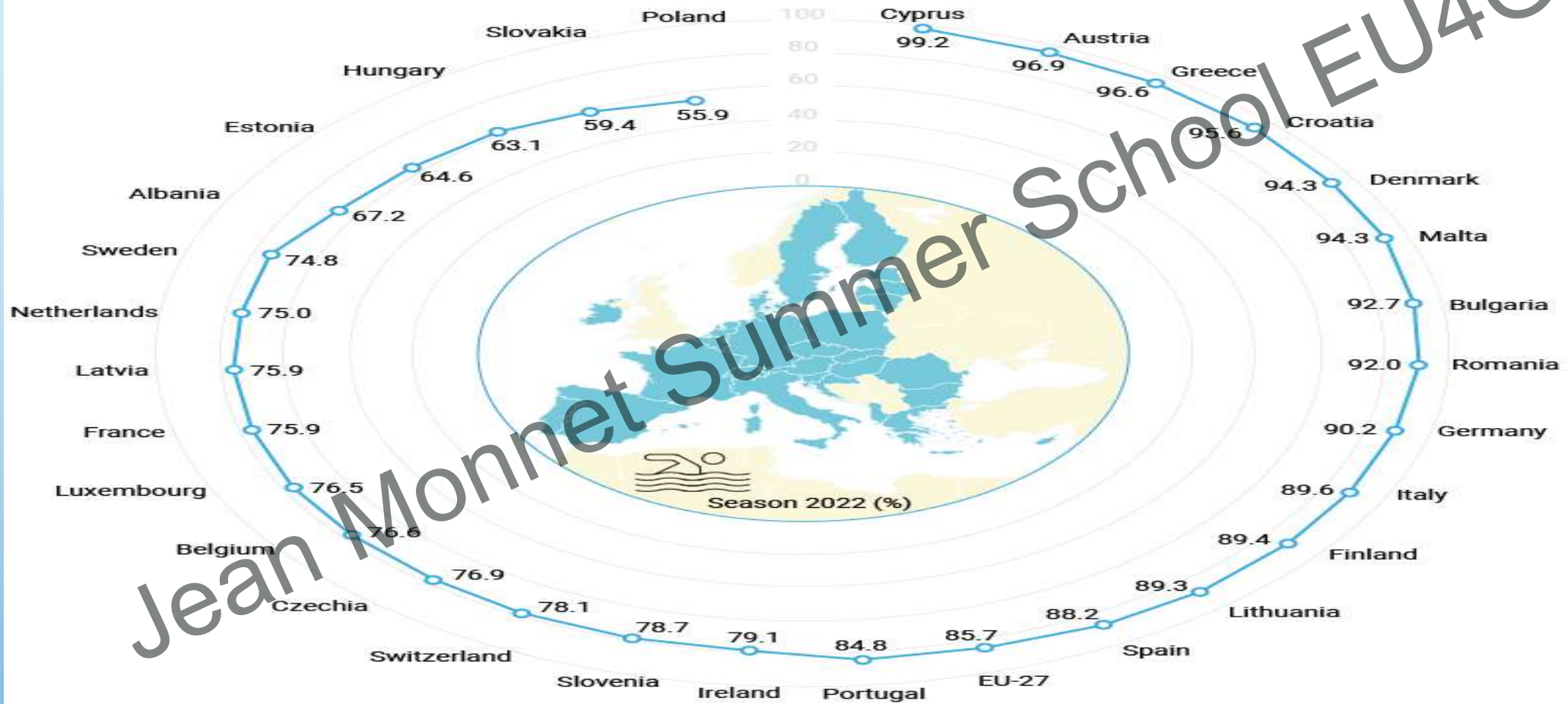


NOTHING IS PERFECT...

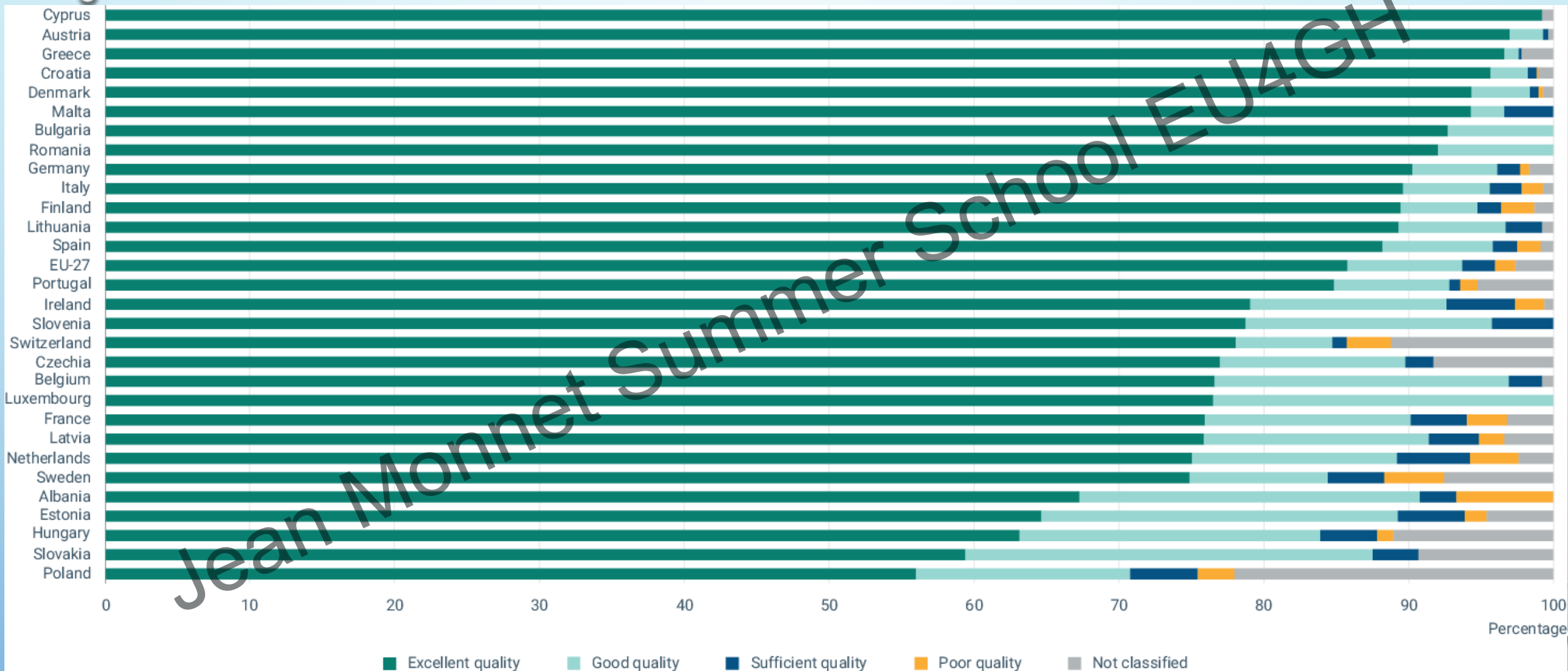
In six EU countries, 3% or more of bathing waters were of poor quality in 2021: Estonia (two bathing waters or 3.1%), France (99 bathing waters or 3.0%), the Netherlands (34 bathing waters or 4.6%), Latvia (two bathing waters or 3.6%), Slovakia (one bathing water or 3.1%) and Sweden (16 bathing waters or 3.5%). In Albania, the number of poor bathing sites dropped significantly since 2015, when 31 bathing water sites (or 39.1%) were assessed as poor. In 2021, there were only eight poor bathing waters (or 6.7%) in Albania. This improvement can be linked to the construction of five wastewater treatment plants in Albania in recent years.

Swimming at bathing sites with poor water quality can result in illness. Bathing water sites classified as poor must be closed throughout the following bathing season and must have measures in place to reduce pollution and eliminate hazards to the health of bathers.

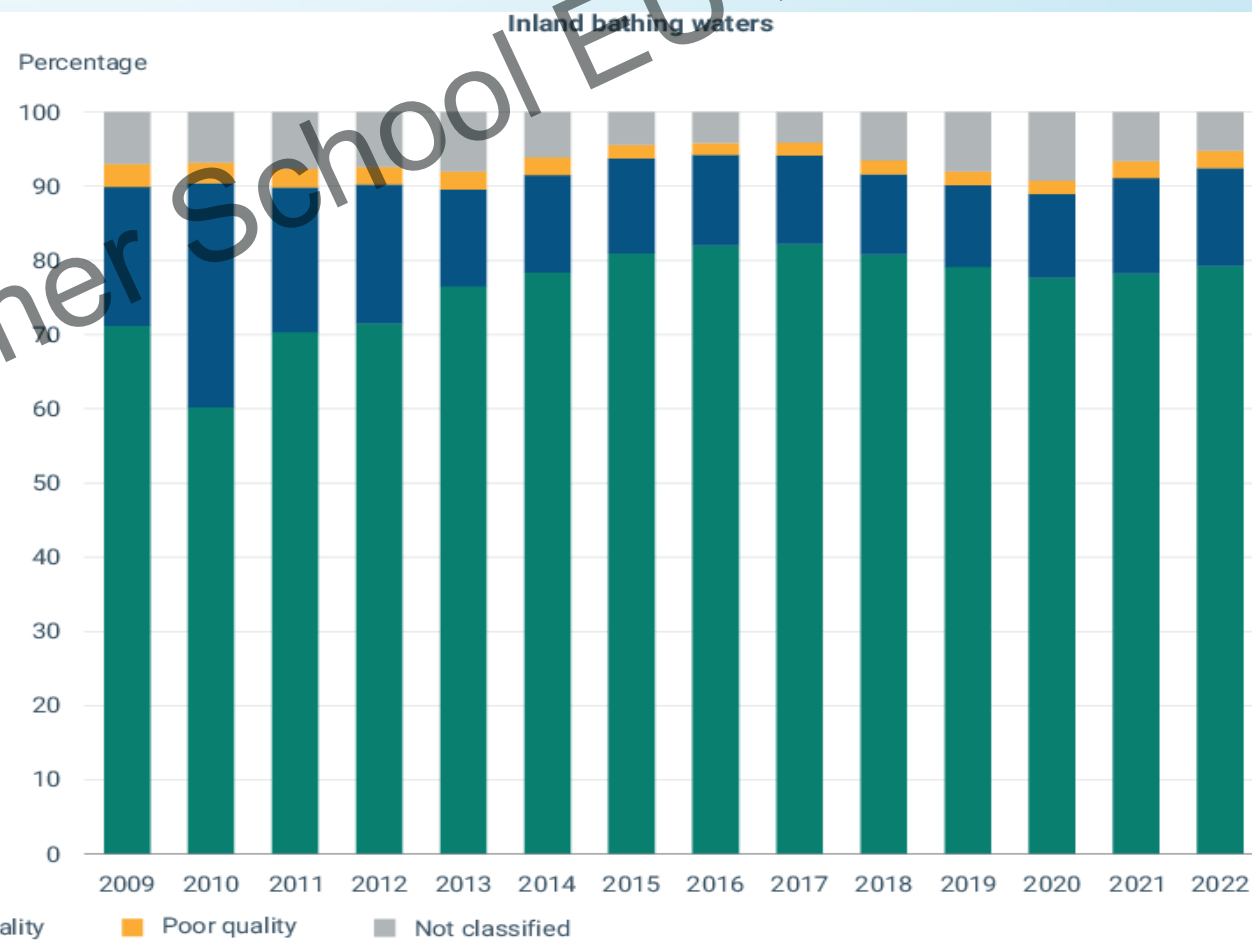
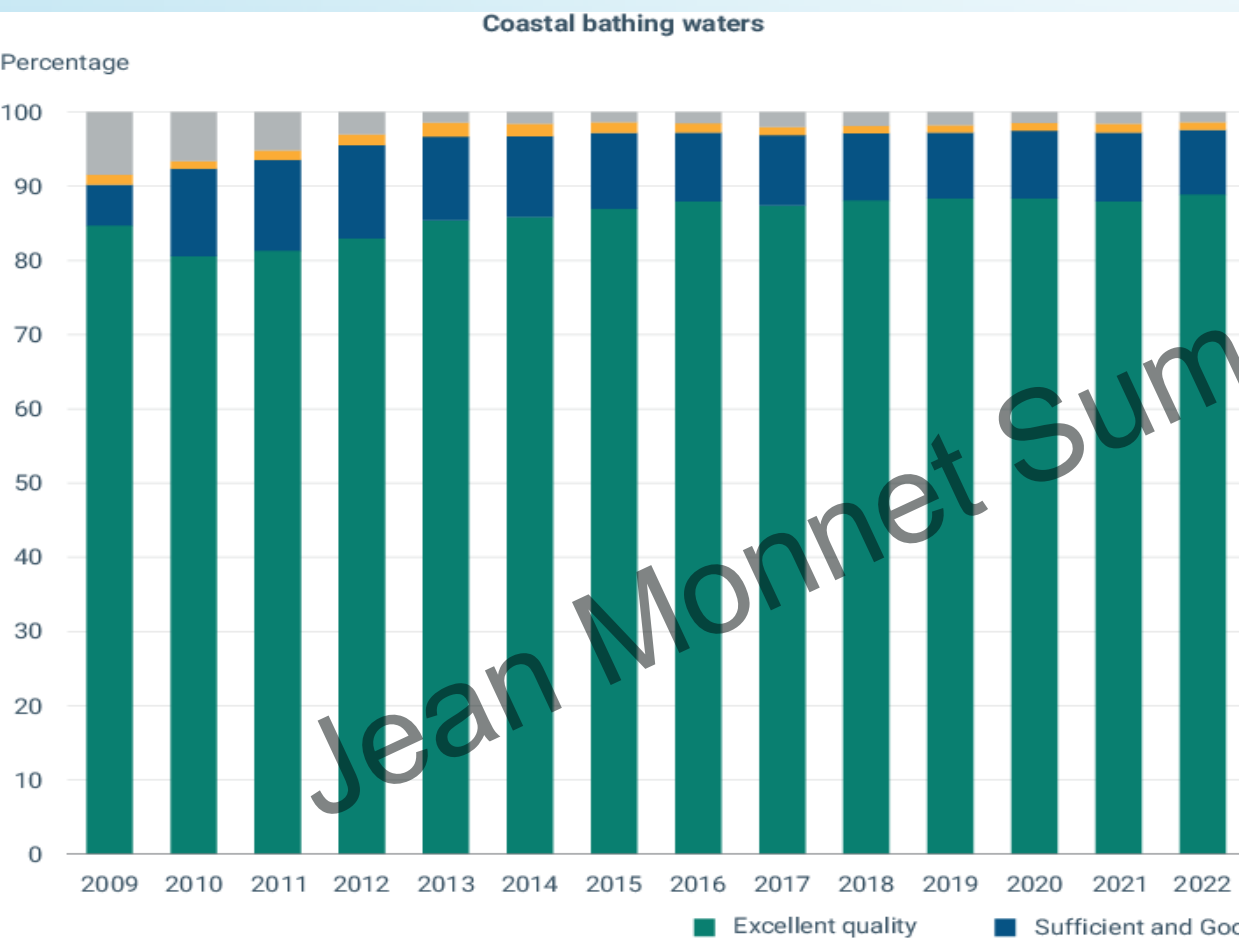
BATHING WATER QUALITY (EXCELLENT) 2022



BATHING WATER QUALITY 2022



COASTAL AND INLAND BATHING WATER QUALITY IN THE 27 EU MEMBER STATES BETWEEN 2009 AND 2022



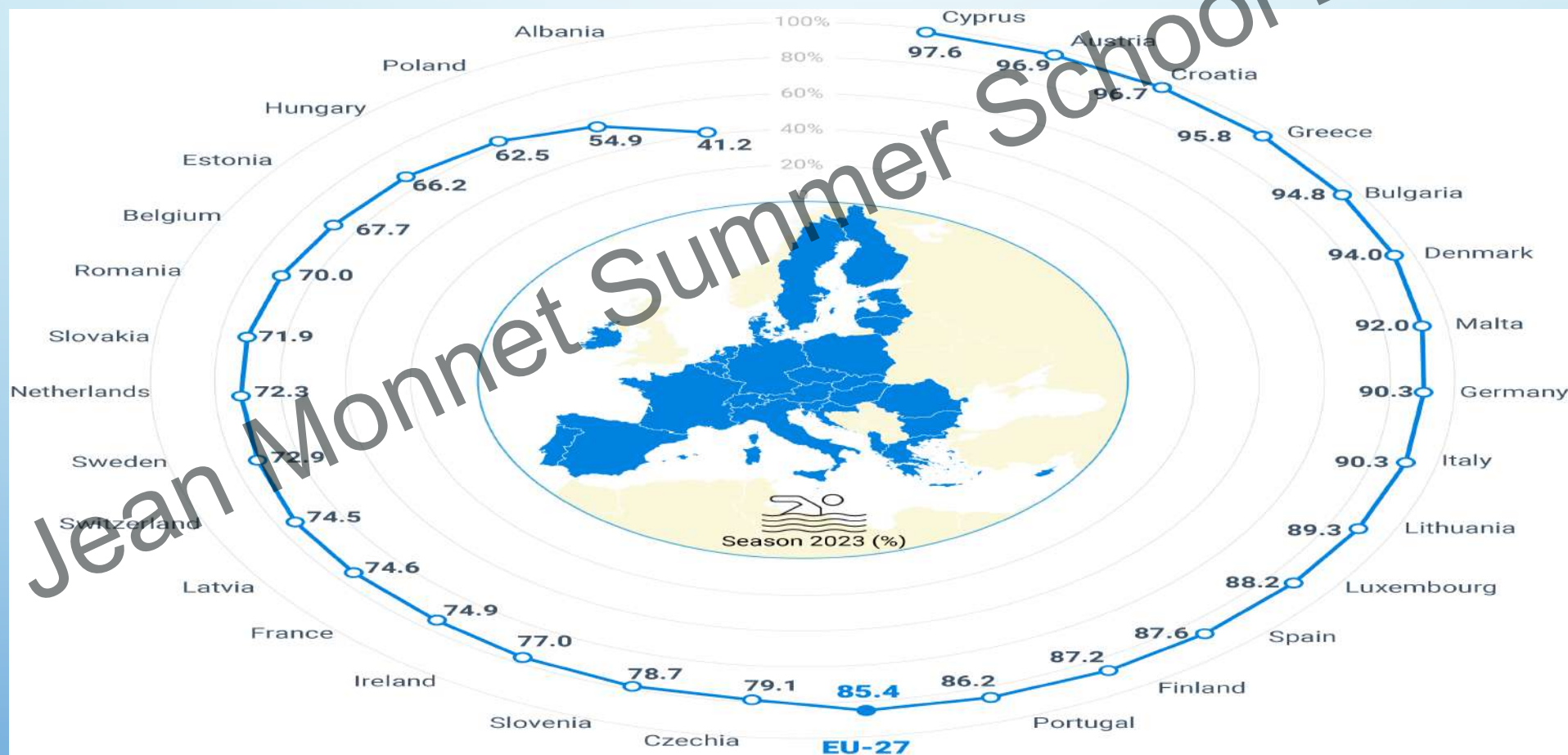
2022 INFORMATION

- Bathing water quality in the EU remains high. In 2022, 85.7% of bathing water sites were rated excellent in the EU and minimum water quality standards were met at 95.9% of sites. This confirms the positive trend of previous years. Between 2010 and 2015, the share of EU bathing sites rated as excellent grew, to 87-89% for coastal bathing waters and 78-82% for inland bathing waters, and has remained stable ever since.
- The quality of coastal bathing waters is generally better than that of rivers and lakes, because there is more frequent renewal and greater capacity for self-purification in the former. In 2022, 88.9% of coastal bathing water sites in the EU were classified as excellent, compared with only 79.3% of inland bathing water sites.

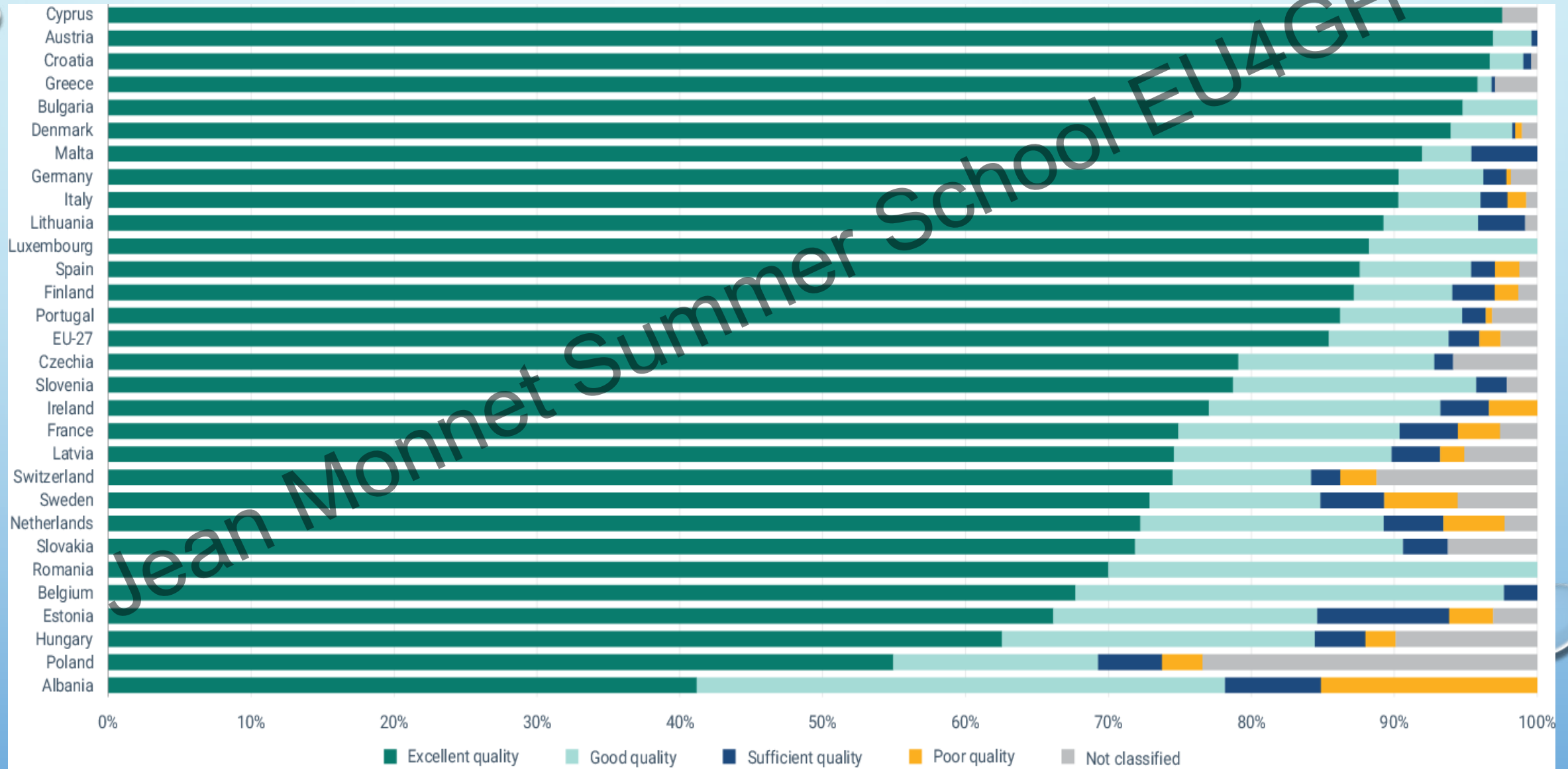
BATHING WATER QUALITY 2023

- BATHING IS SAFE IN MOST OF THE EU'S BATHING WATERS. IN 2023, AT ALMOST 22,000 LOCATIONS, 85% OF BATHING WATERS WERE RATED EXCELLENT, WHILE 96% OF WATERS MET THE MINIMUM QUALITY STANDARDS REQUIRED FOR COMPLIANCE WITH THE BATHING WATER DIRECTIVE, A SLIGHT INCREASE COMPARED WITH THE PREVIOUS YEAR. HOWEVER, 1.5% OF THE EU'S BATHING WATERS ARE OF POOR QUALITY, INDICATING THAT MANAGEMENT MEASURES ARE NOT ALWAYS ADEQUATE OR IN PLACE.
- ALTHOUGH MOST OF EUROPE'S BATHING WATERS ARE CLASSIFIED AS BEING IN EXCELLENT CONDITION, POLLUTION OF SURFACE AND GROUNDWATER REMAINS SIGNIFICANT, AND MAY BE EXACERBATED BY THE CHANGING CLIMATE. IMPROVING WATER RESILIENCE FOR PEOPLE AND FOR THE ENVIRONMENT IN COMING YEARS WILL BE KEY.
- THE QUALITY OF COASTAL BATHING WATERS IS GENERALLY BETTER THAN THAT OF RIVERS AND LAKES. IN 2023, AROUND 89% OF COASTAL BATHING WATERS IN THE EU WERE CLASSIFIED AS EXCELLENT, COMPARED WITH JUST UNDER 79% OF INLAND BATHING WATERS.
- INCREASED HEAVY RAINFALL LINKED TO CLIMATE CHANGE COULD IMPACT BATHING WATER QUALITY NEGATIVELY, POTENTIALLY INCREASING HEALTH RISKS FOR BATHERS.

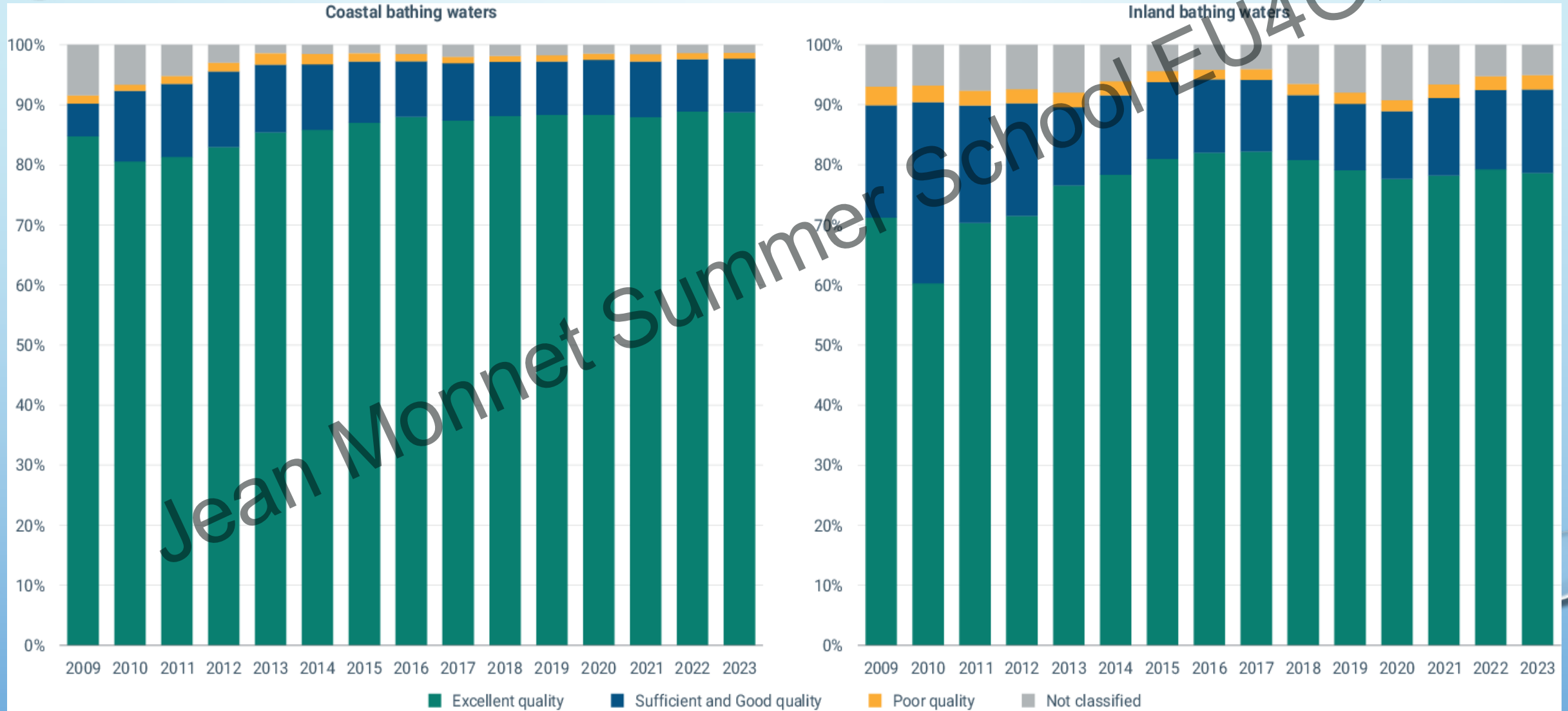
PROPORTION OF BATHING WATERS WITH EXCELLENT QUALITY IN EUROPEAN COUNTRIES IN 2023



BATHING WATER QUALITY IN EUROPE (EU MEMBER STATES, ALBANIA AND SWITZERLAND) IN 2023



COASTAL AND INLAND BATHING WATER QUALITY IN THE EU-27 BETWEEN 2009 AND 2023



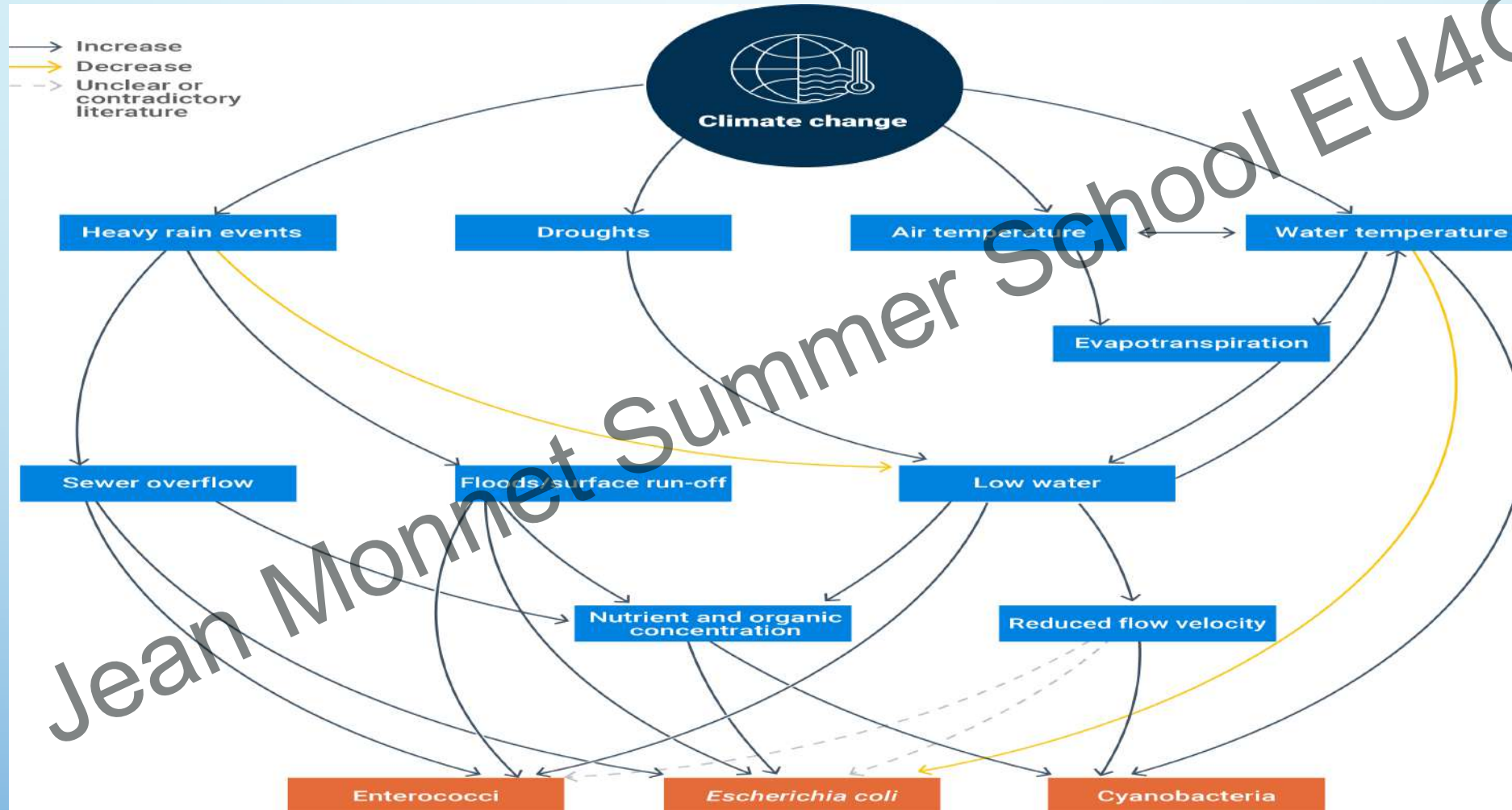
NEXT STEPS: REVIEW OF THE DIRECTIVE

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12658-Calidad-de-las-aguas-de-bano-revision-de-la-normativa-de-la-UE/feedback_es?p_id=22201307

In the context of the European Green Deal, notably the zero pollution action plan, the European Commission is currently assessing whether the [Bathing Water Directive](#) (BWD) is still fit for its purpose of protecting public health and improving water quality, or if there is a need to improve the existing rules and propose relevant updates, including new parameters. During the [review process](#), stakeholders interested or directly involved in the implementation of the BWD were consulted through a number of activities, including an [open public consultation](#), two thematic workshops organised in [November 2021](#) and [April 2022](#), or the most recent [stakeholder validation conference](#) on the evaluation of the directive. The feedback received via these activities will be reflected in the Commission evaluation report, which is published in the first half of 2024.

The BWD has not been analysed in isolation, as its implementation is supported by a broad framework of EU water legislation, including the Water Framework Directive (WFD), the Environmental Quality Standards Directive (EQSD), the Groundwater Directive (GWD), the Marine Strategy Framework Directive (MSFD) and the Urban Waste Water Treatment Directive (UWWTD).

CONCEPTUAL MODEL OF THE RELATIONSHIP BETWEEN CLIMATE WARMING AND THE OCCURRENCE OF E. COLI, INTESTINAL ENTEROCOCCI AND CYANOBACTERIA





USEFUL WEBSITES

https://environment.ec.europa.eu/topics/water/bathing-water_en

<https://www.eea.europa.eu/publications/european-bathing-water-quality-in-2022/italy>

ADDITIONAL INFORMATION

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- TORRES CAZORLA, MARIA ISABEL, “A VUELTAS CON LA REGULACIÓN DE LAS AGUAS DE BAÑO EN LA UNIÓN EUROPEA: ¿HACER DE LA NECESIDAD, VIRTUD?”, *CUADERNOS EUROPEOS DE DEUSTO*, 2024, (FORTHCOMING).

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*Grazie
mille*