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**The first meeting of the Regional Seas
Indicator Working Group**
Istanbul, 23 October 2015

Conclusion of the meeting

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Conclusion of the First Meeting of the Regional Seas Indicators Working Group

Istanbul, Turkey – 23 October 2015

I. Background

1. UNEP Regional Seas Programme was established in 1974. Currently there are eighteen (18) Regional Seas Conventions and Actions Plans across the world, of which seven (7) are administered by UNEP (Caspian, East Africa, East Africa, East Asia, Mediterranean, Northwest Pacific and West and Central Africa).
2. Many of the Regional Seas Conventions and Action Plans assess the state of marine environment of the region on a regular basis. Reports on state of marine environment have been prepared in various regions based on different methodologies. Some regional seas have introduced key indicators for the purpose of assessing the environment.
3. On the other hand, a limited number of Regional Seas Conventions and Action Plans clearly set ecosystem-based objectives. UNEP, therefore, proposed to establish a set of indicators based on the Ecosystem Approach¹. These indicators would enable the Regional Seas Conventions and Action Plans to measure changes of the status of marine and coastal environment in a quantifiable manner, and allowing for comparability between regions.
4. Although the World Ocean Assessment (Regular Process) was conducted to assess the current status of ocean and the Summary was approved by the Ad Hoc Working Group of the Whole of the Regular Process during its meeting 8-11 September 2015², this assessment took a qualitative approach based on the DPSIR framework. In order to monitor chronological change, it is recommended to use a quantitative approach in the future with the possible use of indicators. UNEP launched a report: *Measuring Success: Indicators for Regional Seas Conventions and Action Plans*,³ in which indicators used in different Regional Seas Conventions and Action Plans have been compiled and presented. In the report a core set of common indicators for the Regional Seas Conventions and Action Plans was identified.
5. In September 2015, the Member States adopted the Sustainable Development Goals (SDGs) in the Transforming Our World: 2030. The Goal 14 states “*Conserve and sustainably use the oceans, seas and marine resources for sustainable development*”. The SDGs use indicators to measure achievements towards the Goals and thus it is assumed that indicator approach will continue to be important in the context of the SDGs in the coming years. Regional Seas Conventions and Action Plans would be able to assist member states on monitoring the progress towards the SDGs based on extensive experiences on monitoring the state of the marine environment in

¹ UNEP(DEPI)/RS.14/WP.2.RS Ecosystem Approach to the Regional Seas Conventions and Action Plans

² A/70/112 Summary of the First Global Integrated Marine Assessment

³ UNEP/EARS/WG.2/INF5 Measuring Success – Indicators for the Regional Seas Conventions and Action Plans

respective regions.

6. UNEP has organized the Technical Workshop on Selecting Indicators for the State of Regional Seas from 30 June to 2 July 2014, Geneva, Switzerland⁴. At the workshop, the participants recommended to establish a regional seas indicator working group. Based on the recommendations from the workshop, the First Meeting of the Regional Seas Indicators Working Group was organized on 23 October 2015 in Istanbul, Turkey. The programme (Annex 1) and list of participants (Annex 2) are included in this report.

II. Opening of the meeting

7. Mr. Takehiro Nakamura, UNEP, welcomed the participants to the meeting and outlined the meeting objectives. He stated that this meeting had two main objectives: (1) to organize the Regional Seas Indicator Working Group and agree to work together; and (2) to start discussing the preliminary set of indicators in line with the proposed SDGs and based on the result of the Transboundary Waters Assessment Programme (TWAP) global integrated indicator-based assessment of the Large Marine Ecosystems
8. The meeting participants adopted the meeting agenda and programme.
9. Mr. Takehiro Nakamura, UNEP, proposed that Ms. Virginie Hart, Barcelona Convention, to be the chair of the meeting. The participants welcomed her as the chair. She introduced herself to the participants and all the participants introduced themselves to the meeting.

III. Working Group Term of Reference

10. Ms. Virginie Hart presented the Terms of Reference (TOR) for the working group (Annex 3). She briefly described that different Regional Seas Conventions and Secretariats are moving towards using indicators to measure implementation of conventions and protocols.
11. With regards to the report “Measuring Success – Indicators for the Regional Seas Conventions and Action Plans”, provided as an information document Dr. Hassan Awad, ROPME, pointed out that the information needs some updating based on inputs from the Regional Seas Conventions and Action Plans as some information is now outdated. Referring to the same report, Ms. Gabriella Bianchi, FAO, questioned whether the indicators are compiled only for the purpose of synthesis. She stressed that the reasons of employing indicators need to be clarified. Responding to the comments by participants, the chair also noted that the above mentioned report does not have sufficient background information of the indicators used by the Regional Seas.

⁴ UNEP/EARS/WG.1/3 Report of Technical Workshop on Selecting Indicators for the State of Regional Seas

12. Mr. Alexander Tkalin, NOWPAP, proposed that the meeting participants should discuss the vision of having a common set of indicators before discussing the TOR.
13. Referring to the vision of using indicators, Dr. Ahmed Khalil, PERSGA, proposed using indicators to measure the success of the Regional Seas Strategic Directions (2017-2020) drafted on 22 October 2015 at the 17th Global Meeting of the Regional Seas Conventions and Action Plans.
14. Ms. Johanna Laurila, HELCOM, outlined that most of the indicators used in HELCOM are response indicators. She pointed out that it could be useful to start with status indicators if the member states do not have complete monitoring data sets.
15. Mr. Hassan Mohammadi, ROPME, argued that if member states have different standardization or methods of measuring indicators, it could be misleading to compare between countries or regions. He stressed the importance of regional monitoring programme. For example, ROPME has an extensive experience on regional monitoring on waste water. Ms. Alice Newton, DEVOTES project team, also stressed the importance of using common methodologies to be able to compare results between regions. Mr. Julian Reyna, CPPS, on the other hand, stressed the importance of flexibility for member states to use different indicators.
16. Drawing from the experience from the World Ocean Assessment, Ms. Lorna Innis pointed out that many of the indicators were applied qualitatively. As the Regional Seas are moving towards quantitative indicators, she suggested participants to take consideration of the result from the World Ocean Assessment.
17. Mr. Alexander Tkalin, NOWPAP, proposed that the Draft Indicator Matrix presented (UNEP/EARS/WG.2/3) needs to contain additional column indicating the Regional Seas that are using respective indicator.
18. Mr. Dixon Wariunge, Nairobi Convention, stressed the need for clarifying the reason why the Regional Seas would need common indicators. He stressed that it could be to have a global overview but at regional level, Regional Seas are already using indicators on which member states have agreed.

IV. TWAP Results Discussion

19. Ms. Liana McManus, TWAP project manager, presented the results and finding from TWAP Project⁵ for the Large Marine Ecosystems.

⁵ Transboundary Waters Assessment Programme (TWAP) Large Marine Ecosystems Component

20. Dr. Hassan Mohammadi, ROPME, pointed out that the results presented do not necessarily represent the regional picture as the data used are based on international data sets and modeling, highlighting the importance of data quality.

V. Presentation on Protected Areas and Regional Seas

21. Mr. Brian Mac Sharry, UNEP WCMC, presented the database on protected areas emphasizing the needs for data on boundaries from Regional Seas Conventions and Action Plans. Relevant data on protected area could be analysed within the provided Regional Seas geographical boundaries.

VI. Presentation by Regional Seas Conventions and Action Plans

22. Three Regional Seas Conventions and Action Plans outlined their work on indicators to share experiences with other regions and inspire future work: (1) Bucharest Convention (Ms. Irina Makarenko); (2) Barcelona Convention (Ms. Virginie Hart); and (3) Lima Convention (Mr. Julian Reyna).

VII. Discussion of the preliminary Regional Seas indicator matrix

23. Mr. Takehiro Nakamura, UNEP, presented the draft matrix of Regional Seas Indicators (UNEP/EARS/WG.2/3) highlighting the importance of connecting the indicators with the Goals and Targets of the Sustainable Development Goals (SDGs). The participants were invited to discuss the draft matrix.
24. For the fisheries-related indicators, Ms. Gabriella Bianchi, FAO, assured that she would consult with her colleagues particularly on aquaculture to provide further information to the working group. With regards to Trophic Index, she suggested to wait for the outcome of the discussion on the indicator for Aichi Target 6 currently undergoing. She also confirmed to continue being a part of the Regional Seas Indicators' Working Group.
25. Through extensive discussion on each indicator proposed in the draft matrix, the participants agreed to proceed with the preliminary indicators as shown in Annex 4, which would then require future analysis and development within a DPSIR Framework

VIII. Discussion of Draft Workplan for the Working Group

26. Mr. Takehiro Nakamura, UNEP, presented the draft workplan of the working group (UNEP/EARS/WG.2/4). The participants were invited to discuss the draft workplan.
27. As a result of discussion, the meeting participants agreed to proceed with the work plan as described in Annex 5. It was agreed that additional organizations with experience in developing

marine and coastal indicators would be invited to participate in the working group.

28. Ms. Kanako Hasegawa, UNEP DEPI, announced that she would provide the meeting report for the meeting participants by 30 October 2015. The participants would be requested to review the report by 6 November 2015.

IX. Closure of the working group

29. Ms. Virginie Hart noted the need for data management at Barcelona Convention. Responding to her comment, Ms. Joana Akrofi commented that interested Regional Seas could be a pilot for data management through UNEP-Live platform. Interested Regional Seas Conventions and Secretariats were invited to contact with UNEP DEWA outlining their specific needs for data management.
30. Mr. Takehiro Nakamura, UNEP, thanked the participants for the contributions and valuable inputs to the discussion during the meeting. He officially closed the meeting stressing the importance of this working group in the context of the SDGs.

Annex 1: Programme of the meeting

Timing	Activities	Responsible
23 October 2015		
0900-0915	Opening of the meeting Objective of the meeting Adoption of agenda and programme	UNEP
0915-1000	Working Group Terms of Reference Discussion	UNEP
1000-1030	TWAP results Discussion	UNEP and UNESCO- IOC
1030-1040	Presentation on Regional Seas Dataset	UNEP WCMC
1040 - 1110	Regional Seas Indicator Matrix Comments	UNEP Participants
1110-1120	Coffee/tea break	UNEP
1120-1230	Discussion of the preliminary indicator matrix	Participants
1230-1400	Lunch break	
1230 – 1400	Continued discussion of the preliminary indicator matrix	Participants
1400-1445	Agreement of the preliminary indicator matrix	Participants
1415-1500	Coffee/tea break	
1500-1520	Presentation of a draft workplan of the Working Group	UNEP

1520-1700	Discussion and agreement of a workplan of the Working Group	Participants
1700-1720	Presentation of draft conclusions	UNEP
1720-1750	Agreement of draft conclusions	Participants
1750-1800	Closure of the Working Group	

Annex 2: List of Participants

Regional Seas Conventions and Action Plans			
1	<p><u>Commission on the Protection of the Black Sea Against Pollution (Black Sea)</u> Ms. Irina Makarenko <i>Pollution Monitoring and Assessment (PMA) Officer</i> Permanent Secretariat Commission on the Protection of the Black Sea Against Pollution Bucharest Convention Maslak Mahallesi, Büyükdere Caddesi, No 265, Sarıyerne, Istanbul, 34398, TURKEY Tel: +90 212 299 2940/+90 212 299 2946 Email: irina.makarenko@blacksea-commission.org / iryana.makarenko79@gmail.com</p>	2	<p><u>Secretariat of the Permanent Commission for the South Pacific</u> Mr. Julian Augusto Reyna Moreno <i>Secretary General</i> Permanent Commission for the South Pacific Avenida Carlos Julio Arosemena Km3 Edificio Classic, 2do Piso, Complejo Alban Borja, Guayaquil, Ecuador Email: sgeneral@cpps-int.org</p>
3	<p><u>Nairobi Convention</u> Mr. Dixon Waruinge <i>Head</i> Nairobi Convention Division of Environmental Policy Implementation (DEPI), P. O. Box 30552, Nairobi, Kenya Email: dixon.waruinge@unep.org</p>	4	<p><u>Regional Organization for the Protection of the Marine Environment (ROPME)</u> Dr. Hassan Mohammadi <i>Coordinator</i> Regional Organization for the Protection of the Marine Environment P.O Box 26388, Safat 13124 State of Kuwait Email: hmohammadi@ropme.org</p>
5	<p><u>Regional Organization for the Protection of the Marine Environment (ROPME)</u> Dr. Hassan Awad <i>Marine Environmental Expert</i> ROPME P.O. Nox: 26388 13224 Safat State of Kuwait Email: hbawad@ropme.org</p>	6	<p><u>Northwest Pacific Action Plan</u> Dr. Alexander Tkalin <i>Coordinator</i> Northwest Pacific Action Plan (NOWPAP) Regional Coordinating Unit (RCU) 5-5 Ushijimashin-machi Toyama City 930-0856, Japan Email: alexander.tkalin@nowpap.org</p>

7	<p><u>PERSGA</u> Dr. Ahmed S. M. Khalil <i>Regional Programme Coordinator</i> Living Marine Resources and Climate Change The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) P.O. Box 53662, Jeddah 21583 Kingdom of Saudi Arabia Email: ahmed.khalil@persga.org</p>	8	<p><u>Helcom</u> Ms. Johanna Laurila <i>Information Secretary</i> Helsinki Commission (HELCOM) Katajanokanlaituri 6 B FI-00160 Helsinki, Finland Email: Johanna.laurila@helcom.fi</p>
9	<p><u>Barcelona Convention</u> Ms. Virginie Hart <i>Programme Officer, Monitoring and Assessment</i> Barcelona Convention Secretariat 48 Vassileos Konstantinou Avenue P. O. Box 18019, 116 35 Athens, Greece Email: gaetano.leone@unepmap.gr</p>	10	<p><u>COBSEA</u> Mr. Reynaldo Molina <i>Consultant</i> UNEP, COBSEA Secretariat United Nations Building, 2nd Floor, Block B Rajadamnern-Nok Avenue Bangkok 10200, Thailand Email: molinar@un.org</p>
11	<p><u>SACEP</u> Mr. Pulakesh Mondal <i>Senior Programme Officer/Regional</i> South Asia Co-operative Environment Programme (SACEP) No. 10 Anderson Road, Off Dickman's Road Colombo 5, Sri Lanka Email: pulakesh.mondal@sacep.org</p>	12	<p><u>Helcom</u> Ms. Johanna Laurila <i>Information Secretary</i> Helsinki Commission (HELCOM) Katajanokanlaituri 6 B FI-00160 Helsinki, Finland Email: Johanna.laurila@helcom.fi</p>
Observers and Partners			
13	<p><u>GRID-Arendal</u> Mr. Morten Sorensen <i>Senior Advisor</i> GRID-Arendal UN House P. O. Box 183, N-4802 Arendal, Norway Email: Morten.Sorensen@grida.no</p>	14	<p><u>UNEP WCMC</u> Dr Brian Mac Sharry Senior Programme Officer, Protected Areas Information Coordinator 219 Huntingdon Road, Cambridge, CB3 0DL United Kingdom Email: Brian.MacSharry@unep-wcmc.org</p>
15	<p>Ms. Liana McManus <i>Project Manager</i> The Global Environment Facility Transboundary Waters Assessment Programme (UNEP GEF TWAP) Email: lmcmamus57@gmail.com</p>	16	<p><u>Ministry of Environment and Drainage, Barbados</u> Ms. Lorna Inniss Director Coastal Zone Management Unit Ministry of Environment and Drainage Hincks Street, St. Michael Barbados Email: linniss@coastal.gov.bb</p>
17	<u>NILU-Norway and University of Algarve-Portugal</u>	18	<u>FAO</u>

	Ms. Alice Newton NILU-IMPEC Postboks 100 2027 Kjeller Norway Email: Alice.Newton@nilu.no		Ms. Gabriella Bianchi <i>Senior Fishery Resources Officer</i> Fisheries and Aquaculture Department Viale delle Terme di Caracalla 00153 Rome, Italy Email: Gabriella.Bianchi@fao.org
Coordination			
19	UNEP/DEPI Mr. Takehiro Nakamura <i>Chief</i> Marine & Coastal Ecosystems Unit Division of Environmental Policy Implementation PO Box 30552, 00100 Nairobi, Kenya Email : Takehiro.nakamura@unep.org	20	UNEP/DEWA Ms. Joana Akrofi <i>Programme Officer</i> Division of Early Warning and Assessment United Nations Avenue, Gigiri PO Box 30552, 00100 Nairobi, Kenya Email: joana.akrofi@unep.org
21	UNEP/DEPI Ms. Kanako Hasegawa <i>Associate Programme Officer</i> Regional Seas Coordination Unit, Division of Environmental Policy Implementation PO Box 30552, 00100 Nairobi, Kenya Email: kanako.hasegawa@unep.org		

Annex 3: Terms of reference

Terms of reference: The Working Group will carry out the following tasks:

1. Further to “Measuring Success: Indicators for Regional Seas Conventions and Action Plans”, conduct a comprehensive review of existing regional seas indicators, their scientific background, and current data sources;
2. Review linkages of these regional seas indicators with the relevant Sustainable Development Goals, Aichi Targets, and any other global and regional targets/objectives that the Regional Seas member States need to fulfill and implement;
3. Prepare and recommend to the Global Regional Seas meeting a core set of indicators for the participating regional seas to adopt and report, and a supplemental set of indicators for some of the regional seas to adopt for their own reporting purposes. These sets of indicators should be accompanied with scientific backgrounds and possible available datasets on global, regional and national scales;
4. Ensure that future indicator monitoring will be linked with regional seas based information management systems, such as InforMEA and UNEP Live;

5. Conduct any other tasks identified by the Working Group and/or by the Global Meetings of Regional Seas Conventions and Action Plans; and 6. Transmit the work and results of the Working Group, through UNEP, to the relevant global processes, such as SDG indicator

Annex 4: Draft Indicators Matrix

Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators ⁶	Desirability in RS
Total inputs of nitrogen and phosphorus from agriculture, sewage and atmospheric nitrogen	Chlorophyll a concentration as an indicator of phytoplankton biomass	14.1	Chlorophyll time series; DIN, DIP (modelled data) (both concentration and flux)	Med / BS/ NOWPAP/ ROPME / SACEP / HELCOM / Nairobi
Inputs of marine chemical pollution Trends for selected priority chemicals	Trends for selected priority chemicals including POPs and heavy metals	14.1	POPS (Persistent Organic Pollutants) status	NOWPAP /Nairobi / BS/ CPPS
Overall levels of marine litter Quantification of beach litter items	Quantification and classification of beach litter items	14.1	Marine Plastic Litter	NOPAP /HELCOM/ PERSGA /Nairobi
Ocean warming	Annual mean sea surface temperature (25m below the surface)	14.2	Sea Surface Temperature (SST)	Agreed
Fish landings	Fish catches within EEZs (tonnes) – total capture production	14.4	Fish landings and Landed Value, Fishing effort, Fish stock status, Primary Production required, Marine Trophic Index, Fishing in Balance Index	FAO to provide inputs
Aquaculture	Application of risk assessment to account for pollution and biodiversity impacts	14.4		FAO to provide inputs
Aquaculture	Destruction of habitat due to aquaculture			FAO to provide inputs
Population pressure / urbanization	Length of coastal modification and km² of coastal reclamation	14.2	Rural/ Urban population, %poor,	ROPME / MAP / NOWPAP/ SACEP
Eutrophication status	Locations and frequency of algal blooms reported	14.1	Index of coastal eutrophication	agreed
Pollution hot spots ⁷	1) Concentration of Status of	14.1	Floating plastic debris	agreed

⁶ A detailed table is presented below.

Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators ⁶	Desirability in RS
	selected pollutant contamination in biota and sediments and temporal trends 2) Number of hotspots			
Ocean acidification	1) Aragonite saturation 2) pH 3) Alkalinity	14.3	Pteropods at risk:	ROPME (pH)
Level of exploitation of commercial fisheries	FAO stock status: % stocks overfished compared to MSY	14.4	Catch Stock Status, Marine Trophic Index, Fishing in Balance Index	FAO to provide inputs
Species replacement as a consequence of capture fisheries	Marine trophic index	14.5	Marine Trophic Index	FAO to provide inputs
Endangered species	Distribution of Red List Index species	14.5		NOWPAP
Loss of critical habitat	Trends in critical habitat extent and condition	14.5	Mangrove status; Reefs at Risk Index; seagrass; salt marshes	NOWPAP / CPPS
National Action Plans to reduce input from LBS	% National action plans ratified / operational	14.1	Transboundary Legal Instruments	agreed
Waste water treatment facilities	1) % coastal urban population connected to swage facilities 2) % of waste water facilities complying with adequate standards 3) % of untreated waste water	14.1	NA	agreed
Incentive to reduce marine litter at source	1) % port waste reception facilities available	14.1	NA	agreed

⁷ Actual pollution hotspot and source of hotspot

Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators ⁶	Desirability in RS
	2) Incentives to reduce land based sources ⁸ 3) Amount of recycled waste on land (%)			
Climate change adaptation	1) % national adaptation plans in place 2) Sector based national adaptation plans 3) Number of existing national and local coastal and marine plans incorporating climate change adaptation	14.2	Transboundary Legal Instruments	agreed
Fish harvested within safe ecological limits	Fisheries measures in place (by-catch limits, area-based closures, recovery plans, capacity reduction measures) and multilateral/bilateral fisheries management arrangements	14.4	Catch Stock Status, Marine Trophic Index, Fishing in Balance Index; Fishery Production Potential of LMEs	FAO to provide inputs
Critical marine habitat under protection	% Marine protected areas designated	14.5	Change in Protected Area Coverage	agreed
National ICZM in place	National ICZM guidelines and enabling legislation adopted	14.2		agreed

⁸ In monetary terms

Annex 5: Draft workplan agreed by the participants

Timeline	Activity	Responsible members	Remarks
30 October	Draft report/ matrix and workplan to be circulated for comments	Kanako Hasegawa (UNEP)	Members of WG
November 2015	2-3 page description/vision of Regional Seas Indicators to be drafted, and shared also with other interested parties to participate e/g DEVOTES GESAMP		UNEP ⁹
December 2015	Providing additional information to the initial indicator table by the participating regional seas	Participating regional seas	Linked to SDG targets UNEP to prepare format and send Solicit input from FAO&CBD
December 2015	UNEP to incorporate WG activity in UNEP MTS and POW Prepare proposal(s) (GEF or others) on regional indicator needs	UNEP DEPI / DEWA	UNEP Marine
	Revised proposal of Indicators and analysis to be circulated ¹⁰		MAP / DEWA / DEPI
Mid-January 2016	The second meeting of the Working Group	Chair and UNEP DEPI	Through two telephone conferences to accommodate Western time and eastern time zones
January 2016	Transmission of the indicator table to the global processes		DEWA submit to WOA Secretariat Liana McManus to assist

⁹ Contact: UNEP (Takehiro Nakamura, Joana Akrofi, Kanako Hasegawa) and others (Liana McManus / ROPME/ BS /MAP)

¹⁰ Questionnaires to RS on Priority pollutants will be conducted

Timeline	Activity	Responsible members	Remarks
February 2016	Submission of WG results to CBD and FAO	UNEP DEPI	
March 2016	Input from the SDG Indicator discussion on the SDG indicators	UNEP DEWA to transmit the information to the Working Group	GESAMP to be invited to do a scientific validation of the selected indicators/ DEWA lead
March 2016	Result submitted to Indicator discussion in Statistical Commission through DEWA		
March – May 2016	Preparation of the recommended capacity for monitoring of the proposed indicators and available global/regional datasets	Working Group members	Together of SDG results do some analysis of results for monitoring of indicators/ DEPI& RSP
mid-May 2016	The third meeting of the Working Group	Chair and UNEP DEPI	Through two telephone conference
May- July 2016	Compilation of all the work of the Working Group	Working Group members	To be compiled in a single report to be published by DEPI/
September 2016	Submission of the results of the Working Group to the Global Meeting of the Regional Seas Conventions and Action Plans 2016	UNEP DEPI	Abidjan Cote D Ivoire
	Discussion of the Working Group results at the Global Regional Seas Meeting in 2016		
September 2016	Submission of the results to the proposed regional seas and regional fisheries bodies meeting		To be discussed further