

**Framework Convention
for the Protection of the Marine
Environment of the Caspian Sea**

Distr.: General
August 2019
Original: English

**CONFERENCE OF THE PARTIES
Sixth Meeting
6-8 November 2019, Baku, Azerbaijan**

Working Group on (Environmental) Monitoring and Assessment

(Note by the interim Secretariat)

Introduction:

At its 5th Meeting, Ashgabat, Turkmenistan, 30 May 2014, the Conference of the Parties to the Tehran Convention (COP5) decided to establish a Working Group on (Environmental) Monitoring and Assessment (WGMA).

At the first Preparatory Committee Meeting for COP6 (PrepCom1), Baku, Azerbaijan, 24-27 November 2014, the Representatives of the Contracting Parties requested TCIS to invite the Contracting Parties to nominate up to two members of the WGMA and to prepare terms of reference for consideration and approval by PrepCom2 and COP6.

By letter of 27 February 2015, the Contracting Parties were requested to nominate up to two members of the WGMA.

At PrepCom2, in Baku, Republic of Azerbaijan, 31 May – 3 June 2015, the Representatives of the Contracting Parties reviewed and agreed on the name and terms of reference of the WGMA. The nominated members of the Working Group met informally, elected Mr. Alexander Postnov, Deputy Director of the State Oceanographic Institute, Roshydromet, Russian Federation as Acting Chair, and agreed on the work in the months ahead. The report of the informal meeting is attached as Annex 1.

By letter of 18 June 2015, the Contracting Parties were requested to confirm or, if they would wish, amend the nomination of their member(s) of the Working Group.

The agreed terms of reference of the WGMA as well as the list of its nominated members are attached as Annexes 2 and 3.

As of August 2018, the WGMA has held three meetings, namely in Baku, Azerbaijan, 20-21 January 2016, Bandar Anzali, IR Iran, 19 April 2017 and Geneva, Switzerland, 15 November 2017. The meetings were held back-to-back with the negotiations on the Protocol on Monitoring, Assessment and Information Exchange. CASPCOM representatives attended the second and third WGMA meetings as observers and made substantial contributions.

In four years of its existence the WGMA has:

- Agreed on a set of common Caspian Regional Water Quality Standards based on the list of Maximum Allowable Concentrations of pollutants in the sea water legally established in Azerbaijan, Kazakhstan, Russian Federation and Turkmenistan complemented with a couple of additional parameters proposed by IR of Iran..
- Reached a preliminary agreement on using the Probable Effect Levels (PELs) from the Canadian system as Interim Regional Guidelines for quality of the Caspian Sea bottom sediments. The initial stage will involve only a limited number of parameters to comply with the country's monitoring capabilities
- Reviewed the degree of preparedness of the Caspian littoral states to putting the Caspian Environment Monitoring Program (EMP) into implementation and propose that TCIS undertakes a survey aiming at identifying the country's efforts to start the EMP implementation in the near future.
- Reviewed the Table of Contents and the final text of the Second Caspian Sea State of the Marine Environment (SOE2) Report and made recommendations regarding its structure and procedures for drafting the future SOE reports..
- Drafted procedures for initial monitoring data exchange and quality control and addressed requirements to the Regional Monitoring Data Centre including its possible establishment as a part of the Caspian Environment Information Centre (CEIC), which development and operation is the responsibility of the designated National Information Officers, co-ordinated by GRID-Arendal.

In more detail, the results of the WGMA activities are listed in the reports of the meetings attached as Annexes 4-7.

The WGMA has provided and intends to continue to provide inputs to the negotiations on the Protocol on Monitoring, Assessment and Information Exchange, particularly in the form of the marine environment quality criteria/guidelines and procedures for monitoring-data exchange, as well as to the preparation of the SOE2 Report which is also coordinated by GRID-Arendal.

Close links are being maintained with CASPCOM whose expertise has contributed much to the progress made by WGMA, and with which TCIS has concluded an MOU for cooperation.

Suggested Action:

The Meeting may wish to:

1. Adopt the Terms of Reference of the WGMA, contained in Annex 2;
2. Welcome and endorse the composition and elected Chair of the WGMA, as contained in Annex 3;
3. Welcome the progress made by the WGMA in identifying and implementing priority issues of its agenda, in particular on common water and sediment quality criteria/guidelines;
4. Request the Secretariat to continue to promote close collaboration between the WGMA and CASPCOM, including in support of the preparation of the SOE Reports;
5. Furthermore, request the Secretariat, in consultation with the WGMA and GRID-Arendal to develop the institutional and technical requirements and options for a Caspian monitoring data centre, including its possible integration into the CEIC.

**Report of the informal Meeting of the
Working Group on Monitoring and Assessment
3 June 2015**

The newly formed working group met in Baku on 3 June 2015. In accordance with its draft ToR, the Group elected Dr. Alexander Postnov, Deputy Director of the State Oceanographic Institute (SOI), Roshydromet, Moscow, Russian Federation as acting Chairperson with an understanding that both the composition of the working group and its chairperson subjected to approval by the Contracting Parties during COP-6. The group noted that since a Russian representative had been elected as the acting chairperson, the Russian Federation was entitled for one more expert representing the country in the working group. Thus, Dr. Alexander Korshenko, head of Laboratory for marine pollution monitoring, SOI, initially meant as alternate to Mr. Postnov became a full member of the group.

The acting chairperson expressed his views on the issues which could be addressed by the working group at its first meeting tentatively scheduled for late January 2016. They were:

- (a) to evaluate the Party's preparedness for implementation of the Caspian Environment Monitoring Programme (EMP) previously welcomed by COP meetings. In this connection, the WG members could prepare descriptions of the national monitoring programmes, including information on the responsible agencies, implementing organizations, number of sampling sites, list of sampled marine environmental parameters, chemical analysing capabilities (laboratory equipment and personnel), etc.;
- (b) to elaborate approaches to establishment of the regional marine water quality standards taking into account the sets of maximum allowable concentrations (MACs) of pollutants in marine waters legally established in 4 of 5 littoral countries. As a first step, the established MACs could be compared across the littoral states and against those introduced by European Union. Besides, it was proposed to examine principles used in Europe, US and Canada for establishing standards for pollutants in bottom sediments and biota as well as for identifying sub-regions for the purpose of setting sub-regional marine environment quality standards;
- (c) to evaluate the Party's preparedness for raw data exchange provided that the protocol on monitoring and data exchange has been negotiated and come into power. Such an evaluation could be based on an analysis of the country's legislation related to information exchange with abroad. Besides, the willingness of the Parties to share the available data on the water quality with other countries for a proper assessment of the state of the Caspian Sea marine environment could be evaluated.

After a brief discussion, the members of the group agreed with the proposed areas of activities for the next 7 months and requested the acting chairperson to provide them a questionnaire in support of the outlined plan.

**Terms of Reference
Working Group on Monitoring and Assessment
to the Tehran Convention**

At its 4th Meeting, in Moscow, Russian Federation, on 12 December 2012, the Conference of the Parties (COP) to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention):

- Welcomed the Environmental Monitoring Programme (EMP) contained in document TC/COP4/7 as “the basis for continuation of this activity and capacity building and regional cooperation for monitoring the parameters which determine the quality of the marine environment of the Caspian Sea”, and
- Requested the (interim) Secretariat “to continue and promote its implementation with the involvement and/or support of the CaspCom (Coordinating Committee on Hydrometeorology and Pollution Monitoring of the Caspian Sea), the GEF, the EU, and other stakeholders”.

At its 5th Meeting, in Ashgabat, Turkmenistan, on 30 May 2014, the Tehran Convention Conference of the Parties:

- Welcomed the MoU between the CaspCom and the (interim) Secretariat of the Tehran Convention, contained in document TC/COP5/5);
- Welcomed the proposed Regional Framework and Network for the Tehran Convention and Protocol Compliance Monitoring and Assessment contained in document TC/COP5/5;
- Decided to establish a Working Group on Monitoring and Information Exchange; and
- Requested the (interim) Secretariat to initiate and service intergovernmental consultations related to the development of a legal framework for information sharing in support of the implementation of the Tehran Convention and its Protocols, and in consultation with the Working Group on Monitoring and information Exchange.

At the first Preparatory Meeting for COP6, in Baku, Republic of Azerbaijan, on 27 November 2014, the Representatives of the Parties considered a proposal by the (interim) Secretariat for a legal instrument on data and information sharing, as well as the views of experts on Caspian Regional Water Quality Standards and Objectives, and agreed that a legal instrument on data and information sharing should/could, *inter alia*:

- Provide the framework for the implementation of the EMP and the role of the Working Group on Monitoring and Assessment therein;
- Include a set of water quality standards and objectives

In light of the above and within available resources, the Working Group on Monitoring and Assessment will carry out the following tasks and responsibilities:

1. Keep under review the implementation of the Caspian EMP as required and develop proposals on institutional and operational procedures for a sustainable environmental monitoring system, including a network of national monitoring institutions and national focal points;
2. Carry out a gap analysis of the required monitoring capacity and study the compatibility of national methodologies, including identification of resource requirements to ensure harmonization;

3. Develop regional guidelines for the implementation of the EMP including a quality assurance system taking into account national standards;
4. Develop a basic set of regional and/or if required subregional water quality standards, taking into account the approach suggested in the expert view paper mentioned above;
5. Develop water quality objectives based on the agreed water quality standards;
6. Advise on the role and place of agreed water quality standards and objectives in a legal instrument for monitoring and information exchange;
7. Identify the needs for and provide advice on capacity building as well as on the EMP implementation arrangements in pilot coordinated monitoring cruises;
8. Provide inputs for and oversee the preparation of the draft Report of the State of the Marine Environment of the Caspian Sea;
9. Develop procedures for regular exchange of monitoring and assessment related information among the Contracting Parties through the Secretariat;
10. If necessary, the present terms of reference will be reviewed pursuant to the decision of the Conference of the Parties to the Tehran Convention.

The Working Group on Monitoring and Assessment will be composed of up to two representatives per Contracting Party. It will be established and its composition decided by the COP and function under the auspices of the Secretariat of the Tehran Convention.

The Chair of the Working Group shall be elected from its members and may be reelected every two years.

Composition of the Working Group on Monitoring and Assessment**Acting Chair**

Mr. Alexander Postnov (alexander.postnov@mail.ru)

Azerbaijan

Mr Faig Mutallimov (faig.mutallimov@gmail.com)

Iran

Mr Reza Sheikholeslami (reza.sheikholeslami@gmail.com)

Mr Ziaeddin Almassi (zialmassi@gmail.com)

Kazakhstan

Ms Ainur Ortbayeva (ai_ortbayeva@list.ru)

Mr. Ramadan Abdulhair (abdulhair_r@meteo.kz)

Russia

Ms Tatiana Butylina (okpd@eco-cip.ru)

Ms Alexander Korshenko (korshenko@mail.ru)

Turkmenistan

Mr Hoshgeldi Kirliyev (hem.76@mail.ru)

**1st meeting of the Working Group on Monitoring and Assessment
(Baku, Azerbaijan, 20-21 January, 2016)**

The 1st meeting of the Working Group on Monitoring and Assessment (WGMA) was held in Baku, Azerbaijan 20-21 January, 2016. The meeting was attended by all WGMA members, earlier nominated by the Caspian littoral states in due course, and chaired by Acting Chairperson¹ Alexander Postnov elected at the informal WGMA meeting on the margins of COP-6 PrepCom 3 on 3 June 2015. Valentin Emelin, Grid Arendal and Sergey Monakhov, CASPAS Coordinator were participating as observers, the latter representing Coordinating Committee on Hydrometeorology of the Caspian Sea (CASPCOM) with which the Tehran Convention signed Memorandum of Understanding (Ashgabat, Turkmenistan, November 2013). Also attending the WGMA meeting as observers were the representatives of the Caspian littoral States who came for a back-to-back meeting on *draft Protocol on monitoring, assessment, access to and exchange of information* (21-22 January, 2016).

The WGMA reviewed 4 agenda items related to the WGMA Terms of Reference and agreed on the following conclusions and recommendations.

On the agenda item 1 "Regional preparedness for implementation of the Caspian Environment Monitoring Programme (Caspian EMP)"

The WGMA expressed confidence that Caspian EMP as it was welcomed by TC COP-4 in December 2012 established a minimum set of parameters required for any modern marine environmental assessments and thus the Caspian states are urged to apply efforts to build-up their capabilities to the level sufficient for starting the EMP (phase 1) implementation as soon as possible.

The WGMA reviewed the current national monitoring programs of the Caspian states as well as their capacities to meet the requirements of the Caspian EMP. The WGMA concluded that presently most states have no technical capabilities or financial resources to start a full-fledged implementation of the Caspian EMP (phase 1) in the near future. Thus, in the next several years, at least, the data on the Caspian marine environment required for Caspian State of Environment (SoE) assessments can come only from national monitoring programs and potentially published scientific papers, although the composition of these data are not sufficient for a profound SoE.

In this respect capacity building and support for monitoring activities in the EMP implementation is needed and should first and foremost focus on strengthening the individual and collective capacities of countries, through on-the-job training and otherwise, in the area of sediment sampling and monitoring related to point sources of pollution. Technical capacities and previous experience allow doing it in each country.

¹ The WGMA composition, chairmanship and Terms of Reference subject to formal approval by the TC COP-6.

On agenda item 2 “Approaches to establishment of the regional marine water quality standards/ targets”

In order to provide a baseline for assessments of the Caspian Sea marine environment the WGMA recommended to develop a set of Regional Marine Water, Sediment, and Biological Quality Standards (Criteria) taking into account the existing national legislation.

WGMA noted that, as of now, four out of five Caspian littoral states, namely, Azerbaijan, Kazakhstan, Russia and Turkmenistan, have the common Marine Water Quality Standards (a set of the so called Maximum Allowable Concentrations - MACs - of the major water pollutants) accommodated into their national legislation systems. I.R. Iran agreed to explore the possibilities for adopting these MACs as the Regional Marine Water Quality Standards.

At the same time, the legal systems of all Caspian states do not stipulate for any Sediment Quality Criteria. In view of that the WGMA nominated a sub-group of experts who shall review the Sediment Quality Criteria used in other regions of the world (Europe, USA, Canada, etc.) and draft a set of criteria for basic pollutants in the sediments, which can serve as the Regional Sediment Quality Criteria in the Caspian Sea, within the time-frame of six months.

On the agenda item 3 "Legal and technical aspects of monitoring data exchange"

The WGMA reviewed the current legislation of the Caspian littoral states related to environmental information exchange with other countries and concluded that no legal limitations are in place which might hinder the data exchange. The WGMA agreed that the *draft Protocol on monitoring, assessment, access to and exchange of information (hereafter - the draft Protocol)*, which is presently under negotiation, should contain a direct reference to agreed procedures for validated data exchange, which may include raw data, required for a proper assessment of the state of the Caspian environment.

More specifically, the following provisions related to the procedures of the data exchange, are to be reflected in the *draft Protocol*, one of its annexes or any related implementation arrangements:

- number and location of the monitoring stations (sites) whose data subject to submitting;
- type of media (water, sediments, biota);
- minimum data quality control procedures applied at the national level prior to data submitting;
- frequency and timing of submitting (e.g., annually, July-August, following the year of submitting);
- submitting formats;
- information on certified labs participating in the monitoring activities;
- address(es) used for data submitting (e.g., TC Secretariat, designated responsible national organization, etc.);
- designated responsible organization for the submitted data accumulating, checking, compiling and managing;

- rights of data owners and procedures for access to compiled datasets.

On the agenda item 4 "The Second Caspian Sea State of the Environment (SoE) Report: status of preparation"

In response to Task 8 of its Terms of Reference, the WGMA took note of the information provided by Valentin Emelin, Grid Arendal on the progress in preparation of the 2-d SoE report including its outline and table of contents. The WGMA proposed that arrangements should be negotiated among the Caspian littoral states in future which would guide the process of the SoE report preparation, outlining, *inter alia*, whether the SoE should constitute a purely scientific or governmentally negotiated report.

Sergey Monakhov, the CASPAS Coordinator, informed the WGMA meeting of the activities of the Coordinating Committee on Hydrometeorology of the Caspian Sea (CASPCOM) and the information resources developed and maintained under its auspices (catalogues of the sea level data, water temperature data, regional atmospheric circulation indicators), which are important for the assessment of the Caspian Sea environment. Further development of CASPCOM information resources will be promoted by coming into force of the Agreement on Cooperation in the Field of Hydrometeorology of the Caspian Sea (signed in Astrakhan, 29 September 2014) on 31 January 2016.

The legal basis for cooperation between the Tehran Convention and CASPCOM was laid by the Memorandum of Understanding signed in 2013. In view of that, the WGMA recommended:

- to integrate CASPCOM information resources into the information resources of the Tehran Convention through relevant links on the Convention website;
- to elaborate, through joint effort of the Tehran Convention and CASPCOM experts, a list of meteorological and hydrological indicators of the Caspian ecosystem status for their subsequent review and assessment on regular basis;
- to involve CASPCOM in the preparation of the SoE reports as regards climate, water balance and sea level change as well as other physical parameters of the Caspian Sea environment;
- Secretariats of CASPCOM and the Tehran Convention are advised to inform each other of the planned activities of the mutual interest, in particular, of the field studies of the Caspian Sea.

The major outcomes of the 1-st meeting of WGMA were reported to the negotiators of the *draft Protocol on monitoring, assessment, access to and exchange of information* who were holding a meeting in Baku on 21-22 January 2016, back-to-back with the WGMA meeting.

No dates for the 2-d WGMA meeting were specified but Secretariat proposed that it could be coupled with the 2-d round of negotiations on the *draft Protocol* which is preliminary scheduled for late 2016.

2nd meeting of the Working Group on Monitoring and Assessment

(Bandar Anzali, IR Iran on 19 April 2017)

The meeting was attended by all WGMA members, earlier nominated by the Caspian littoral states in due course, and chaired by Acting Chairperson Alexander Postnov elected at the informal WGMA meeting on the margins of COP-6 PrepCom 3 on 3 June 2015. Elena Ostrovskaya was participating as an observer, representing Coordinating Committee on Hydrometeorology of the Caspian Sea (CASPCOM) with which the Tehran Convention signed Memorandum of Understanding (Ashgabat, Turkmenistan, November 2013). Also attending the WGMA meeting as observers were the representatives of the Caspian littoral States who came for a back-to-back meeting on the draft Protocol on monitoring, assessment, access to and exchange of information (19-20 April, 2017).

The WGMA reviewed 4 agenda items related to the WGMA Terms of Reference and agreed on the following conclusions and recommendations.

On the agenda item 1 "Caspian Regional Water Quality Standards"

The WGMA agreed to accept the list of Maximum Allowable Concentrations (MACs) of marine water pollutants currently effective in Azerbaijan, Kazakhstan, Russia and Turkmenistan as interim Caspian Regional Water Quality Standards for 5 years starting from the date of the Protocol on monitoring, assessment, access to and exchange of information (hereafter Protocol) entry into force. The Chair will prepare and distribute among the WGMA members a draft list of MAC-based standards for the chemical substances included into Caspian Environmental Monitoring Programme (EMP). Standards for biological parameters outlined in EMP will be drafted by a sub-group composed of three experts from Azerbaijan, Iran and Russia.

On the agenda item 2 "Caspian Regional Sediment Quality Criteria"

WGMA took note of a report by Ms. E. Ostrovskaya on the basis for establishing bottom sediment standards including a comparison of Dutch and Canadian bottom sediment quality standards (guidelines). The WGMA members appreciated the report and requested that it is distributed among them to allow them to express their opinion (in writing) as to which set of standards (Dutch or Canadian) better fits the conditions in the Caspian Sea with a special reference to the mechanic composition of the bottom sediments in various parts of the sea.

On the agenda item 3 "CASPCOM possible contribution to implementation of Tehran Convention"

WGMA took note of information from CASPCOM presented by Ms. E. Ostrovskaya regarding the available CASPCOM information resources and possible CASPCOM participation in drafting certain parts of the State of Environment (SoE) Report. The Secretariat informed the meeting that presently the SoE structure is being developed but this process strongly depends on availability of funds. WGMA agreed that as soon as the SoE structure was established CASPCOM would be informed of the concrete sections of SoE into which it would be invited to contribute.

On the agenda item 4 "Procedures for monitoring data exchange"

WGMA reviewed the provisions of the draft Protocol on monitoring, assessment, access to and exchange of information (hereafter – the draft Protocol) as of 21 February 2016 related to monitoring and data exchange and expressed satisfaction that proposals by the 1-st WGMA meeting (Baku, 20-21 January 2016) had been accommodated into the draft Protocol. As a follow-up, WGMA discussed principles for the original monitoring data exchange which later might become a part of the Protocol.

Upon discussions, WGMA agreed as follows (with some reservations indicated below).

Subject to reporting and exchange are original data from all EMP stations, while data from national monitoring network are to be reported optionally. Generally, the data are to be submitted annually by the end of the year following the reported year but Azerbaijan and Turkmenistan felt that they might need more time to prepare their data for submission.

Data for all types of media (water, sediments, biota) sampled at the EMP stations are subject to reporting and exchange while the data from reported (exchanged) national monitoring stations may cover all or selected types of media. At the same time, as Azerbaijan proposed, exchanging of biota data could start at a later time when all countries would be prepared to make that type of observations.

To establish minimum data quality control procedures to be applied at the national level prior to data submission, WGMA agreed to review the relevant procedures used by the Black Sea Commission. A document describing such procedures developed by the Black Sea Commission is to be distributed among the WGMA members for their evaluation as to whether those procedures can be used in the Caspian Sea.

Data submission formats of the Black Sea Commission are also to be distributed for evaluation by the WGMA members as to their applicability to the Caspian Sea conditions.

Information on certified labs participating in the monitoring activities is to be attached to the submitted data, including name and postal address of the laboratory, name of the head, contact information of the head, short description of methods and instruments used to determine concentration of certain chemical substances.

The data are formally submitted to the TC Secretariat which forward it to the Caspian monitoring data centre, which is a responsible organization for the data accumulating, checking, compiling and managing, designated by COP.

WGMA did not come to an agreement regarding the nature of the monitoring data centre. The majority of countries believed that the existing Caspian Environment Information Center (CEIC) should be assigned to act as the Caspian monitoring data centre, while the Russian Federation expressed doubts regarding the CEIC ability to do so. To support this standpoint, Russian Federation informed the meeting on the existing technical requirements to such a data centre. Under these circumstances, the Secretariat expressed its readiness to consider the established technical requirements to the data centre and formally contact CEIC to examine their willingness to serve as the Caspian monitoring data centre.

Additionally, Russian Federation raised the issue of the status of observation of *Mnemiopsis leidy* abundance within the Caspian Environment Monitoring Programme, which was expected to be put before COP-6 for formal approval. The Russian Federation stated that it was not technically prepared to that type of observations and requested its status to be changed from mandator to optional. Other countries regretted such state of affairs stressing importance of these observations for assessing the state of the Caspian ecosystem as a whole. Russian Federation agreed to revisit this issue later.

3-d meeting of the Working Group on Monitoring and Assessment

(Geneva, Switzerland, 15 November, 2017)

The 3-d meeting of the Working Group on Monitoring and Assessment (WGMA) was held in Geneva, Switzerland, 15 November, 2017 in the course of the TC COP-6 PrepCom 5. The meeting was attended by the WGMA members from all Caspian littoral states, earlier nominated in due course, and chaired by Acting Chairperson² Alexander Postnov elected at the informal WGMA meeting on the margins of COP-6 PrepCom 3 on 3 June 2015. Also attending were NEIO and national experts from the littoral states participating in the CEIC 2. Elena Ostrovskaya, CASPAS Coordinator, was participating as an observer, representing Coordinating Committee on Hydrometeorology of the Caspian Sea (CASPCOM) with which the Tehran Convention had signed Memorandum of Understanding (Ashgabat, Turkmenistan, November 2013). Also, partly attending the WGMA meeting as observers were the representatives of Grid Arendal.

The WGMA reviewed 4 agenda items related to the WGMA Terms of Reference.

Draft Table of Contents of the 2-d Caspian State of Environment (SoE) Report

This item had not been on the WGMA preliminary agenda and was added to it on the request of the PrepCom plenary meeting in accordance with the group Terms of Reference. Two versions of the Table of Contents of the SoE Report were proposed. The proposal by Grid Arendal followed DSPIR approach which had been developed by European Environment Agency and applied to 1st Caspian State of Environment Report. Another approach was proposed by the Russian Federation and provided for a shortened social-economical description of the Caspian region which was not immediately related to environmental issues.

The discussion revealed a difference in the country's views as to which of the two proposed versions of the Table of Contents should be taken as a basis for further consideration. Kazakhstan and Turkmenistan welcomed the Russian version of the Table of Contents while Azerbaijan expressed its readiness to consider the Russian version of the Table of Contents and start to work on it. By contrast, Iran maintained that not all issues which Iran believed important were reflected in the Russian version.

After a long discussion it was proposed, as a compromise, that the Grid Arendal version would be accepted as a model Table of Contents with an understanding that those of its entries on which a country possessed no information or considered it confidential would be left unfilled. However, after an internal consultation within the delegation, the Russian Federation stated that this proposal was unacceptable to it and it would follow its own format.

² The WGMA composition, chairmanship and Terms of Reference subject to formal approval by the TC COP-6.

Meanwhile entries for 5 chapters of the Grid Arendal Table of Contents were reviewed and partly revised.

At this point, due to acute time shortage, the WGMA terminated discussions on this item. They were resumed later at a plenary meeting and reported elsewhere.

Caspian Environment Monitoring Program

The WGMA revisited the Caspian Environment Monitoring Program (EMP) and expressed concern about a lack of progress in its implementation. The group confirmed its support to EMP but emphasized that its implementation strongly depended on the material resources whose availability was by far beyond the WGMA member capacities. For this reason, the group recommended that the Secretariat could initiate a survey aiming at identifying the country's efforts to start the EMP implementation in the near future.

Caspian Regional Sediment Quality Criteria

The Acting Chair reminded that the previous WGMA meeting in Iran in April 2017 took note of a report by Dr Ostrovskaya which described the basis for establishing bottom sediment criteria including a comparison of Dutch and Canadian bottom sediment quality criteria (guidelines). Following the WGMA request, the report and presentation were distributed among the members in July this year for further consideration. Later, Dr Ostrovskaya proposed a set of values merging the two types of criteria and presented it to the WGMA meeting.

After a brief discussion, the WGMA agreed that it was too early to make a final decision on the Caspian regional bottom sediment quality criteria (guidelines) and recommended that the existing bottom sediment data from various Caspian Sea regions were to be examined against the set of draft values proposed by Dr Ostrovskaya. Based on the results of such a comparison, the next WGMA meeting would revisit this issue.

Procedures for monitoring data exchange

Under this item, the group addressed three issues on which no agreement had been reached at the previous meetings.

Minimum data quality control procedures to be applied at the national level prior to data submission. A document describing such procedures applied by the Black Sea Commission was distributed among the WGMA members as had been requested earlier. The document covered the quality data assurance and quality control procedures at all stages: sampling and sample preparation, chemical analyses, quality audit and, finally, manual data checking by experts. WGMA decided to continue examination of this document which, in addition, would foster harmonization of methodologies for chemical analyses among the chemical laboratories in the region.

Data submission formats. The relevant formats applied by the Black Sea Commission had also been distributed at the previous WGMA meeting request. Due to time shortage, the group could

not conclude on their applicability to the Caspian Sea conditions. Thus, this issue would be revisited at the next WGMA meeting.

Organization to serve as the Caspian Regional Monitoring Data Centre with a responsibility for initial data accumulation, checking, compiling and managing. The Russian Federation informed the meeting that one of Roshydromet organizations, namely, the State Oceanographic Institute (SOI) could assume responsibilities of the Caspian Regional Monitoring Data Centre. WGMA took note of this proposal and expressed an interest in receiving more information about the SOI technical capabilities and human expertise in this field. Thus, this issue would be revisited at the next WGMA meeting. Other countries may wish to propose their own organizations as the Caspian Regional Monitoring Data Centre.

1- st Virtual Meeting of the Working Group on Monitoring and Assessment

(18 June, 2019)

1- st Virtual Meeting of the Working Group on Monitoring and Assessment (WGMA) was held online 18 June, 2019. The meeting was attended by WGMA members, earlier nominated by the Caspian littoral states in due course, and chaired by Acting Chairperson Alexander Postnov elected at the informal WGMA meeting on the margins of COP-6 PrepCom 3 on 3 June 2015. Also attending the WGMA meeting as observers were Dr. Elena Ostrovskaya (CASPCOM) and Mr. Daniel Nixdorf (TCIS) as well as NCLOs of Iran and Turkmenistan.

The WGMA reviewed agenda items related to the WGMA Terms of Reference.

Caspian Environment Monitoring Programme (EMP)

Acting Chair reminded the group of its previous decision to promote the EMP implementation by producing a map which would display national monitoring networks of all the Caspian littoral states with a special indication of stations intended to serve as EMP stations. To this end, it had been agreed that the littoral states would provide metadata on stations of the national pollution monitoring networks in accordance with a distributed format. As of mid-June 2019, Acting Chair received the metadata from Kazakhstan, Russian Federation and Turkmenistan. In the course of further discussion, Azerbaijan expressed its readiness to provide metadata on the national network as soon as they become available to the experts. Iran claimed that it was not completely in agreement with the metadata reporting format. Acting Chair proposed to discuss this technical issue with Iran² by correspondence and to provide the updated format to the WGMA members so that they could fill in their metadata or update the already provided metadata if necessary (as requested by Kazakhstan).

Caspian Regional Sediment Quality Criteria

Acting Chair reminded the group that the previous WGMA meetings examined a basis for establishing bottom sediment criteria with a special reference to Dutch and Canadian bottom sediment quality criteria and reviewed a set of their values as proposed by Dr. Ostrovskaya (CASPCOM). However, it was agreed that it was too early to make a final decision on the Caspian Regional Bottom Sediment Quality Criteria. To allow a broader choice, the group requested Dr. Ostrovskaya to provide information on the other (apart from Canadian and Dutch) existing systems of bottom sediment quality criteria.

Speaking at the meeting on 18 June 2019, Dr. Ostrovskaya emphasized that selecting an existing set of the bottom sediment criteria as regional (after some adaptation) was necessary to avoid a lot of expensive research studies which would be needed should we decided to develop our own system. Canadian quality criteria were most carefully worked out also with respect to assessing incidence for biological adverse effects and better suited the Caspian climate. As the Dutch system was more inclined to the fresh water environment and much work needed to clean this up for the Caspian case, the Canadian system could easier be adapted to the Caspian Sea with a possibility to be reconsidered at a later stage, if required.

The main obstacle for choosing the Canadian system was that some limits of concentrations were too high but that could be adjusted. Meanwhile we could start with the most relevant of Canadian criteria.

In the followed discussion, Iran expressed its concern regarding technical capability of the Caspian littoral states for determining the required pollutants in the bottom sediments (available range of measuring) . Dr. Ostrovskaya pointed out that the matter was a need to select the regional criteria for bottom sediment quality assessment rather than to harmonize of the country's technical capabilities of making chemical analyses of the bottom sediments.

Azerbaijan and Kazakhstan noted the need to select the Canadian sediment quality criteria while Kazakhstan proposed to make use of the Canadian Probable Effect Levels (PELs) as Interim Regional Criteria of the Caspian Sea bottom sediments.

In response to the Iran's concern regarding the country's technical capability to make the required chemical analyses, Kazakhstan remarked that a preliminary analysis by Dr. Ostrovskaya had shown that the existing data of the Caspian Sea sediment chemical composition could be compared to the proposed criteria.

As a result of discussion, the WGMA members reached a preliminary agreement on using the Probable Effect Levels (PELs) from the Canadian system as Interim Regional Criteria of the Caspian Sea bottom sediments. The initial stage will involve only a limited number of parameters to comply with the country's monitoring capabilities.

A possible legal status of CRSQC was considered and there was a general agreement that they should be called "guidelines" rather than "standards". This, in particular, implied that CRSQC would be applied solely to the Tehran Convention implementation and should not affect the existing national environmental legislation or/and national environment assessment procedures of the Caspian littoral states.

Procedures for Monitoring Data Exchange

Under this item, the WGMA addressed three issues on which no agreement had been reached at the previous meetings.

Minimum data quality control procedures to be applied at the national level prior to data submission. Acting Chair reminded that previously the WGMA had agreed to consider a document of the Black Sea Commission entitled "Guideline on Quality Assurance and Quality Control of Chemical Oceanographic Data Collections" (hereafter – "BSC Guideline on QA/QC" as a basis for a relevant document for the Caspian Sea. The BSC Guideline on QA/QC consisted of several chapters describing procedures for quality assurance and quality control (QA/ QC) at the stages of (a) sampling and sample preparation (Chapter 3), (b) chemical analysis (Chapter 4) and (c) data processing/ management (Chapter 5). This document had been disseminated among the WGMA members for several times.

Acting Chair informed the group of the comments by Kazakhstan to the first part of the document, namely to its Chapter 4 ("Procedures of QA/QC at Stage of Chemical Analysis"). Besides, Acting Chair reminded the group that Iran had earlier proposed to establish standard (unified) methods for chemical analyses.

Acting Chair proposed not to unify the quality assurance procedures for sampling and chemical analyses but focus on the data quality control itself (Chapter 5) at the first phase. The reason for that was that unification of quality assurance procedures for sampling and chemical analyses would lead to a necessity to agree on common methods for chemical analyses which were not likely to be achieved in near future as required by the ongoing Protocol negotiating process. Instead, to guarantee a comparability of the data originated in different littoral states, a procedure of the interstate laboratory intercalibration might be applied at the first phase.

The WGMA members generally agreed to focus on the data quality control at the first phase but remarked that the issue of the analysis methods unification (standardisation) deserved to be revisited by the group as soon as possible. Iran proposed to have a timetable for such a revision with a final view to establish an auditing system in every littoral state to insure data comparability. This measure should be suggested to the Conference of the Parties.

Data submission formats. Acting Chair reminded that the relevant formats applied by the Black Sea Commission had also been distributed at the previous WGMA meeting request. However, due to time shortage, the group could not conclude on their applicability to the Caspian Sea conditions. It was agreed that the Acting Chair would distribute the model data submission formats shortly and would expect written comments within three months.

Azerbaijan supported by other littoral states complained that BSC Guideline on QA/QC as well as the data submission formats existed in English only which was inconvenient for the most Russian speaking experts. TCIS expressed an opinion that if these documents could not be found in Russian then translation of Chapter 5 of the BSC Guideline on QA/QC and the data submission formats could be arranged.

Caspian Regional Monitoring Data Centre with a responsibility for initial data accumulation, checking, compiling and managing. Acting Chair informed the meeting that though a decision as to which littoral state and organization would host the Caspian Regional Monitoring Centre rested with the Conference of the Parties, WGMA was expected to elaborate requirements which Caspian Regional Monitoring Centre should meet. Alexander Korshenko, a WGMA member from the Russian Federation, was supposed to present the experience of the State Oceanographic Institute of Roshydromet as the Russian national monitoring centre but was unable to attend the WGMA virtual meeting on 18 June. Acting Chair suggested to distribute a presentation by Alexander Korshenko and invited other Caspian littoral states to prepare their presentations on the matter. Iran expressed its wish to prepare such a presentation of its own.

At the conclusion of the meeting, the WGMA members agreed that the virtual meeting format proved to be useful and that such a practice ought to be continued. Russian Federation and Turkmenistan suggested, however, to focus the future virtual meetings on one or two issues since a longer agenda makes the perception difficult given the required translation into two languages.