



# **Workshop on Environment Statistics and Information for Sustainable Development in the Arab Region**

Beirut, Lebanon  
12-16 November 2018

**Final report**

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## Background, objectives and overview of the workshop

1. The United Nations Statistics Division (UNSD) – in partnership with the United Nations Economic and Social Commission for Western Asia (ESCWA), the United Nations Environment Programme (UN Environment), and the European Environment Agency (EEA) – delivered the Workshop on Environment Statistics and Information for Sustainable Development in the Arab Region (henceforth ‘the workshop’) in Beirut, Lebanon, from 12 to 16 November 2018.
2. Given a United Nations Statistical Commission request for UNSD to actively support developing countries in environment statistics through technical cooperation, the main purpose of the workshop was to help States to implement the Framework for the Development of Environment Statistics (FDES 2013). Specifically, the workshop aimed at:
  - a) training participants from national statistical offices (NSOs) and ministries of environment or equivalent institutions (MoEs) in the Arab region on basic concepts, methods and best practices in environment statistics based on the FDES;
  - b) providing a forum for exchange of information on the status of national environment statistics;
  - c) enhancing participants’ capabilities in selected topics of environment statistics such as water and waste;
  - d) reviewing selected Sustainable Development Goals (SDGs) indicators in relation to the FDES Basic Set of Environment Statistics; and
  - e) sharing knowledge and experience in climate change statistics and indicators.
3. The workshop gathered 32 participants – being 16 from NSOs and 16 from MoEs – from 15 countries of the Arab region: Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, State of Palestine, Qatar, Sudan, Syrian Arab Republic, Tunisia, and Yemen.<sup>1</sup> The League of Arab States (LAS) was also represented. (See Annex 2 for the list of participants.)
4. The workshop counted with 12 resource persons from the organising institutions (UNSD, ESCWA, UN Environment and EEA), the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations University (UNU), the Centre for Environment and Development for the Arab Region and Europe (CEDARE), Environment Agency Austria (UBA), and the European Topic Centre on Inland, Coastal and Marine Waters (ETC/ICM). Additionally, the workshop counted with one participant from the National Bureau of Statistics of the United Republic of Tanzania, a country that implemented the FDES 2013 and made important progress in environment statistics over recent years.
5. The workshop consisted of a series of experts’ presentations, sharing of and discussion of lessons learned from country practices, and facilitated group discussions. UNSD and ESCWA presentations covered the conceptual foundation and the structure of the FDES 2013, strategic pillars and steps to implement the FDES 2013, and details of environment statistics particularly relevant for the region (i.e. waste, water, and climate change). FDES 2013 supporting materials, such as the Environment Statistics Self-Assessment Tool (ESSAT), were also presented and discussed. UN Environment presented tools that NSOs and MoEs can use to facilitate the sharing of information. EEA, which is conducting the EU-funded European Neighbourhood Instrument (ENI) Shared Environmental Information System (SEIS) - ENI SEIS II South support mechanism project in the Mediterranean region, supporting the production of water and

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<sup>1</sup> Algeria, Bahrain, Saudi Arabia and the United Arab Emirates were also invited but were unable to participate.

waste statistics to be used to assess progress of the Union for the Mediterranean Initiative Horizon 2020 for a cleaner Mediterranean, described their initiatives. FAO, UNFCCC, UNU, CEDARE, UBA and ETC/ICM also provided substantive technical contributions in their respective subject matters.

### Summary agenda

(See Annex 1 for details.)

#### Opening of the workshop

1. Framework for the Development of Environment Statistics (FDES 2013)
  - 1.1. Status and needs of environment statistics for sustainable development
  - 1.2. The FDES 2013 and its tools
  - 1.3. Use of the FDES 2013 and links to Frameworks
  - 1.4. Country use of FDES
2. Regional and National Work on Environmental Information
3. Sustainable Development Goals (SDG) Indicators
  - 3.1. Review of the environmentally-related SDG Indicators
  - 3.2. Use of national data for the environmentally-related SDG Indicators
4. Water Statistics
  - 4.1. Methodology on water statistics
  - 4.2. Data on water
  - 4.3. Assessment of the state of water statistics in the region
5. Waste Statistics
  - 5.1. Methodology on waste statistics
  - 5.2. Data on waste
6. Climate Change Statistics
  - 6.1. Current work in climate change statistics and indicators
  - 6.2. Round-table discussion on climate change statistics and indicators
7. Geospatial Information System (GIS) and environment statistics

#### Closing of workshop

- Recommendations on the way forward to advance data and indicators work

## Opening

6. Ms Roula Majdalani (ESCWA Acting Deputy Executive Secretary for Programme Support), Mr Juraj Riecan (ESCWA Statistics Division Director), Ms Reena Shah (UNSD), Mr Abdelmenam Mohamed (UN Environment), Ms Sabah Nait (on behalf of EEA) and Ms Shahira Wahbi (LAS) opened the workshop. They welcomed the participants and stressed the importance of partnerships and discussions coming out of the week. They highlighted the importance of the FDES for the monitoring of SDGs, particularly in relation to some topics relevant for the Arab region, and underscored the importance of country-led information in making assessments in the environmental field.

7. Following the introduction of participants, Ms Wafa Aboul Hosn (ESCWA) presented the objectives and the agenda of the workshop, including the use of group work and plenary discussions. She asked countries to volunteer chairing some of the sessions. Participants agreed on the agenda proposed.

## Session 1. Framework for the Development of Environment Statistics (FDES 2013)

### *1.1. Status and needs of environment statistics for sustainable development*

8. Ms Aboul Hosn (ESCWA) updated participants on the regional situation regarding environment statistics. She highlighted how the transition from the Millennium Development Goals (with one environmental goal) to the SDGs (with a third of its 232 indicators being related to environment) represents a huge challenge, for which there is need for institutional coordination within countries, and between countries and international organisations. In this regard, the FDES and the System of Environmental-Economic Accounting (SEEA) Central Framework can provide guidance for the compilation of environmental data. She emphasised the importance of NSOs exchanging environmental data, administrative data and geospatial information, and indicated that ESCWA can provide technical assistance, with support from its partners. She underscored that NSOs are indeed the sources of data for SDG indicators, and, as such, they need to produce the information or coordinate it from other stakeholders. She mentioned the importance of countries not just collecting and verifying data, but also publishing it and sharing it with regional and international organisations.

9. Ms Shah (UNSD) presented the international requirements for environment statistics, including for reporting on various multilateral environment agreements. She explained how the SDGs frequently require multiple underlying statistics to compile just one indicator. She also introduced the UNSD/UN Environment Questionnaire 2018 on Environment Statistics; she also pointed to the UNSD website as a repository of nationally-produced environmental surveys and censuses, and FDES-supported environment statistics and related compendia.

### *1.2. The FDES 2013 and its tools*

10. Ms Shah and Mr Thiago Neto (UNSD) explained the conceptual foundation, structure and contents of the FDES 2013, its Basic Set of Environment Statistics, and the Manual on the Basic Set. Ms Shah mentioned that the United Nations Statistical Commission has endorsed the FDES 2013 as the framework for strengthening environment statistics programmes in countries, and has recognised it as a useful tool in the context of the SDGs.

11. As Ms Shah pointed out that the FDES is only available in English, Ms Wahbi (LAS) indicated that her organisation could help translating it into Arabic.

### *1.3. Use of the FDES 2013 and links to Frameworks*

12. Ms Shah and Mr Neto (UNSD) explained the implementation of the FDES 2013 and its advantages, and how to conduct the ESSAT. Ms Aboul Hosn (ESCWA) described the link between the FDES and the SEEA, and how the FDES is seen as the foundation for developing the basic environment statistics which could then serve to compile the environmental-economic accounts. She mentioned the role of ESCWA in supporting countries to implement the FDES and the SEEA, and encouraged South-South cooperation for this same purpose.

### *1.4. Country use of FDES*

13. Mr Ali Khodor Jaber (Lebanon) and Ms Ruth Minja (Tanzania) introduced the experience of their countries in using the FDES 2013. Mr Naddaf explained the shared responsibilities of the Ministry of Environment and the Central Administration for Statistics regarding data compilation to monitor natural resources and environmental issues. He mentioned the challenges in sharing information with other ministries, the private sector, and international agencies.

14. Ms Minja explained how growing pressure on environmental issues meant an increased demand for and awareness of environmental data for policy-making in her country. She told participants how Tanzania implemented the FDES following a capacity building project on environment statistics implemented by UNSD in collaboration with the East African Community; the country has now promoted interinstitutional platforms and conducted an environment statistics data gap assessment, as well as produced an environment statistics compendium according to the FDES. She underscored the importance of strengthened institutional cooperation, and of the prioritisation of statistics. She also mentioned challenges regarding lack or incompleteness of metadata for indicators, low response rate on some topics, limited data accessibility, and lack of (or uncoordinated) data management systems.

### *Discussion*

15. Participants questioned the clarity of some SDG indicators, with consequences for coordination at the national level. ESCWA indicated that the Inter-agency and Expert Group on SDG indicators can provide the venue for methodological discussions; meanwhile, ESCWA has translated into Arabic the SDG indicators metadata, which can be useful for countries in the region.

16. Participants appreciated the FDES, the Manual on the Basic Set and the ESSAT as important tools to assist in the development or strengthening of environment statistics. Some also questioned the level of capacity needed to work with the FDES and requested additional technical assistance. Ms Minja explained that, in the case of Tanzania, they had several workshops with stakeholders and formed a National Technical Working Group, which has assisted with the production of environment statistics.

17. Participants emphasized the importance of conducting specialized environmental surveys or including environmentally-related questions in existing censuses/surveys as a means of obtaining additional environmental information.

## Session 2. Regional and National Work on Environmental Information

18. Ms Wahbi (LAS) briefed participants on the decisions the Council of Arab Ministers Responsible for the Environment (CAMRE) took recently regarding environmental information and sustainable development indicators. She explained how LAS and ESCWA have been working on the selection and prioritisation of indicators, and on supporting the provision of information on them.

19. Mr Mohamed and Mr Erick Litswa (UN Environment) presented their work on environmental data mapping in the Arab region, and introduced two innovative systems, namely Environment Live and the Indicator Reporting Information System (IRIS), which countries can use to support their efforts in this field. They mentioned how reporting obligations due to legal instruments are bound to increase, and that having indicators organised beforehand can help countries.

### Discussion

20. Participants discussed potential environmental reporting demand overload on countries. They brought up the importance of having indicators which are feasible and harmonised with national and regional priorities and contexts. They also mentioned the value of assistance from international organisations – especially SDG indicators' custodian agencies – to countries for this work to be successful.

21. Country representatives indicated their need for training in using innovative systems such as the ones UN Environment presented. Participants mentioned the importance of not just installing a system and getting trained to use it, but also of linking it to other data sources and using it to produce relevant data. Once again, coordination and cooperation were deemed essential.

## Session 3. Sustainable Development Goals (SDG) Indicators

### *3.1. Review of environmentally-related SDG indicators*

22. Ms Shah (UNSD) demonstrated the link between the FDES 2013 and the environmentally-related SDG indicators. She explained how the FDES can help address the issue of a single SDG indicator demanding multiple statistics to be calculated. She presented the matrix with the correspondence between the Basic Set of Environment Statistics and environmentally-related SDG indicators. She also made participants aware that some indicator definitions are complex and not straightforward; for that reason, the matrix also brings additional sources of information that might help in cases where SDG indicators are tier 2 or 3.

23. Ms Aboul Hosn (ESCWA) discussed regional work on these indicators. She presented the data and statistics project that ESCWA is carrying out in partnership with UNSD and UN Environment, for the improvement of environment statistics according to international guidelines. She mentioned issues such as the absence of harmonised definitions and methodologies, the absence of coherent data in some countries. Among the accomplished activities, she mentioned regional workshops, online training, and missions to countries. Going forward, there shall be published guidance material on different indicators, and the development of partnerships with relevant authorities to promote statistics.

## Country presentations

24. Representatives of four countries – Egypt, Iraq, Morocco and Qatar – presented their progress in developing environmentally-related SDG indicators and reporting on them.
25. Ms Manar Ali (Egypt) told participants about how her country has been working to standardise the calculation of some environmental indicators. She mentioned challenges related to the lack of involvement of private sector and civil society, and the lack of awareness in the environmental field. She also mentioned the importance of cooperation with ESCWA to build capacities to ensure implementation of international conventions. As a lesson learned from their experience, she mentioned that having a unit specialised in sustainable development in each relevant ministry can help with the development of indicators.
26. Mr Amer Obaid Saud (Iraq) underscored that, from his country's experience, no government institution can work on all environmentally-related SDG indicators alone. In their case, they developed a plan for SDGs with the statistical coordination commission. They have chosen to focus on guaranteeing the quality of indicators, and to work in a way that various government administrations provide data which the NSO then centralises.
27. Ms Kawtar Salik (Morocco) explained how, in her country's case, the High Commission for Planning is in charge of all SDGs. Notwithstanding this, they have realised the need to adapt goals to the economic, social and environmental situation on the ground, and to understand the concerns and priorities of households in the country. To do so, the High Commission for Planning has got new mandates related to the SDGs and have added some specialisations to its structure. Mr Begdouri Mokhtar (Morocco) presented his country's project with the ENI SEIS II South for the Mediterranean.
28. Mr Metab Ali Al Kubaisi (Qatar) told participants about his country's experiences in environmental monitoring, and how they are planning to apply geospatial information to it. Given that environmental issues are all-encompassing, he stressed the need for streamlined efforts.

## Group work

### *3.2. Use of national data for the environmentally-related SDG indicators*

29. This sub-session was organised around a lively group work and plenary discussion on the use of national data for environmentally-related SDG indicators. Countries were split in four groups, each of them looking at a set of these indicators to answer these questions:
- How useful is the FDES in order to map to SDGs?
  - What are some of the main challenges in producing, disseminating and sharing the indicators under the various environmentally-related goals?
  - If your country produces the data for the indicators which differs from the internationally available data produced or modelled by the custodian agencies, how can this be reconciled to avoid reporting multiple values of the same indicator from the same country?
  - If your country does not have capacity to produce the indicators and there are internationally available data produced or modelled by the custodian agencies, how can this be dealt with? What are the capacity-building needs of the countries to assist them to produce the indicators?



30. Regarding question (a), groups mentioned that a ready-made framework, such as the FDES, is very useful to help identify requirements for indicators, including information sources and entities from which to collect data, as well as identify data gaps. The identification of indicators is important for the mobilisation of resources to meet capacity building needs. The matrix with the correspondence between the Basic Set of Environment Statistics and environmentally-related SDG indicators is very helpful in providing an overall picture of what details are needed to compile the indicators.

31. For question (b), groups pointed out challenges related to the production of information and data; lack of human, financial, technical and technological resources (including training); legal (and sometimes political) issues; differences in terminology, definitions and methodology; limited coverage of certain topics by some authorities (including due to absence of clear statistical unit); unclear definition of entities responsible for certain topics; and little or no coordination between the various producers of data at the national level.

32. In order to avoid problems raised in question (c), groups suggested that data flows must be done in a well-defined and reliable cycle where all these possibilities are identified. Sometimes, this may demand the support of local or domestic law. Groups also underscored the importance of only using data produced by statistical authorities and from official sources. The need for the custodian agencies to have transparent methodologies in cases of estimation and to validate estimated data with countries was also emphasized.

33. Finally, for question (d), groups suggested that SDG indicators' custodian agencies are best suited to help States build their capacities.

## Session 4. Water Statistics

### *4.1. Methodology on water statistics*

34. Ms Shah (UNSD) showed how the FDES is applied to water statistics. She gave an overview of the relation between water and FDES components, sub-components and topics. Mr Neto (UNSD) introduced the methodology sheet on water resources from the Manual on the Basic Set of Environment Statistics.

35. Mr Seifeddine Jomaa (EEA-ETC/ICM) presented the Horizon 2020 (H2020) water indicator specification factsheets developed in the framework of the ENI SEIS II South support mechanism. He explained that, in this project, the purpose of regularly producing data and sharing information was to contribute to a less polluted Mediterranean Sea, which is something relevant for many Arab countries.

36. Ms Aboul Hosn (ESCWA) presented the International Recommendations for Water Statistics (IRWS). She explained how the IRWS provide guidance for the collection of coherent comparable water statistics; they also bring principles, concepts and definitions, and help setting priorities for data collection.

### *4.2. Data on water*

37. Ms Shah (UNSD) talked about the water section of the UNSD/UN Environment Questionnaire on Environment Statistics. She explained the data collection, validation and dissemination cycle (including data prefilling). She emphasised that UNSD does not do estimation with the data provided, and always goes back to countries when there is need to clarify or change data. She explained the structure of the

questionnaire and showed the results from the previous questionnaire round for the countries in the region. She demonstrated how this data relates to SDG indicators (including indicators which are currently estimated), and underscored the importance of footnotes to data to explain possible anomalies.

38. Mr Jomaa (ETC/ICM) presented some regional data on water statistics from Horizon 2020 / ENI SEIS II South. He demonstrated how technological advancements allow countries and international agencies to have more data available, and to compare certain ecosystems to other and learn from that.

### Country presentations

39. Mr Karim Salah (Tunisia) presented his country's water accounts. He explained that there are multiple institutions responsible for producing water statistics, and several water information systems, which raises the issue of interinstitutional coordination. There is divergence in terminology between partners, and reliable data is frequently unavailable. To overcome that, the NSO collects data from producing institutions, processes data, and tries to make water statistics publications more in line with needs such as SDG reporting.

40. Mr Mohamed Eissawi (Egypt) explained how, in his country, water monitoring responsibilities are shared among three authorities, according to different water sources. There is, however, an integrated programme, and national water accounts are prepared by the NSO. Additionally, given the issue of different municipalities adopting differing methodologies, the NSO takes charge of harmonising data at the central level.

### *4.3. Assessment of the state of water statistics in the region*

41. Country representatives worked in groups to analyse how the ESSAT can help them compile water statistics.

### Discussion

42. Regarding the UNSD/UN Environment Questionnaire on Environment Statistics, country representatives indicated that NSOs and MoEs should always be contacted together, given the structural complexities related to data sharing. Ms Shah (UNSD) explained that UNSD and UN Environment work in this manner, and that they count on the workshop participants to help with data collection when UNSD sends questionnaire reminders by the end of the year.

43. Country representatives mentioned receiving multiple related questionnaires from international organizations in a short time period. Ms Shah (UNSD) explained that international organizations are working towards improved harmonization regarding the questionnaires. Nonetheless, she suggested that countries currently represented in the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs) could bring the issue up with their delegates.

## Session 5. Waste Statistics

### *5.1. Methodology on waste statistics*

44. Mr Neto (UNSD) showed how the FDES is applied to waste statistics. He gave an overview of the relation between waste and FDES components, sub-components and topics. Ms Shah (UNSD) introduced

the methodology sheet on generation and management of waste from the Manual on the Basic Set of Environment Statistics.

45. Ms Cécile Roddier-Quefelec (EEA) presented the waste and industrial emissions indicator specification factsheets developed for Horizon 2020 initiative. She started by introducing what SEIS is, explaining that SEIS is not a system as an IT tool, but rather as a concept, with pillars of content, infrastructure and cooperation. She introduced the principles which guide this work (e.g. information should be managed as close as possible to its source, should be collected once and shared with others for many purposes, should be readily available to easily fulfil reporting obligations, should be easily accessible to all users, should be accessible to enable comparisons).

46. Mr Cornelis Baldé (UNU) presented some recent developments in the area of electronic waste (e-waste). He gave the definition of e-waste, talked about the growing amount of it, and the relevance of the issue. He mentioned related problems, such as hazardous components in e-waste, impacts of e-waste on health, losses of valuable material in bad e-waste management, and exports of e-waste to poorer countries. He explained how statistics on e-waste are very limited, and not standardised. There is a global e-waste statistics partnership to build capacity building, including in the use of trade statistics to develop e-waste statistics. There are related expected activities in the next two years, including a project with Arab States.

#### Country presentation

47. Ms Sona Hilal Abuzahra (Jordan) talked about her country's experience with e-waste statistics. She explained how the need for e-waste statistics comes from the need to evaluate developments over time, elaborate policies, limit e-waste generation, prevent illegal dumping, and promote recycling. She showed how rapid change in technologies (and lifestyles), shorter product lifecycle, and designs which do not support repair and reuse are reasons for e-waste growth. She highlighted the importance of Jordan's cooperation with UNU to improve data availability, data quality, and awareness, and to improve the questionnaires to capture e-waste generation from households. There are plans to include data derived from import and export statistics, but still some issues with data quality, estimation, and difficulties in obtaining data from all economic activities.

#### 5.2. Data on waste

48. Mr Neto (UNSD) talked about the waste section of the UNSD/UN Environment Questionnaire on Environment Statistics. He explained the structure of the questionnaire and showed the results from the previous questionnaire round for the countries in the region. He demonstrated how this data relates to SDG indicators (including indicators which are currently estimated).

49. Ms Roddier-Quefelec (EEA) presented the waste data dictionaries developed for Horizon 2020 reporting under the ENI SEIS II South project, and some regional data on waste statistics.

50. Ms Nait (UBA) introduced the current effort to develop Jordan's National Monitoring Information System for Waste, project done in partnership with UBA. With it, they are covering the majority of SDG indicators, with live data. She underlined the importance of a legal basis to implement any integrated monitoring system, and how the very good cooperation between Jordan and the EEA follows from very good coordination at national level as well.

## Discussion

51. Participants discussed how to obtain reliable data on the informal sector's participation in waste collection. They mentioned the existence of some exercises at international level to try and monitor this type of case, but that it is still a challenge. Participants suggested the use of household surveys to help obtain this type of data, but also indicated that this may be a lesser priority for countries in conflict situation. The importance of collecting detailed data on e-waste was also emphasized by the participants.

## Session 6. Climate Change Statistics

### *6.1. Current work in climate change statistics and indicators*

52. Ms Shah (UNSD) presented the latest developments in climate change statistics. She told participants about some past activities in the area, and noted that the 47th session of the United Nations Statistical Commission (2016) requested UNSD to develop a global set of climate change statistics and indicators. She explained how UNSD piloted climate change statistics and indicators in 2017-2018 with 12 countries. UNSD is developing an inventory of related work on climate change statistics by partner organisations, and is also planning to conduct a Global Consultation on Climate Change Statistics and Indicators in 2019. The approach to the work has been bottom-up, with a review of what countries are using – 96 national sources have been consulted so far. UNSD has been identifying indicators related to drivers, impacts, mitigation, adaptation, and vulnerability.

53. Mr Francesco Tubiello (FAO) introduced the FAOSTAT Analytical Environmental Statistics, which includes the climate change-relevant statistics at FAO (i.e. statistics in agriculture, forestry and other land use). He explained how agriculture is both a significant cause of climate change and a sector greatly vulnerable through negative impacts. FAOSTAT also includes an emissions database, with data on emissions by sector and on emissions intensity.

54. Mr Vlad Trusca (UNFCCC) explained the relation of climate change statistics to policies. He presented a background to the UNFCCC Secretariat, and explained how his organisation deals with data submitted by countries. He explained the data processes of collection, analysis, management and dissemination. He presented some tools they have available (GHG Locator, GHG Data Interface, NDC Registry, NAMA Registry, CGE E-network). He explained that parties to the UNFCCC submit a vast amount of data about all national activities, and this becomes publicly available. He advocated enhanced cooperation between NSOs and authorities responsible for reporting climate change data; he also told country representatives to expect an increase of data reporting requirements under the Paris Agreement, given the Transparency Framework which will be finalized at the 24<sup>th</sup> session of the Conference of Parties (COP24) in Katowice, Poland in December 2018.

55. Ms Carol Chouchani Cherfane (ESCWA Sustainable Development Policies Division Director) presented the Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR). She explained how RICCAR is an integrated assessment of water for Arab region, including biophysical assessment of conditions, projections, and water vulnerability.

## Country presentations

56. Ms Abuzahra (Jordan) told participants about her country's experience with reporting on climate change. She explained the needs regarding identification of problems and constraints. She mentioned that there is good coordination in the area among institutions in Jordan, but that some data is still not available. There are also challenges related to enhancement of environmental surveys to have physical data at the level of economic activity.

57. Ms Samira Nefzi (Tunisia) presented the Tunisian Observatory for Sustainable Development (OTED). She explained how it started 20 years ago and how it has been looking at sustainable development. It encompasses sustainable development indicators (even before the SDGs) and allow for the regular publication of reports. She also presented studies on Tunisia's vulnerability to climate change (e.g. regarding rising temperatures and precipitation disparities in the country). She explained how her country has an impact-response framework for indicator identification. They test indicators to verify if they are relevant, acceptable, credible, easy, and robust. They have conducted an exercise for the agricultural sector, in which they chose 27 indicators. They will be presenting their first report on agriculture at the COP24. She mentioned they intend to use this approach for other sectors which are also vulnerable to climate change, such as tourism and health. She explained that the main aim of the exercise was not to have a new set of indicators, but to show that many indicators available in systems in concerned administrations would allow them to calculate climate change adaptation. Tunisia now has a preliminary set of indicators which allows them to assess climate change adaptation.

## Discussion

### *6.2. Round-table discussion on climate change statistics and indicators*

58. Participants shared their plans to work with climate change statistics and indicators, and challenges associated with this task. Participants once again mentioned issues of coordination and cooperation among national institutions. Country representatives shared best practices in obtaining data, such as the use of workshops with (or working groups of) different relevant stakeholders. Country representatives also expressed their thanks to international agencies which supported them in this type of work, and asked for further assistance. Countries also expressed interest to participate in the Global Consultation on Climate Change Statistics and Indicators.

## Session 7. Geospatial Information System (GIS) and environment statistics

59. Ms Roddier-Quefelec (EEA) presented Project Copernicus, the European programme for monitoring the Earth. She showed how it provides free and openly accessible information on space, land monitoring, marine environment monitoring, atmosphere monitoring, climate change, and emergency management and security. This data can help with core environment services and in emergency response (natural disasters, anthropogenic emergency situations, and humanitarian crises).

60. Ms Aboul Hosn (ESCWA) talked about the work of her organisation with the European Topic Centre of the University of Malaga (ETC-UMA). She explained how the project to provide geospatial information assistance to some countries started with an online survey targeting NSOs on status and needs to produce and utilise geospatial information. ESCWA and ETC-UMA have developed geospatial data and workflows to monitor environmental SDGs. With Egypt, Jordan and Palestine, they have administered a survey on the availability and accessibility of relevant sources of spatial data for SDG

indicator reporting; in these three countries, they have also conducted national workshops for stakeholders associated with SDGs, environmental data, and geospatial information. There has been basic training and awareness-raising on the importance of geospatial workflows.

61. Mr Tubiello (FAO) delivered a presentation on geospatial information and Earth observations as data sources for climate change statistics. He explained how FAOSTAT agri-environmental statistics can be applied to land cover and land cover change (e.g. area burned, emissions from biomass fires, area of degraded peatlands/emissions), and to temperature change. Information from these statistics is needed for key reporting processes. He demonstrated how there is a very large use of geospatial-derived statistics to address relevant issues in agri-environment and climate change. FAO produces and disseminates analytical estimates in support of national, regional and global evidence-based decision-making. The aim is to support, through methodological work as well as data, international reporting by member countries. He explained how the focus on education/communication of results to non-specialised users is an important driver of this work.

### Country presentations

62. Ms Yasmen AlShamali (Kuwait) presented eMISK, the Environmental Monitoring Information System of Kuwait. She explained how geospatial information is used for decision-making in public policies in her country. She showed how they are strengthening their databases according to an environmental vision of Kuwait for 2035, which is to have reliable information relevant for users. She explained the importance of environment awareness-raising, and how they use monitoring data to support their work.

63. Ms Safieh Ibrahim (Palestine) presented GeoMOLG, the Geographic System of the Ministry of Local Government. She explained how the system supports efforts for the modernisation of SDG monitoring in Palestine. She explained how technical committees composed of the NSO and national stakeholders have defined a set of indicators for monitoring and for SDGs. They have also identified the need to publish information and to disseminate metadata to all partners. She also presented the Palestine SDG Site, which contains maps available with detailed information for specific areas. As for challenges to monitoring SDG indicators in general, she mentioned limited resources, capacity constraints, duplication or overlap of tools and mechanisms, and insufficient coordination at national and international level.

### Discussion

64. Participants discussed how to use geospatial information as a source of official statistics.

### Recommendations

65. At the end of the workshop, following discussions, the plenary recommended that:
- i. Custodian agencies of SDG indicators use official national data in the Global SDG Indicators Database and, when estimated, get back to the countries for validation, as the data for many of the environmentally-related SDG indicators reviewed by participating countries in the workshop were not consistent with the national data.
  - ii. ESCWA, UNSD, UN Environment, EEA, UNFCCC, UNU, FAO to continue support to countries on areas of work in environment statistics, climate change statistics and geospatial data for SDG and environmental indicators.

- iii. International and regional organisations coordinate their environment data collection exercises from countries to minimise duplication and reporting burden.
- iv. Countries ensure and maintain strong inter-institutional coordination to better streamline production and use of environmental statistics and indicators.
- v. ESCWA, LAS, UN Environment and partners consolidate the environmentally-related SDGs Priority list of the Arab Working Group on Sustainable Development agreed in March 2017 in Amman with the environmentally-related SDGs Priority list of the Implementation Framework for the Environmental Dimension of the 2030 Agenda in the Arab Region adopted in Cairo in September 2017 in line with CAMRE recommendation.
- vi. Countries implement the statistical environmental frameworks, the FDES and the SEEA, and incorporate this work into their national action plans or national strategies for the development of statistics.
- vii. Countries apply the ESSAT (Parts I and II) at the national level in collaboration with all relevant stakeholders.
- viii. Countries make use of the cooperation with EEA on the Shared Environment Information System (SEIS) that helped countries setting-up and strengthening institutional set up to provide data on environment indicators supporting evidence-based decision making.
- ix. ESCWA and other partners provide translation of the FDES and the e-training course on FDES into Arabic and organise training for countries in the region on technical subjects of FDES.
- x. UN Environment invite countries to set up IRIS for national implementation of the Arab Region Indicators, linked to the implementation of the FDES, and provide guidance on using IRIS for indicator-based reporting.
- xi. National statistical offices improve collaboration with the ministry responsible for climate change reporting to UNFCCC to promote the use of common underlying statistics serving multiple reporting requirements under, inter alia, UNFCCC, SDGs and the Sendai Framework.
- xii. Countries participate in the Global Consultation on Climate Change Statistics to be conducted by UNSD in 2019.
- xiii. South-South cooperation be encouraged to share experiences and best practices in environment statistics among similar countries.
- xiv. Countries include environmentally-related questions in censuses/surveys and/or develop specialised environmental surveys and share lessons learnt.

## Reference

<https://unstats.un.org/unsd/envstats/meetings/2018-Arab%20Region/ArabRegion.cshtml>

## Workshop on Environment Statistics and Information for Sustainable Development in the Arab Region

Beirut, Lebanon  
12-16 November 2018  
Agenda (final version)

**Monday, 12 November 2018**

### Opening of the Workshop

**8:00-8:30**      **Registration of participants**

**8:30-10:30**    **Opening and Objectives of the workshop** (chair: ESCWA)

- United Nations Economic and Social Commission for Western Asia (ESCWA)
- United Nations Statistics Division (UNSD)
- United Nations Environment Programme
- European Environment Agency (EEA)
- League of Arab States
- Introduction of participants
- Presentation and adoption of agenda
- Presentation of the objectives (ESCWA)

*10:30-11:00*    *Coffee break - Group Photo*

### Session 1: Framework for the Development of Environment Statistics (FDES 2013)

**11:00-12:30**    **Session 1.1: Status and needs of environment statistics for sustainable development**  
(chair: ESCWA)

- Regional situation (ESCWA)
- International situation (UNSD)
- Discussion

**12:30-13:30**    **Session 1.2: The FDES 2013 and its tools** (chair: ESCWA)

- Conceptual foundation and structure of the FDES (UNSD)
- Basic Set of Environment Statistics (UNSD)
- Manual on the Basic Set of Environment Statistics (UNSD)
- Discussion

*13:30-14:30*    *Lunch break*

**14:30-15:30**    **Session 1.3: Use of the FDES 2013 and links to Frameworks** (chair: Jordan)

- Implementation of the FDES 2013 (UNSD)
- Environment Statistics Self-Assessment Tool (ESSAT) (UNSD)
- From the FDES 2013 to the System of Environmental-Economic Accounting (SEEA) (ESCWA)
- Discussion



- 15:30-16:30 **Session 1.4: Country use of FDES** (chair: Jordan)
- Lebanon
  - Tanzania
  - Discussion and wrap-up

## Tuesday, 13 November 2018

### Session 2: Regional and National Work on Environmental Information

- 8:30-11:00 **Session 2: Regional and National Work on Environmental Information** (chair: UNSD)
- League of Arab states briefing on CAMRE Decisions and the implementation of the sustainable development indicators for the Arab Region (LAS)
  - Data mapping in the Arab region, briefing on the Questionnaire (UN Environment & CEDARE)

11:00-11:30 *Coffee break*

- 11:30-12:30 **Session 2: Regional and National Work on Environmental Information**
- Environment Live Data and Services (UN Environment)
  - The Indicator Reporting Information System (IRIS), UN Environment

### Session 3: Sustainable Development Goals (SDG) Indicators

- 12:30-13:30 **Session 3.1: Review of the environmentally-related SDG Indicators** (chair: Sudan)
- From the FDES 2013 to the SDG Indicators (UNSD)
  - Regional work on SDG Indicators (ESCWA)

13:30-14:30 *Lunch break*

- 14:30-16:00 **Session 3.1: Review of the environmentally-related SDG Indicators**
- Country presentations on progress and experience in developing sustainable development indicators, and the use of indicators in reporting on state of environment and outlooks
  - Countries: Egypt, Iraq, Morocco, Qatar

- 16:00-16:30 **Session 3.2: Use of national data for the environmentally-related SDG Indicators**
- Group work

## Wednesday, 14 November 2018

- 8:30-11:40**    **Session 3.2: Use of national data for the environmentally-related SDG Indicators**
- Group work
  - Discussion (plenary)

*11:40-12:00*    *Coffee break*

### **Session 4: Water Statistics**

- 12:00-13:20**    **Session 4.1: Methodology on water statistics**
- Application of the FDES to water statistics (UNSD)
  - Manual on the Basic Set of Environment Statistics: Water Resources (UNSD)
  - International Recommendations for Water Statistics (IRWS) (ESCWA)
  - Shared Environmental Information System (SEIS): Water Indicator Specification Factsheets (EEA)
- 13:20-13:40**    **Session 4.2: Data on water**
- UNSD/UN Environment Questionnaire on Environment Statistics (water section) (UNSD)

*13:40-14:30*    *Lunch break*

- 14:30-16:30**    **Session 4.2: Data on water** (chair: Palestine)
- ESCWA Region
  - Shared Environmental Information System (SEIS): Regional data on water statistics (EEA)
  - Country examples: Tunisia  
Egypt
- 16:30-17:00**    **Session 4.3: Assessment of the state of water statistics in the region**
- Group work: Use of the ESSAT for Subcomponents on water statistics

## Session 5: Waste Statistics

### 8:30-11:00 Session 5.1: Methodology on waste statistics (chair: ESCWA)

- FDES 2013 Subcomponents 3.3: Generation and Management of Waste and 3.4: Release of Chemical Substances (UNSD)
- Manual on the Basic Set of Environment Statistics: Generation and Management of Waste (UNSD)
- Shared Environmental Information System (SEIS): Waste and Industrial Emissions Indicator Specification Factsheets (EEA)
- Electronic waste statistics (UNU)
- Experience with electronic waste (Jordan)

*11:00-11:30 Coffee break*

### 11:30-12:50 Session 5.2: Data on waste (chair: ESCWA)

- UNSD/UN Environment Questionnaire on Environment Statistics (waste section) (UNSD)
- Shared Environmental Information System (SEIS): Regional data on waste statistics (EEA)
- Country example: Jordan - UBA-Vienna on behalf of MoE/DOS

## Session 6: Climate Change Statistics

### 12:50-13:30 Session 6.1: Current work in climate change statistics and indicators (chair: ESCWA)

- Global set of climate change statistics and indicators (UNSD)

*13:30-14:30 Lunch break*

### 14:30-17:00 Session 6.1: Current work in climate change statistics and indicators

- FAOSTAT statistics for climate change in agriculture, forestry and other land use (FAO)
- Climate change statistics and relation to policies (UNFCCC)
- Climate change project (ESCWA Sustainable Development Division)
- Country example: Jordan

## Friday, 16 November 2018

**8:30-9:30**      **Session 6.1: Current work in climate change statistics and indicators**

- Country example: Tunisia

**9:30-10:10**      **Session 6.2: Round-table discussion on climate change statistics and indicators**

### **Session 7: Geospatial Information System (GIS) and environment statistics**

**10:10-11:20**      **Session 7: GIS and environment statistics (chair: ESCWA)**

- Project Copernicus (EEA)
- ESCWA's work with European Topic Centre - University of Malaga

**11:20-11:45**      *Coffee break*

**11:45-12:50**      **Session 7: GIS and environment statistics**

- Geospatial information and Earth observations: data sources for climate change statistics (FAO)
- Country examples: Kuwait - eMISK;  
Palestine - GeoMOLG, georeferenced information system,  
and pilot Spatial Data infrastructure

### **Closing of Workshop**

**12:50-13:20**      **Recommendations on the way forward**

**13:20-13:30**      **Evaluation**  
**Presentation of certificates**

## Annex 2 – List of participants

### **AUSTRIA**

Ms Sabah Nait  
Senior Expert/leading EEA Framework Contract-  
ENI S  
Environment Agency Austria  
Vienna, Austria  
Tel.: +43664311175  
E-mail: Sabah.Nait@umweltbundesamt.at

### **EGYPT**

Ms Manar Ali  
Statistician  
General Department for Environmental  
Statistics  
Central Agency for Public Mobilization and  
Statistics  
Cairo, Egypt  
Tel.: +1225940840  
E-mail: manar.ali@feps.edu.eg;  
capmas@capmas.gov.eg

Mr Mohamed Eissawi  
Head of Environmental Indicators and Reporting  
Unit  
Ministry of Environment, Egyptian  
Environmental Affairs Agency (EEAA)  
Cairo, Egypt  
Tel.: +10 60006544  
E-mail: mohamed.moatamed@gmail.com

### **IRAQ**

Mr Amer Obaid Saud Saud  
Director of Sustainable Development  
Directorate  
Sustainable Development Department  
Ministry of Environment  
Baghdad, Iraq  
Tel.: +964 7726778636 / +964 7815254565  
E-mail: moen\_iraq@yahoo.com;  
moen.iraq@gmail.com;  
aamer\_swod@yahoo.com

Mr Nawfal Talab Al-Gburi  
Head of Researchers  
Nineveh Statistics Directorate  
Baghdad, Iraq  
Tel.: +96 477082 12141  
E-mail: nofl2000@yahoo.com

### **JORDAN**

Mr Faraj Mohammad Altalib  
Head of State of Environment and Environmental  
Indicators Section  
Monitoring & Assessment Directorate  
Amman, Jordan  
Tel.: +962 775 488872  
E-mail: altalibfaraj@yahoo.com

Ms Sona Hilal Abuzahra  
Manager of Sustainable Development Unit  
Department of Statistics  
Amman, Jordan  
Tel.: +96 2796466495  
E-mail: suna@dos.gov.jo; sona1z@yahoo.co.uk

### **KUWAIT**

Ms Yasmen A A A AlShamali  
Geographic Planner  
Statistics Section  
Environmental Monitoring Information System  
of Kuwait (EMISK)/EPA  
P. O. Box 24395  
Safat, Kuwait  
Tel.: +965 97174622  
E-mail: yasmeen@emisk.org

### **LEBANON**

Mr Ali Khodor Jaber  
Statistics Expert on Environment Monitoring  
and Statistics  
Environmental Monitoring and Statistics  
Ministry of Environment  
Beirut, Lebanon

Tel.: +961 1976555 / 472  
E-mail: a.jaber@moe.gov.lb

Mr Youssef Naddaf  
Head of Environmental Monitoring and  
Statistics  
Environmental Monitoring and Statistics  
Ministry of Environment  
Beirut, Lebanon  
Tel.: +961 1976555 / 489  
E-mail: y.naddaf@moe.gov.lb

Ms Patty Farah  
Head of Information Technology Department  
Service of Planning and Programming  
Directorate General of Environment Ministry of  
Environment  
Beirut, Lebanon  
Tel.: 961-01-976555 ext. 506  
Fax: 961-01-976530  
Mob.: 961 -03 - 482372  
E-mail: P.Farah@moe.gov.lb

Ms Nadine Saliba  
Economist  
National Accounts Department  
Central Administration for Statistics  
Presidency of the Council of Ministers  
Hadath, Lebanon  
Tel.: 961 5 461302  
Mob.: 96170805949  
E-mail: nadine.saliba1@gmail.com

Ms Riwa Hammoud  
Business Specialist  
Central Administration for Statistics  
Presidency of the Council of Ministers  
Hadath, Lebanon  
Tel.: 9615461302  
Mob.: 96170991020  
E-mail: riwahammoud@gmail.com

#### **LIBYA**

Mr Fathallah Saleh Tayib Hamad  
National Agriculture Research Center  
Tripoli, Libya  
Tel.: +218925778403  
E-mail: Fathalla.altalb@gmail.com

Mr Muath Mohammed Elbati  
Director  
Economic Statistics Department  
Bureau of Statistics and Statistics  
Tripoli, Libya  
Tel.: +218913726128  
E-mail: nfo@bsc.ly; Moad\_ma@yahoo.com

Mr Mohamed Abduladim Desuki  
Head of Environment statistics and Member of  
the Environment Committee  
Bureau of Statistics and Census (on behalf of  
EGA)  
Tripoli, Libya  
Tel.: +218 925028911  
E-mail: mahdesoki@yahoo.com

#### **MAURITANIA**

Mr Moulaye Guig  
National Accountant  
Office National de la Statistique  
Nouakchott, Mauritania  
Tel.: +222 46880548  
E-mail: moulaye06@yahoo.fr;  
webmaster@ons.mr

Mr Mohamed El Hor  
Head  
Service of Combating Desertification  
Ministry of Environment and Sustainable  
Development  
Nouakchott, Mauritania  
Tel.: +222 46852292  
E-mail: horahmedali@gmail.com

**MOROCCO**

Mr Begdouri Mokhtar  
Secrétariat D'Etat chargé du Développement  
Durable  
Rabat, Morocco  
Tel.: +6 66 62 98 82  
E-mail: begdourimokhtar@yahoo.fr

Ms Kawtar Salik  
Head  
Infrastructure Service for Air and Maritime  
Transport Activities  
Rabat, Morocco  
Tel.: +212662010053  
E-mail: k.salik@hcp.ma

**OMAN**

Ms Fatma Abdullah Hamdan Al Sadi  
Head of Statistics Section  
Statistics Section  
Ministry of Environment and Climate Affairs  
Muscat, Oman  
Tel.: +968 95778785  
E-mail: fatmaalsadi77@hotmail.com

Mr Mohammed Al Balushi  
Head, Section of Sector Economic  
National Center of Statistics & Information  
Muscat, Oman  
Tel.: +968 9923 4702/+968 2422 3735  
E-mail: mbalushi@ncsi.gov.om

**STATE OF PALESTINE**

Ms Safieh Ibrahim  
Head  
Solid Waste Division  
Palestinian Central Bureau of Statistics  
Ramallah, Palestine  
Tel.: +972 598061479  
E-mail: sbrahim@pcbs.gov.ps

Mr Anwar I. M. Muala  
Director of Sustainable Development  
Department  
Sustainable Development Department  
Environment Quality Authority

Ramallah, Palestine  
Tel.: +972 598061479  
E-mail: Muala-a@hotmail.com

**QATAR**

Mr Metab Ali Al Kubaisi  
Ministry of Municipality and Environment  
Chemical Consultant  
Doha, Qatar  
Tel.: +974 44263433 / 55524388  
E-mail: makubaisi@mme.gov.qa

**SUDAN**

Mr Abdelrahman Alkhalifa  
Head of Planning and Environmental  
Assessment Division  
National Council For Environment Khartoum,  
Sudan  
Tel.: +249 92885855  
E-mail: abdkhalifa78@gmail.com

Ms Shahinaz Fadlelmula  
Statistician  
Central Bureau of Statistics  
Khartoum, Sudan  
Tel.: +249 1241 24098  
E-mail: cooperationunit@gmail.com;  
shahi\_soni2010@yahoo.com

**SYRIAN ARAB REPUBLIC**

Mr Chris Tawfik Zahr  
Directorate of International Cooperation  
Ministry of Local Administration and  
Environment  
Damascus, Syria  
Tel.: +963 992 059539 / +963 11 6347362  
E-mail: chriszahr89@gmail.com

Ms Hasna Alsameh  
Assistant of Economy Director  
Central Bureau of Statistics  
Damascus, Syria  
Tel.: +963 11 3335830  
E-mail: cbs.syr@gmail.com

### **UNITED REPUBLIC OF TANZANIA**

Ms Ruth Minja  
Principal Statistician  
National Bureau of Statistics  
Dodoma, Tanzania  
Tel.: +255 712 680 975  
E-mail: ruth.minja@nbs.go.tz;  
ruth.minja@yahoo.com

### **TUNISIA**

Mr Karim Salah  
Head of Service  
National Institute of Statistics  
Tunis, Tunisia  
Tel.: +216 71 281 123 / +216 55 264 882  
E-mail: salah.karim.06@gmail.com

Ms Samira Nefzi  
Chef de service  
Observatoire Tunisien de l'environnement et du  
développement durable (OTEDD) / Agence  
Nationale de Protection de l'Environnement  
(ANPE)  
Tunis, Tunisia  
Tel.: +216 98 67 62 89  
E-mail: samira.benjad@gmail.com

### **YEMEN**

Mr Ameen Mohammed Qaid Al-Hammadi  
General Manager of Planning and Information  
Statistics Department  
Ministry of Water & Environment  
Sana'a, Yemen  
Tel.: +967 773122473  
E-mail: ameensd2030@gmail.com

Mr Munder Mohammed Ahmad Farhan  
Head  
Environment Statistics Section  
Central Statistical Organization  
Sana'a, Yemen  
Tel.: +967 772 311183  
E-mail: cso1@y.net.ye

### **INTERNATIONAL AND REGIONAL ORGANIZATIONS**

#### **CENTER FOR ENVIRONMENT & DEVELOPMENT FOR THE ARAB REGION & EUROPE – CEDARE**

Mr Ahmed Abdelrehim  
Regional Programme Manager  
CEDARE  
Cairo, Egypt  
Tel.: +202 2451 3921/22/23 Extension: 600  
E-mail: ahrehim@cedare.int

#### **EUROPEAN ENVIRONMENT AGENCY – EEA**

Ms Cécile Roddier-Quefelec  
Project coordinator  
ENI SEIS II South Support Mechanism  
European Environment Agency  
Copenhagen, Denmark  
Tel.: +45 3343 5940  
E-mail: Cecile.Roddier-  
Quefelec@eea.europa.eu

#### **EUROPEAN TOPIC CENTRE/INLAND, COASTAL AND MARINE WATER – ETC/ICM**

Dr. Seifeddine Jomaa  
Scientist  
Department of Aquatic Ecosystem Analysis and  
Management, Helmholtz Centre for  
Environmental Research – UFZ  
European Topic Centre/Inland, coastal and  
marine water (ETC/ICM), Germany  
Tel.: +49 391-810-9135  
E-mail: seifeddine.jomaa@ufz.de

#### **LEAGUE OF ARAB STATES – LAS**

Ms Shahira Wahbi  
Chief, Natural Resources Sustainability &  
Partnerships  
League of Arab States  
Tahrir Square, Cairo, Egypt  
Tel.: +202 2 575 0511  
Mob.: +20100 6688105  
E-mail: shuhryar@yahoo.com;  
envsusdev.dept@las.int;  
shaherah.wahby@las.int



Mr Mustafa Saadi Al-Jabouri  
Director of Arab Group Responsible for  
Environmental Indicators and Sustainable  
Development  
League of Arab States  
Tahrir Square, Cairo, Egypt  
Tel.: +2011 55666698  
E-mail: mustafa.saadi@las.int

**FOOD AND AGRICULTURE ORGANIZATION OF  
THE UNITED NATIONS – FAO**

Mr Francesco Nicola Tubiello  
Senior Statistician  
Statistics Division  
FAO  
Via Terme di Caracalla  
Rome, Italy  
Tel.: (39) 06 57052169  
E-mail: francesco.tubiello@fao.org

**UNITED NATIONS ENVIRONMENT  
PROGRAMME – UN ENVIRONMENT**

Mr Abdelmenam Mohamed  
Regional Programme Officer  
Science-Policy Interface  
West Asia Office/UN Environment  
Manama, Bahrain  
Tel. : (+973) 17812783  
Mob.: (+973) 36465046  
E-mail: abdelmenam.mohamed@unep.org

Mr Erick Litswa  
Programme Assistant Officer  
Programme Manager – Indicator Reporting  
Information System (IRIS)  
Nairobi, Kenya  
E-mail: erick.litswa@unep.org

**UNITED NATIONS FRAMEWORK CONVENTION  
ON CLIMATE CHANGE – UNFCCC**

Mr Vlad Trusca  
Team Leader  
Mitigation, Data and Analysis Programme  
UNFCCC Secretariat

Bonn, Germany  
Tel.: +49 2288151593  
E-mail: vtrusca@unfccc.int

**UNITED NATIONS UNIVERSITY – UNU**

Mr Cornelis Baldé  
Senior Project Officer  
United Nations University  
Bonn, Germany  
Tel.: +31 6-15587843  
E-mail: balde@vie.unu.edu

**UNITED NATIONS ECONOMIC AND SOCIAL  
COMMISSION FOR WESTERN ASIA – ESCWA  
Statistics Division**

Beirut, Lebanon

Juraj Riecan  
Director  
Tel.: +961 1978-301  
Email: riecan@un.org

Ms Wafa Aboul Hosn  
Chief  
Economic Statistics  
Tel.: +961 1978-353  
E-mail: aboulhosn@un.org

Mr Wassim Hammoud  
Statistics Assistant  
Economic Statistics  
Tel.: +961 1978-349  
E-mail: hammoudw@un.org

Mr Ramzi Fanous  
Statistics Assistant  
Economic Statistics  
Phone: +961 1978-709  
E-mail: ramzi.fanous@un.org

Mr Mohamad Skaini  
Research Assistant  
Economic Statistics  
Phone: +961 1978-784  
E-mail: mskaini@hotmail.com

**UNITED NATIONS STATISTICS DIVISION – UNSD**  
**Environment Statistics and Geospatial**  
**Information Branch**  
New York, USA

Ms Reena Shah  
Chief  
Environment Statistics Section  
Tel.: +1 212-963-4586  
E-mail: shahr@un.org

Mr Thiago Neto  
Associate Statistician  
Environment Statistics Section  
Tel.: +1 917-367-5257  
E-mail: netot@un.org