Table 3.1.2.1. The methodologies used for assessment of the four Mediterranean Sub-regions

CIs 13&14		
Sub-region	**Sub-division**	**Methodology**
Aegean and Levantine Seas (AEL)	Aegean Sea (AEGS)	G/M comparison
	Levantine Sea (LEVS)	G/M comparison
Adriatic Sea (ADR)	North Adriatic (NAS) *	IMAP NEAT assessment methodology
	Central Adriatic (CAS) *	
	South Adriatic (SAS) *	
Central Mediterranean Sea (CEN)	Central Mediterranean (CENS)	G/M comparison
	Ionian Sea (IONS)	G/M comparison
Western Mediterranean Sea (WMS)	Alboran Sea (ALBS) and Levantine – Balearic Sea (LAVS-BAL) Sea Sub-division	G/M comparison
	Central Western Mediterranean Sea (CWMS): Central and Southern Parts	
	Tyrrhenian Sea (TYRS)	G/M comparison and EQR assessment
CI 17		
Sub-region	**Sub-division**	**Methodology**
Aegean and Levantine Seas (AEL)	Aegean Sea (AEGS)	CHASE+ assessment methodology
	Levantine Sea (LEVS)	
Adriatic Sea (ADR)	North Adriatic (NAS) *	IMAP NEAT assessment methodology
	Central Adriatic (CAS)*	
	South Adriatic (SAS) *	
Central Mediterranean Sea (CEN)	Central Mediterranean Sea (CENS)	CHASE+ assessment methodology
	Ionian Sea (IONS)	
Western Mediterranean Sea (WMS)	Alboran Sea (ALBS)	IMAP NEAT assessment methodology
	Central Western Mediterranean Sea (CWMS)	
	Tyrrhenian Sea (TYRS)	
CI 18		
The four Mediterranean Sub-regions: AEL, ADR, CEN and WMS		The assessment approach for biological effects based on the use of the literature sources only
CI 19		
Aegean and Levantine Seas (AEL)	Aegean Sea (AEGS)	CHASE-like approach applied, considering frequency of spill occurrence trend.
	Levantine Sea (LEVS)	
Adriatic Sea (ADR)	North Adriatic (NAS)	
	Centrale Adriatic (CAS)	
	South Adriatic (SAS)	
Central Mediterranean Sea (CEN)	Central Mediterranean Sea (CENS)	
	Ionian Sea (IONS)	
Western Mediterranean Sea (WMS)	Alboran Sea (ALBS)	
	Central Western Mediterranean Sea (CWMS)	
	Tyrrhenian Sea (TYRS)	

CI 20	
The four Mediterranean Sub-regions: AEL, ADR, CEN and WMS	The assessment approach for contaminants in seafood based on the concentration limits for the contaminants regulated in EU Regulations
CI 21	
The four Mediterranean Sub-regions: AEL, ADR, CEN and WMS	The assessment approach for bathing water quality based on complementary use of the assessment results as presented in the Assessment report from the European Environment Agency (EEA) on the State of Bathing Water Quality in 2020 and the assessment of monitoring data reported for IMAP
cCI 26	
The four Mediterranean Sub-regions: AEL, ADR, CEN and WMS	The adapted exposure metrics and assessment methodology as provided in the document "Setting of EU Threshold Values for impulsive underwater sound – Recommendations" from the Technical Group on Underwater Noise (TG Noise), available at this URL The adaption of the assessment methodology was undertaken further to the proposal of the IMAP Guidance Factsheet for cCI 26.
cCI 27	
The four Mediterranean Sub-regions: AEL, ADR, CEN and WMS	The adapted exposure metrics and assessment methodology as provided in the document "Setting of EU Threshold Values for continuous underwater sound – Recommendations" from the Technical Group on Underwater Noise (TG Noise), available at this URL The adaption of the assessment methodology was undertaken further to the proposal of the IMAP Guidance Factsheet for cCI 27.

* Referred to as NAS (Northern Adriatic Sea), CAS (Central Adriatic Sea) and SAS (Southern Adriatic Sea) in NEAT assessment, instead of NADR (North Adriatic), MADR (Middle Adriatic) and SADR (South Adriatic), respectively.

Assessment of IMAP Common Indicators 13 and 14

Geographical scale of the assessment	Sub-regional based on integration and aggregation of the assessments at sub-division levels
Contributing countries	Croatia, Italy, Slovenia and Montenegro
Mid-Term Strategy (MTS) Core Theme	Enabling Programme 6: Towards Monitoring, Assessment, Knowledge and Vision of the Mediterranean Sea and Coast for Informed Decision-Making
Ecological Objective	EO9. Contaminants cause no significant impact on coastal and marine ecosystems and human health
IMAP Common Indicators	CI13. Key nutrients concentration in water column CI14. Chlorophyll-a concentration in water column
GES Definition (UNEP/MED WG 473/7) (2019)	**CI 13**: Concentrations of nutrients in the euphotic layer are in line with prevailing physiographic, geographic and climate conditions **CI 14**: Natural levels of algal biomass, water transparency and oxygen concentrations in line with prevailing physiographic, geographic and weather conditions
GES Targets (UNEP/MED WG 473/7) (2019)	**CI 13** • Reference nutrients concentrations according to the local hydrological, chemical and morphological characteristics of the un-impacted marine region. • Decreasing trend of nutrients concentrations in water column of human impacted areas, statistically defined. • Reduction of BOD emissions from land-based sources. • Reduction of nutrients emissions from land-based sources **CI 14** • Chlorophyll a concentration in high-risk areas below thresholds • Decreasing trend in chl-a concentrations in high risk areas affected
GES Operational Objective (UNEP/MED WG473/7) (2019)	**CI 13** Human introduction of nutrients in the marine environment is not conducive to eutrophication **CI 14** Direct and indirect effects of nutrient over-enrichment are prevented

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266. Given the lack of quality-assured, homogenous data prevented the application of both the EQR and the simplified EQR assessment methodologies, the assessment of eutrophication within the preparation of the 2023 MED QSR was undertaken in the sub-divisions of the Aegean-Levantine Sea (AEL), the Central Mediterranean Sea (CEN) and the Western Mediterranean Sea (WMS) by evaluating only data for Chla available from the remote sensing sources, whereby the typology-related assessment was impossible to apply.

267. The application of the Simplified methodology based on G/M comparison in the AEL Sub-region relied on the use of COPERNICUS data for Chl*a* obtained by remote sensing.

Along with the application of the IMAP NEAT GES assessment methodology in the Adriatic Sea Sub-region, the application of the Ecological quality ratio (EQR); the Simplified EQR methodology, and the Simplified methodology based on G/M comparison was also explored in another three Mediterranean Sub-regions with insufficient data for the IMAP NEAT GES assessment.

The ecological quality ratio (EQR) is a dimensionless measure of the observed value of an indicator compared with reference conditions. The ratio goes from 0 (large deviation) to 1 (when the observed value is equal or better than the reference conditions).

The application of the EQR method was found relevant for assessment of IMAP Common Indicators 13 & 14 where full set assessment criteria for Chl*a*, DIN and TP exist. Typology related assessment needs to be performed.

Given the lack of data reported by the CPs, this methodology was impossible to apply within the preparation of the 2023 MED QSR. However, key aspects of this methodology, as presented here-below, are developed for future application within the implementation of IMAP.

The EQR, which is set as the relative deviation from the reference conditions (RC), must be calculated for every boundary value using the simple equation:

$$EQR_{actual} = RC/Chla_{annual\ G\text{-}mean} \qquad (1)$$

where for $Chla_{annual\ G\_mean}$, the Chl*a* concentrations defined for every boundary value must be used.

As Chl*a* concentrations are derived using non-linear relationships, the corresponding EQRs are not on a linear equidistant scale. To calculate the EQRs values normalized (Anon, 2005) to the scale from 0 to 1 (EQR_{norm}) and set them equidistantly, with respect to the calculated values designated as EQR*actual*, the following conversion functions need to be used:

Chl*a* - $EQR_{norm} = 0.2586 \ln(EQR_{actual}) + 0.9471$	for Type I coastal waters	(2)
TP - $EQR_{norm} = 0.3183 \ln(EQR_{actual}) + 0.9521$	for Type I coastal waters	(3)
Chl*a* - $EQR_{norm} = 0.1824 \ln(EQR_{actual}) + 1.0253$	for Type I open waters	(4)
DIN - $EQR_{norm} = 0.1216 \ln(EQR_{actual}) + 1.0209$	for Type I open waters	(5)
Chl*a* - $EQR_{norm} = 0.1488 \ln(EQR_{actual}) + 1.0385$	for Type I Montenegro	(6)
DIN - $EQR_{norm} = 0.0966 \ln(EQR_{actual}) + 1.0378$	for Type I Montenegro	(7)
Chl*a* - $EQRnorm = 0.246 \ln(EQRactual) + 0.981$	for Type II A Adriatic coastal waters	(8)
TP - $EQRnorm = 0.333 \ln(EQRactual) + 0.979$	for Type II A Adriatic coastal waters	(9)

The actual and normalized EQRs for all boundary values of Types I, and II A Adriatic are shown in Tables I and II, Annex II (CH 2), respectively.

Finally, for each considered variable, sampling station or area is classified in GES or non-GES, comparing the EQR value of the indicator to the class boundary value.

The application of the simplified EQR methodology was found relevant where complementary data availability i.e. *in situ* and from remote sensing is found for Chla only and the typology related assessment is not possible to apply. Given the lack of homogenous quality assured data reported by the CPs even for Chla only, an application of the simplified EQR method was impossible for any sub-region/sub-division within the preparation of the 2023 MED QSR.

For the application of the simplified EQR method within the IMAP implementation, thresholds need to be used to define the boundary limits between an acceptable and unacceptable environmental status (i.e., Good Environmental Status (GES) or non-Good Environmental Status (non-GES)). In the absence of the assessment criteria for nutrients, application of the simplified EQR method is foreseen by relying on the experiences gained in the Baltic Sea (Andersen et al. 2011; HELCOM 2010). For an indicator showing a positive response (i.e., nutrients and Chl*a*), it indicates that the threshold has an upper limit of +50 % deviation from reference conditions. Setting the threshold to 50 % implies that low levels of disturbance (defined as less than +50 % deviation), resulting from human activity, are considered acceptable, while moderate (i.e., greater than +50 %) deviations are not considered acceptable for the water body in question.

Given the lack of quality-assured homogenous data prevented the application of NEAT, EQR and simplified EQR assessment methodologies, the assessments within the 2023 MED QSR were prepared only by evaluating data available for Chla from remote sensing sources, whereby the typology-related assessment is impossible to apply. The application of **the simplified methodology based on G/M comparison** relied on the use of satellite-derived data for Chl*a* (e.g. COPERNICUS, ARGANS, SMED algorithm).

Data were aggregated as a 5-year geometric mean and normalized in order to ensure their comparability between the areas of assessment. For normalization, the bestNormalize package in R was used. The best normalization transformation was identified as the Ordered Quantile normalizing transformation (Bartlett, 1947, Beasley et al., 2009). From the normalized values, the following values are back-transformed: the 10th percentile as the reference condition, the 50th percentile as the mean value of the distribution, and the 85th percentile ~ mean +1 SD that represents the G/M threshold.

Finally, each considered observation point or area was classified in GES or non-GES status, comparing the value of the indicator to the boundary limit between G/M i.e. back transformed the 85th percentile of the normalized distribution.

Available data.

268. A detailed data analysis was performed in order to decide on applying the assessment methodologies that can be found optimal for specific sub-region/sub-division in the present circumstances related to the lack of data reporting. Table 3.1.3.1.1 informs on data availability in AEL by considering data reported by the Contracting Parties by 31st October, the cut-off date for data reporting. Figure 3.1.3.1.1 shows the locations of sampling stations in the AEL Sub-region.

Table 3.1.3.1.1. Data availability by country and year for the Aegean Levantine Sea (AEL) Sub-region showing data reported by the CPs for the assessment of EO5 (CI13 and CI14) up to 31st Oct 2022.

Country	Year	Amon	Ntri	Ntra	Phos	Tphs	Slca	Cphl	Temp	Psal	Doxy
Cyprus	2016	182	172	197	89	-	17	180	205	203	186
	2017	38	15	48	14	-	28	141	150	150	131
	2018	39	27	41	41	-	36	56	93	91	109
	2019	45	22	49	49	-	49	37	38	38	62
	2020	84	67	82	82	-	39	86	72	71	72
	2021	-	-	-	-	-	-	136	112	112	107
Greece	2016-2021	No data provided									
Egypt	2016-2021	No data provided									
Israel	2017	15	15	15	15	-	15	15	15	15	15
	2018	14	14	14	14	-	14	14	13	13	13
	2019	14	14	14	14	-	14	14	14	14	14
	2020	14	14	14	14	-	14	14	14	14	14
Lebanon	2017	-	225	225	225	-	-	195	224	224	-
	2018	-	286	286	286	-	-	247	285	285	-
	2019	-	547	547	547	-	40	386	538	538	-
	2020	-	268	268	268	-	-	160	268	268	-
	2021	-	291	291	291	-	-	154	291	291	-
Syria	2016-2021	No data provided									
Turkiye	2016	342	209	341	342	341	342	209	342	342	307
	2019	1460	1055	1479	1138	1545	972	1052	994	17713	1558

Amon - Ammonium; Ntri- Nitrite; Ntra – Nitrate; Phos – Orthophosphate; Tphs—Total phosphorous; Slca – Orthosilicate; Cphl – Chlorophyll *a*; Temp – Temperature; Psal – Salinity; Doxy – Dissolved Oxygen.

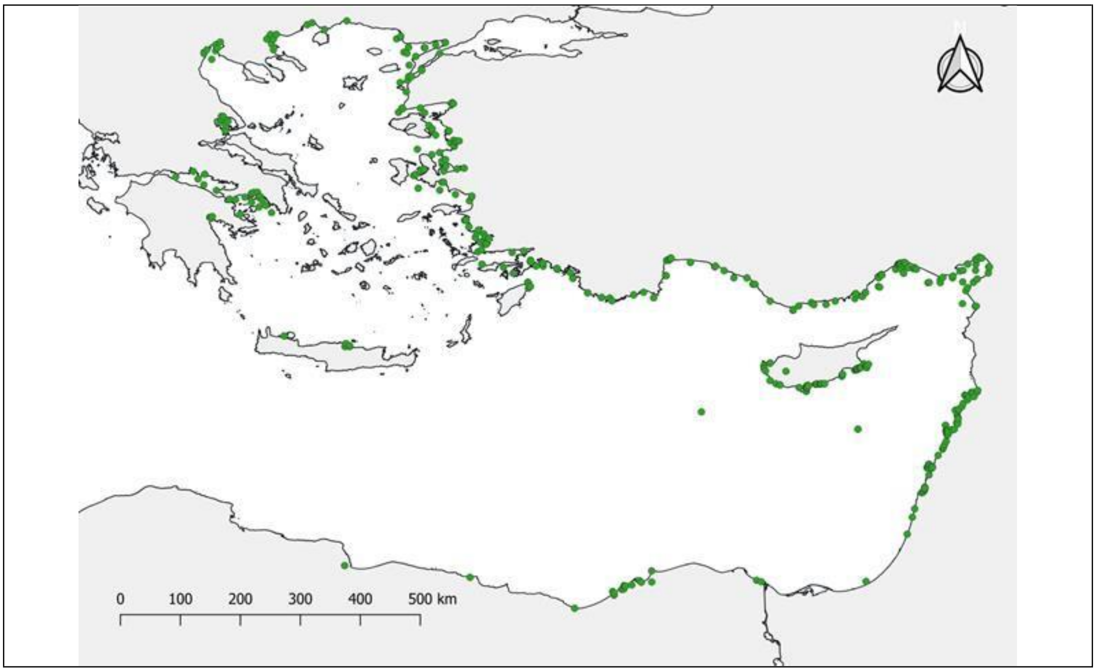


Figure 3.1.3.1.1. The locations of sampling stations in the AEL Sub-region

269. Given the lack of homogenous and quality assured data reported in line with IMAP requirements, as shown in Table 3.1.3.1.1, it was necessary to explore the use of alternative data sources. The COPERNICUS source was found relevant regarding the existence of a systematic repository of remote sensing data for Chl a. Using only Chl a data, with a good geographical coverage (1 x 1 km) and high sensing frequency (daily), it was possible to tentatively develop a simple assessment method, by applying ecological rules and a comparison of the obtained values to the defined G/M threshold. Chlorophyll a data for the Levantine Sea Sub-division, comprising of 22 million records, and for the Aegean Sea Sub-division, comprising of 20 million records, were downloaded from the Copernicus web-site[48].

270. For the Levantine Sea the Copernicus product with ID: OCEANCOLOUR_MED_BGC_MY_009_78 was downloaded for the period from Apr 2016 to Mar 2021. It consists of Level 4 monthly values of Chlorophyll a concentration (CHL) with a resolution of 1 x 1 km. The file format is NetCDF-4 (.nc).

271. For the Aegean Sea the Copernicus product with ID: OCEANCOLOUR_MED_BGC_MY_009_144 was downloaded for the period from Jan 2016 to Dec 2020. It consists of Level 4 monthly values of Chlorophyll a concentration (CHL) with a resolution of 1 x 1 km. The file format is NetCDF-4 (.nc).

272. Data elaboration was performed by using R, an open-source language widely used for statistical analysis and graphical presentation (R Development Core Team, 2022)[49]. Maps are elaborated using QGIS 3.28, an open-source GIS tool.

273. For every point of the grid (Figure 3.1.3.1.2.a and b), a GM annual value was calculated, as required in the COMMISSION DECISION (EU) 2018/229[50]. The parameter values were expressed in µg/l of Chlorophyll a, for the geometric mean (GM) calculated over the year in at least a five-year period. These GM annual values were later used as a metric for the development of the assessment criteria for the present CI 14 assessment.

[48] https://data.marine.copernicus.eu/product/OCEANCOLOUR_MED_BGC_L4_NRT_009_142/description
[49] R Development Core Team (2022). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0. http://www.R-project.org
[50] Commission Decision (EU) 2018/229 of 12 February 2018 establishing, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, the values of the Member State monitoring system classifications as a result of the intercalibration

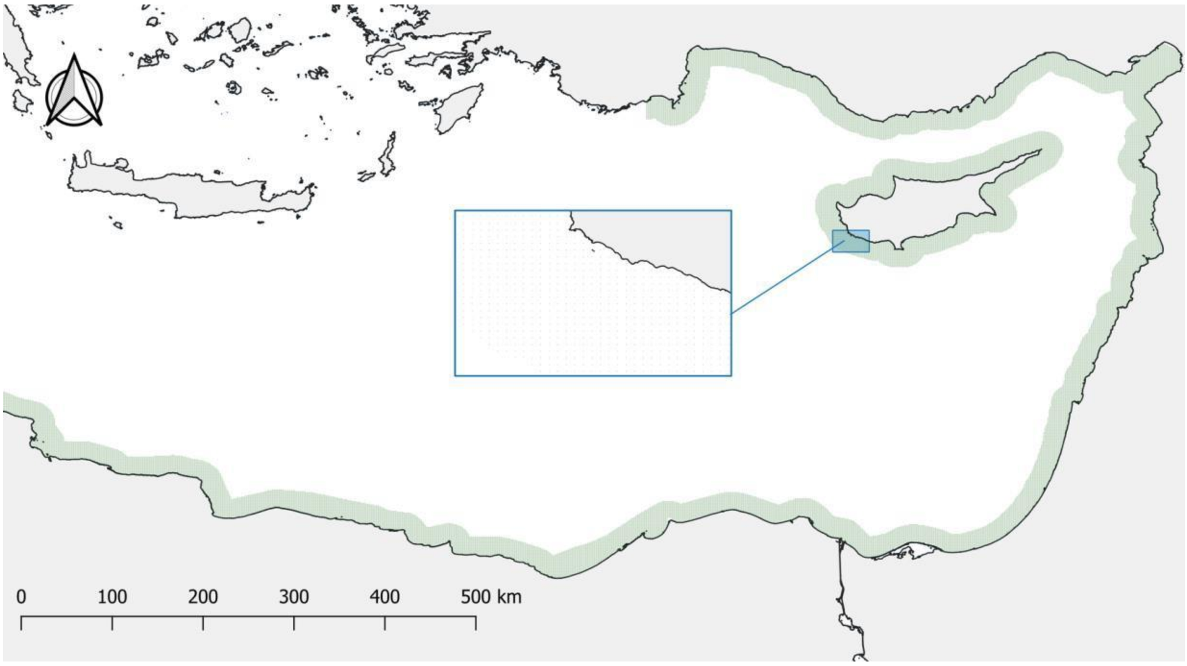


Figure 3.1.3.1.2.a. The Levantine Sea Sub-region: The dots in the assessment zones represent data in the grid (1 x 1 km). In the small rectangle a detailed view of the sensing grid is presented.

Figure 3.1.3.1.2.b. The Aegean Sea Sub-division: The dots in the assessment zones represent data in the grid (1 x 1 km). The blue lines demark the three spatial assessment units set within the Aegean Sea Sub-division for the purpose of data grouping for the present assessment.

Setting the areas of assessment.

274. Following the rationale of the IMAP national monitoring programmes related to distribution of the monitoring stations, as well as the rules for integration and aggregation of the assessment products, in the Levantine Sea Sub-divisions for the purposes of the present work the two zones of assessment were defined, i.e., : i) the coastal zone and ii) the offshore zone; and given the lack of information on water typologies present in national waters, for the present assessment in the Aegean Sea Sub-division only the coastal zone was assessed.

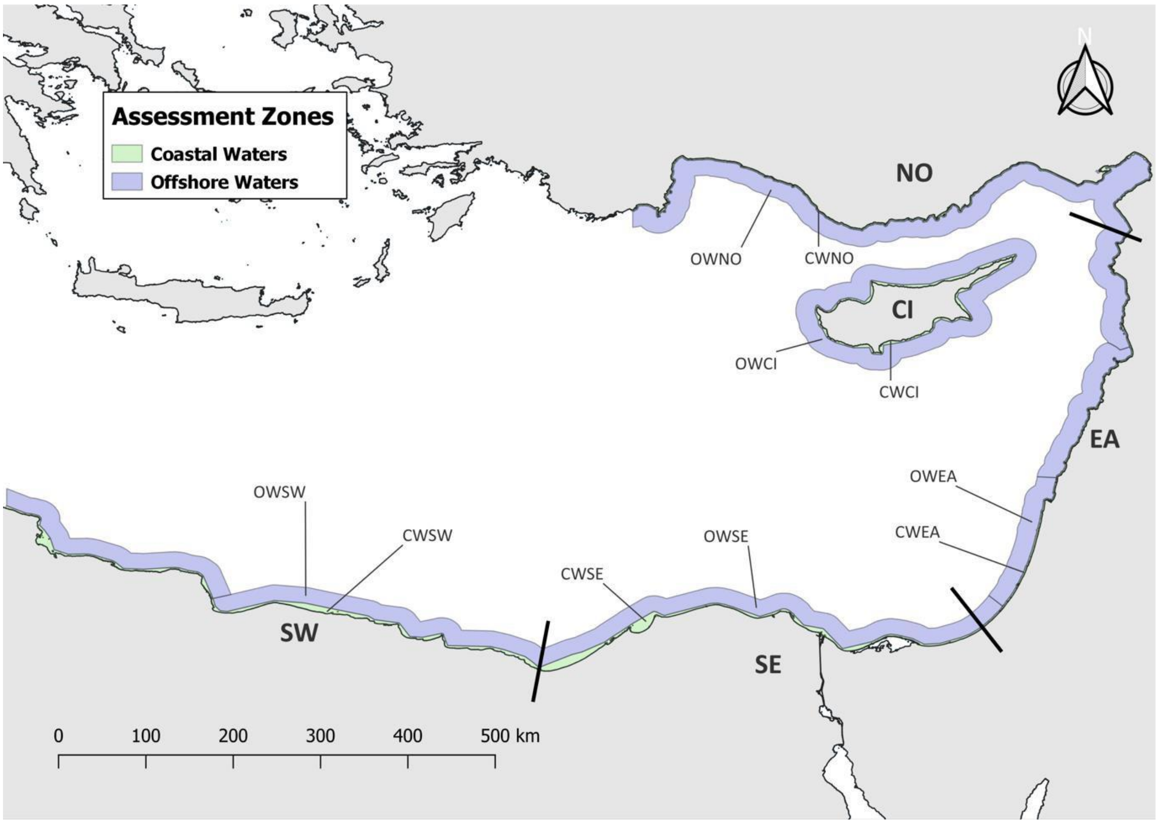
275. For purpose the of present work, it should also be recalled that GIS layers collected from different sources (International Hydrographic Organization – IHO Seas subdivisions, European Environment Information and Observation Network – EIONET (WFD delimitation (2018)); VLIZ marine subregions.

Levantine Sea

276. The principle of the NEAT IMAP GES assessment methodology applied in the Adriatic Sea Sub-region, as well as in the Western Mediterranean Sea Sub-region regarding CI 17, for setting of the spatial assessment units (SAUs) within the two main assessment zones along the IMAP nesting scheme, was also followed for setting the coastal (CW) and the offshore monitoring zones (OW) in the Levantine Sea Sub-division. The CW included internal waters and one Nautical Mile outward. The offshore waters in the LEV start at the outward border of CW and extend to 20 km outward given this coverage corresponds to the area where national monitoring programmes are performed as shown in Figure 22: Pressures exerted by agriculture on the marine environment.

277. The AZ were divided between the five areas Northern, Eastern, Cyprus Island and the two Southern (West and East), which delimitations are shown on Figure 3.1.3.1.3. (upper map). It resulted in eight SAUs (i.e., CWNO – Northern CW; OWNO – Northern OW; CWEA – Eastern CW; OWEA – Eastern OW; Cyprus Island CW – CWCI; Cyprus Island OW – OWCI; Southern East CW – CWSE; Southern East OW – OWSE; Southern West CW – CWSW; and Southern West OW – OWSW). The finest IMAP SAUs were further set on the base of nested assessment areas (AZs, five areas) by considering the national areas of monitoring and hydrographic characteristics.

278. The finest IMAP sub SAUs set in the Levantine Sea Sub-division for the purpose of the present CI 14 assessment are depicted in. Figure 3.1.3.1.3 (lower map), including their nesting in the two main assessment zones i.e. CW and OW of the Levantine Sea Sub-division.



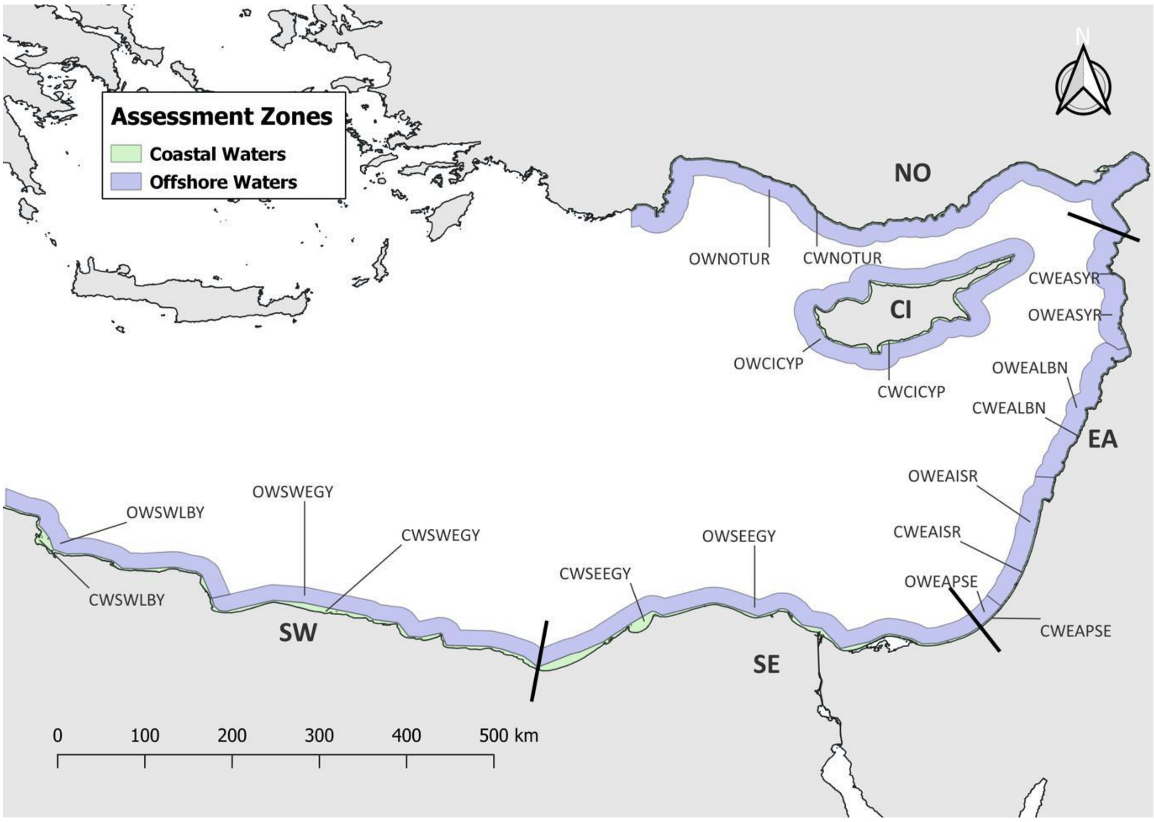


Figure 3.1.3.1.3.a. The nesting of IMAP spatial assessment units set in the coastal (CW) and the offshore assessment (OW) zones of the Levantine Sea Sub-division by SAU (upper map); and depiction of the finest IMAP subSAUs (lower map).

Aegean Sea

279. In addition, available literature indicates waters in front of Mersin and in the Iskenderun Bay as impacted areas. A slight impact can also be identified along the coast of Israel and in the OW in the southern part of the Eastern Levantine Sea, as well as in front of Port Said and Alexandria. The influence of the Nile River through the river Delta is weak and confirms the changes in the area caused by construction of the Aswan dam. There is also an indication of a coastal impact in the Tobruk area in the waters of Libya.

280. The Coastal Assessment Zone was divided into three spatial assessment units (SAUs) within the Aegean Sea Subdivision: the North Aegean (NA), the Central Aegean (CA) and the South Aegean (SA) as shown in Figure 3.1.3.1.3.b. Then the finest spatial assessment units (sub SAUs) were obtained in the three SAUs by taking account of the definition of the Greek (EIONET) and the Turkish51 national waterbodies for assessment of eutrophication.

281. The finest IMAP subSAUs set in the Aegean Sea Sub-division for the purpose of the present CI 14 assessment are depicted Figure 3.1.3.1.3.b. It shows their nesting in the Aegean Sea Sub-division. Namely, the following sub SAUs were set: i) 8 along the coast of Greece: AEG_C_ARG, AEG_C_ISL, AEG_C_SOR, AEG_N_HAL, AEG_N_HAL_O, AEG_N_ISL, AEG_N_THE and AEG_S_KRE; and 7 along the coast of Turkiye EGE_C, EGE_S, EGE04, EGE09, AEG_N, EGE_N and EGE13_2.

Figure 3.1.3.1.3.b. The nesting of the finest IMAP spatial assessment units (sub SAUs) in the coastal (CW) zone of the Aegean Sea Sub-division.

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[51] NEAT, BEAST, Lusival Index, Ecological Quality Index Evaluation Report of Turkish Eagean Coasts

Setting the good/non-good boundary value/threshold for the Simplified G/M comparison assessment methodology application in the AEL Sub-region

282. The definition of baseline and threshold values for IMAP CIs 13 and 14 in the Mediterranean Sea is an ongoing process. The setting of GES-nonGES boundary limits within GES assessment of the Adriatic Sea Sub-region for IMAP CIs 13 and 14 were based on the boundary and reference values defined for TP and DIN, and updated ones for Chl a.

283. The attributes were added to all new satellite derived Chl*a* data points in order to allow their use for calculation of the assessment criteria by the CW and OW, and SAUs in the Levantine Sea Sub-division, and by the CW and SAUs in the Aegean Sea Sub-division.

284. The use of a new parameter for assessment i.e. satellite derived Chl*a* imposes calculation of a new set of assessment criteria given absence of any tested relationship of the satellite derived Chl*a* data with *in situ* measured Chl*a* data based on effects-pressures relationship. Namely, the use of reference and boundary water types related values[52], , was impossible for the present work.

285. In order to calculate the assessment criteria applicable within the present work, the annual GM values for satellite derived Chl*a* data were normalized using the R package *bestNormalize*. Then, the normalization process was tested for usual normalisation transformation, log x, boxcox, yeojohnson and Ordered Quantile normalizing transformation (orderNorm). The best normalisation was obtained with *orderNorm()*, and it was used for calculation of the assessment criteria applied to deliver the present CI 14 assessment.

286. For the assessment of CI 14, the Reference conditions (RC) were calculated from the normalized values and were represented by the 10th percentile. For setting the G/M threshold, a modification of the rule applied in the Baltic Sea (Andersen et al. 2011[53]; HELCOM 2010[54]) was applied within the present work given the 50th percentile represents the mean value of the distribution, and the 85th percentile ~ mean +1 SD represents the G/M threshold. It was necessary to use this criterion given expert - based analysis of the satellite derived Chl*a* preliminary indicates that most of the assessed waters are in the high status.

287. The transformation of percentile to z-scores were obtained using the pnorm() an qnorm() functions in R. The RC values (oN10) and the G/M thresholds (oN85) were calculated from the normalized values through the predict function. The results of calculation are presented in Table 3.1.3.1.2.a, and are obtained by the AZs and SAUs set in the Levantine Sea Sub-division, and in Table 3.1.3..1.2.b in the Aegean Sea Sub-division. In the absence of information on water typologies present in national waters, the assessment criteria were provided only at the level of SAUs.

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[52] The water typology was applied as set by the Decision IG.23/6 of COP 20 (MED QSR)

[53] Andersen, J. H., Axe, P., Backer, H., Carstensen, J., Claussen, U., Fleming-Lehtinen, V., et al. (2011). Getting the measure of eutrophication in the Baltic Sea: towards improved assessment principles and methods. Biogeochemistry, 106(2), 137–156.

[54] HELCOM. (2010). Ecosystem health of the Baltic Sea 2003-2007: HELCOM Initial Holistic Assessment.

Table 3.1.3.1.2 a.: Reference conditions (oN10) and G/M threshold (oN85) set by IMAP Assessment zones (AZ) and Spatial Assessment Units (SAU) in the Levantine Sea Sub-division.

AZ	SAU	oN50	oN50+50	oN90	oN10	oN85	oN25
CW	CI	0,047	0,071	0,075	0,034	0,065	0,039
CW	EA	0,462	0,692	1,762	0,125	1,402	0,209
CW	NO	0,152	0,227	2,156	0,066	1,454	0,089
CW	SE	1,769	2,653	5,675	0,059	4,773	0,174
CW	SW	0,038	0,056	0,161	0,025	0,104	0,029
OW	CI	0,039	0,059	0,051	0,029	0,049	0,034
OW	EA	0,061	0,092	0,142	0,042	0,110	0,051
OW	NO	0,064	0,095	0,170	0,044	0,140	0,052
OW	SE	0,227	0,341	1,495	0,042	0,990	0,093
OW	SW	0,031	0,047	0,037	0,023	0,035	0,028

oN50 – Mean, oN50+50 – Mean + 50%, oN90 – 90th percentile, oN10 – 10th percentile, oN85 – 85th percentile, oN25 – 25th percentile

Table 3.1.3.1.2. b. Reference conditions (oN10) and G/M threshold (oN85) set by IMAP Assessment zones (AZ) and Spatial Assessment Units (SAU) in the Aegean Sea Sub-division.

AZ	SAU	oN50	oN50+50	oN90	oN10	oN85	oN25
CW	CA	0,074	0,111	0,142	0,053	0,12	0,06
CW	NA	0,126	0,189	0,625	0,085	0,436	0,097
CW	SA	0,056	0,084	0,079	0,046	0,07	0,051

oN50 – Mean, oN50+50 – Mean + 50%, oN90 – 90th percentile, oN10 – 10th percentile, oN85 – 85th percentile, oN25 – 25th percentile

288. By selecting the 85th percentile of the normalized distribution as G/M boundary limit, therefore as the limit between the acceptable and the unacceptable statuses i.e. good and non-good , the compatibility of the present classification was achieved with a five classes GES/non GES scale set in the Adriatic Sea Sub-region. It should be noted that the two status classes i.e., good and non-good are assigned to the units assessed by applying the simplified G/M assessment methodology. Since the assessment findings are based on the use of only one parameter i.e., Chl-a, and therefore, the integrated consideration of the minimum of parameters needed to assess the good environmental status for IMAP CIs 13 and 14 was impossible, only classification in good and non-good status was provided.

Results of the Simplified G/M comparison assessment methodology application in the LEVS.

a) The Levantine Sea (LEVS) Sub-division

289. Upon setting the reference conditions and the G/M threshold, each observation point, or area were classified in good or non- good status , by comparing the value of the indicator i.e., the satellite derived Chla to the G/M threshold, i.e. the back transformed 85th percentile of normalized distribution.

290. The results of CI 14 assessment using the satellite derived Chla data are presented in Tables 3.1.3.1.3.a. and 3.1.3.1.4.a., and Figure LEVS 3.1.3.1.5.E. The good status corresponds to the RC conditions, as well as to the values below the 85th percentile of normalized distribution set as good/non good statusboundary (i.e. blue coloured cells in the last column of Tables 3.1.3.1.3.a and 3.1.3.1.4.a). The good status corresponds to the class above G/M boundary limit (i.e. red coloured cell in the last column of Table 3.1.3.1.4.a.).