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**Astana, Kazakhstan
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**Europe’s environment — An Assessment of
Assessments: Summary**



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The “Environment for Europe” process: 20 years of pan-European cooperation

Sustainable management of water and water-related ecosystems

Sustainable management of water and greening the economy

**Greening the economy: mainstreaming the environment into
economic development**

**Reporting on the outcomes of the discussion under the
thematic segments**

Europe’s environment — An Assessment of Assessments: Summary

Prepared by the European Environment Agency

Summary

The present document contains the key findings of “Europe’s Environment Assessment of Assessments” (EE-AoA) report prepared by the European Environment Agency under the guidance of the United Nations Economic Commission for Europe Steering Group on Environmental Assessments. This document will be part of the EE-AoA package for the Seventh “Environment for Europe” Ministerial Conference alongside the EE-AoA report.

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Preamble

1. The European Environment Agency (EEA) has produced four pan-European state of “Europe’s Environment” reports in support of the United Nations Economic Commission for Europe (UNECE) “Environment for Europe” process.¹ Over time, and in conjunction with a host of other reports (including the additional four five-yearly state and outlook reports produced by EEA for its geographical area),² this has provided a comprehensive overview of environmental challenges across the region.

2. To complement this, and in support of the 2011 Ministerial Conference, EEA has prepared “Europe’s environment — An Assessment of Assessments” (EE-AoA). This assessment of assessments focuses on the two themes of the Astana Conference: water and related ecosystems, and green economy.

3. An assessment of assessments process reviews and critically analyses the existing assessment landscape across the pan-European region. It thus provides a basis to identify strengths of and gaps in existing assessments and their findings, their regional specificities, and the ways in which we can improve them and make them more policy relevant.

4. The methodological basis for an assessment of assessments has been developed via the United Nations Marine Assessment of Assessments commissioned by the United Nations General Assembly in 2009. The present report demonstrates the robustness and viability of extending an assessment of assessments process to broader thematic and geographic perspectives.

5. For the assessment of assessments presented here almost 1,000 environmental assessment reports were identified and recorded in a dedicated virtual library, with the support of experts across 53 UNECE countries and international organizations. More than half of these publications have been reviewed in detail — focussing on water and related ecosystems, and green economy.³

6. Overall, this exercise highlights that the assessment landscape is crowded, fragmented and diverse across the region. We are producing more reports, more statistics and more indicators today than five years ago. However, the evidence that we use more of what we produce for policy, awareness or action-driven purposes is often missing.

7. This assessment of assessments exercise has resulted in a report, the main findings and recommendations of which are summarized below. The report itself is structured as follows:

- Chapter 1 describes the overall setting for the EE-AoA, including the “landscape” of environmental assessments and their context. Furthermore, it explains the methodology that underpins the assessment of assessments exercise.
- Chapter 2 focuses on water and related ecosystems. This chapter highlights that the number of publications recorded over the past years is impressive. However, description of the status remains predominant, while topics such as water scarcity, extreme events, water ecosystems or water management are addressed only in a limited fashion.
- Chapter 3 focuses on green economy. As green economy is a relatively new topic and conceptual aspects are still to be clarified, there are only very few dedicated

¹ In 1995, 1998, 2003 and 2007.

² In 1995, 1999, 2005 and 2010.

³ Building on the methodology developed and applied in the context of the recent United Nations Marine Assessment of Assessments.

green economy assessments. Nevertheless, a host of sectoral and/or thematic assessments do address issues directly or indirectly related to green economy.

- Chapter 4 presents a cross-cutting overview across and beyond the two themes addressed in the previous chapters. This highlights a number of key observations and questions about environmental assessments across the region covering commonalities, institutional responsibilities, processes and content, and scope for improved environmental governance, as well as applicability and transferability of the results.
- Finally, in Chapter 5, based on the findings across the assessment of assessments — and with the contribution and endorsement of the UNECE Steering Group on Environmental Assessments — a set of recommendations has been developed that can help strengthen the overall suite of environmental assessments in support of the “Environment for Europe” process.

I. Key findings from Chapter 1 — “Setting the scene”

8. At the Sixth “Environment for Europe” Ministerial Conference held in Belgrade in 2007, environmental ministers made a new request for a further pan-European report, asking EEA to consider producing a fifth assessment. At the same time, a reform of the “Environment for Europe” process was called for in order to improve its focus and make it more policy relevant. The reform plan was approved by the UNECE Committee on Environmental Policy in early 2009 and adopted by UNECE at its sixty-third session.

9. During the two years following the Belgrade Conference, reflections about producing a fifth assessment pointed to the need for a reform of that process also. This was already hinted at in the report produced by EEA for the 2007 Belgrade Ministerial Conference on lessons learned to be used for future environmental assessment and reporting work in the region.⁴ This concluded that to improve the pan-European assessment it was necessary to:

- Allow systematic data exchange (every year as a minimum) with countries in Eastern Europe, Caucasus and Central Asia (European Neighbourhood Policy countries, the Russian Federation and Central Asian countries).
- Strengthen the cooperation and partnerships between international organizations in terms of working together to obtain good environmental information, sharing the information available and better coordinating their information demands towards countries.
- Continue activities of the UNECE Working Group on Environmental Monitoring and Assessment on a more regular basis.
- Run open consultations with the countries during the different stages of the report’s preparation.

10. Given the major challenges faced at a pan-European level, two recent developments were taken into consideration for reforming the pan-European environmental assessment process:

⁴ EEA note, “Pan European Assessment Reports on the State of the Environment and associate activities: lessons learned in working with countries in Eastern Europe, Caucasus and Central Asia on the preparation of the Belgrade Report (ECE/CEP/AC.10/2008/3).

(a) The European Union (EU) initiative on a Shared Environment Information System (SEIS) (<http://www.eea.europa.eu/about-us/what/shared-environmental-information-system>); and

(b) The United Nations experience in the preparation of the Marine Assessment of Assessments, launched in 2005 by United Nations General Assembly resolution 60/30 (<http://www.un.org/News/Press/docs/2005/20050320050303.htm>).

11. Considering these developments, an agreement was reached by the UNECE Committee on Environmental Policy in 2009 to carry out an assessment of existing European environmental assessments, instead of developing a new fifth pan-European environmental assessment. This exercise, named “Europe’s Environment: An Assessment of Assessments”, was carried out by EEA under the guidance of a steering group to assist the preparation of the report for the Astana Conference.

12. The agreement on developing the EE-AoA process was recognized as an important first step in reforming the future of European environmental assessments. The main purpose was “to provide a critical review and analysis of existing environmental assessments that are of relevance to the region and the two selected topics for the Astana Conference, to identify gaps that need to be covered and priorities that should be addressed for conducting assessments to keep the pan-European environment under continuous review” (ECE/EX/2010/L.6, annex I, para.1).

13. While a first major outcome of this was to produce a report for the Astana Ministerial Conference, the process was seen to be a longer-term activity with the potential to continue after the Conference to cover other topics and provide the basis for developing a sustainable assessment process across all environmental topics, including, inter alia, the regular updating and sharing of relevant information.

14. Thus, the EE-AoA is not a new assessment of environmental issues, but an analysis and assessment of the methods and underpinning information tied to the policy debate to support improved outcomes as reflected in the recent assessments available across the pan-European region. The two themes of the Astana Conference, water and related ecosystems and green economy, served as the basis for production of the EE-AoA.

15. Building on available Assessment of Assessments (AoA) methodology, the present assessment also introduces a number of novelties which can be summarized as follows:

(a) *Enhanced ownership through a participatory process.* Individual countries through dedicated networks had a lead role in the EE-AoA process by providing the information input into the process and by being involved in the critical evaluation of the information. Besides countries, United Nations subsidiary bodies and programmes (UNECE, the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), EEA and other international organizations such as the Organization for Economic Cooperation and Development (OECD) actively contributed to the process, making it a concerted effort at the pan-European level and at the regional level, the latter especially through the concrete contribution of the Regional Environmental Centres (RECs) in the preparation of the four subregional AoA reports under EEA coordination;

(b) *A modular and flexible approach at various scales.* The EE-AoA process may be applied at the national level and upwards, through an aggregation procedure that leads to “regional assessments”. To further this objective, four regional AoA modules having the same thematic coverage were developed in parallel covering the countries in Eastern Europe, Caucasus and Central Asia and the Russian Federation. Similarly, the AoA process has the potential to be disaggregated from the national level downwards to the subnational/local level, an ability that may prove to be important for large countries such as the Russian Federation. Further, this modularity makes the approach flexible and replicable;

(c) *A specific and challenging thematic focus.* The EE-AoA dealt with two complex and totally different themes. The main challenge was to understand and capture their complexity at both national and regional levels through the use of common tools, necessarily kept as simple as possible to be effectively used by a wide range of contributors;

(d) *Consistency ensured through guidelines and capacity-building.* As countries and international organizations were invited to nominate their representatives to contribute to the assessment process, the production of guidelines to ensure a common understanding of the process and of the objectives to be tackled became imperative. Furthermore, training and assistance was provided by EEA in order to ensure the consistency and coherence of the process and also to develop capacities for further assessments;

(e) *Interactive information technology platform for production and dissemination of the results.* The high number of stakeholders involved in the assessment process made it essential to rely on a common platform for both the uploading and sharing of information. The EE-AoA portal (<http://aoa.ew.eea.europa.eu/>) acts as a repository of the knowledge and a processing/analytical instrument allowing the generation of summary overviews and statistics for the public at large;

(f) *Developing and enriching the AoA methodology and toolbox.* All the tools used to implement the EE-AoA process are available in the EE-AoA portal for further use including their development path and description. These tools can also be considered as outcomes and products of the process.

II. Key findings from Chapter 2 — “Water and related ecosystems”

16. The first key theme of the Astana Ministerial Conference is “Sustainable management of water and water-related ecosystems”.

17. Water issues are serious and worsening in many parts of Europe, making water management complex. While water is abundant in much of Europe, large areas are affected by water scarcity and droughts — particularly in Southern Europe and Central Asia with their severe lack of, and high demand for, water. Europe is also suffering from floods, with an increasing number of deaths, displacement of people and economic losses. Climate change is projected to exacerbate this, with more frequent and severe droughts or floods projected for many parts of Europe.

18. An estimated 120 million people in the pan-European region do not have access to safe drinking water and adequate sanitation, making them more vulnerable to serious water-related diseases. Despite progress over the past 15 years, especially those living in rural and remote areas in Eastern Europe, the Caucasus and Central Asia remain vulnerable. Water quality has improved in many parts of Europe over the past 20 years, the result of better regulation and enforcement together with investment in wastewater treatment plants.

19. At both the global and European scales a multitude of inland water assessments is available, with, in many ways, Europe leading the way in producing water assessments. This is partly driven by the 15-year tradition of EEA water assessments as part of the State of the Environment (SoE) reports, supplemented with water assessment activities by OECD, UNECE and the World Health Organization and water statistics produced by Eurostat and OECD. The EU water policies, including their reporting obligations, also add relevant assessments on the status and pressures affecting EU waters. Finally, the establishment of Transboundary Water Commissions that produce assessments for the waters under their mandate helped in developing a solid knowledge base on water assessments.

20. The information on water produced by European countries has markedly increased over the past 20 years, well documented by the information presented in the national freshwater assessments. For instance, the AoA review template contains 319 SoE and water reports from 48 countries covering the period 2005–2010. The increase in the production and dissemination of such reports is due to an increased understanding that environmental monitoring and information systems are crucial for developing environmental policy.

21. In many countries, a variety of national assessments that, inter alia, relate to water and water-related ecosystems are produced in the form of SoE reports, environmental statistics, environmental performance reviews, state of water assessments, indicators, yearbooks and a range of thematic water reports.

22. Much attention has been paid to making the presentation of information inviting to the reader; the use of diagrams, graphs, charts and maps within the reports has much improved over the years. Moreover, the increased use of indicators has resulted in more targeted and compact information.

23. Nevertheless, producing factual, timely and easy-to-understand SoE assessments remains a challenge for several countries. In many cases the assessments are largely descriptive, being a compilation of different water issues with a strong focus on status and pressures. Some improvements over the years are visible. The information presented in assessments has changed from presenting the status of a few basic parameters on a limited number of locations to presenting status, sources, effects and policy measures on a much wider range of parameters, making them much more integrated. However, in most cases only limited information on policy performance, water management, implementation of measures, new challenges, etc., is provided, although this information is imperative to make the information useful for decision makers.

24. The timeliness of relevant water information has also improved over the last ten years; often the data and information in the water assessments are only a few years old. However, for some countries part of the assessments are based on old data, in some cases more than ten years old. Regional and international assessments often have difficulty in collecting timely information.

25. Depending on the country, some freshwater environmental issues are more important than others and therefore the focus of the assessment varies between the countries. While all countries report about general water quantity and water quality issues, little reporting was found about newer issues including hazardous substances, impacts of water scarcity and drought, or water management.

26. Many water and water management issues that are important at the national level are related to similar issues that are important at the European level. Although the country information would be valuable for European water assessments to support and better document the analysis, the current data and information flows from country to European level are not optimal and not always based on the information and knowledge available nationally. To improve this situation, a consistent common approach and close cooperation between international organizations and countries is needed.

Main findings of the water assessments

27. The analysis of SoE and water assessments has revealed a multitude and variety of products, containing a wealth of information. At the same time, the analysis also revealed that much information is lacking, and the policy relevance of the information remains weak. This is not only true of national assessments but also of regional ones.

28. In general, the regular assessments help to improve the quality of the data and information. An important flaw in many of the reports analysed is that they are generally rich in statistical data but are of limited use in the state-of-water assessment and in the

policy-making process. To improve this situation, the analytic part of the assessments has to be improved, making the assessments more relevant in the policy-making process.

29. Assessments are currently too restricted to environmental status and trends and have to focus more on measures and management. Indicators help in simplifying the communication of various environmental issues to policy-makers and the general public. Frameworks (e.g., the Driving Forces-Pressures-State-Impacts-Responses (DPSIR) framework) help in making assessments comparable between issues and countries. To improve future assessments it is recommended to work towards more integrated assessments. These provide information about the status and trends, but also provide future outlooks based on policy directions.

30. More and more, countries are opening up their databases to public access and make water information readily available on the Web for reasons of accountability and trustworthiness. Where countries are providing information through web-based databases, the procedure of the international programmes collecting information through questionnaires becomes obsolete. The SEIS principles enable a situation in which national and regional assessments can be developed with up-to-date information. This exchange should be based on the SEIS principle that the data and information is managed as close as possible to its source.

III. Key findings from Chapter 3 — “Green Economy”

31. The second theme of the Astana Ministerial Conference is “Greening the economy: mainstreaming the environment into economic development”. The term green economy is not consistently defined as it is still an emerging concept. The most widely used and authoritative green economy definition comes from UNEP: “[A] green economy [is] one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.”⁵

32. The concept of green economy, in the context of poverty eradication and sustainable development, will attract further attention as it will be one of two key themes at the United Nations Conference on Sustainable Development to be held in Rio in 2012 (Rio 2012).

33. Green economy can refer to sectors (e.g., energy), topics (e.g., pollution), principles (e.g., polluter pays) or policies (e.g., economic instruments). It can also describe an underpinning strategy, such as the mainstreaming of environmental policies or a supportive economic structure.

34. Resource efficiency is a closely related concept, since the transition to a green economy depends on meeting the twin challenges of maintaining the structure and functions of ecosystems (ecosystem resilience) and finding ways to cut resource use in production and consumption activities and their environmental impacts (resource efficiency).

35. Whatever the underlying approach of green economy is, it stresses the importance of integrating economic and environmental policies in a way that highlights the opportunities for new sources of economic growth while avoiding unsustainable pressure on the quality and quantity of the natural assets. This involves a mixture of measures ranging from economic instruments such as taxes, subsidies and trading schemes, through regulatory policies, including the setting of standards, to non-economic measures such as voluntary approaches and information provision.

⁵ UNEP (2011), *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* (advance copy available from <http://www.unep.org/greeneconomy>).

36. Although no comprehensive assessments covering the priority themes of green economy and resource efficiency as applied in the EE-AoA exist, broad strategies for greening the economy (a dynamic rather than static process) or specific theme-based assessments have been undertaken at national, regional and global levels by a range of public and private sector organizations.

37. Most assessments cover well-established themes, such as energy, industry and governance (green economy), and use of natural capital (resource efficiency). However, far fewer cover other important (often newer) aspects of green economy, including futures and scenarios, environmental impact assessment/strategic impact assessment (EIA/SIA), corporate social responsibility (CSR), life-cycle analysis (LCA), and finance, trade and tourism.

38. Assessments are overwhelmingly focused on the state of different priorities, and this is particularly the case for the more well-established or traditional themes. Other aspects of the DPSIR framework (drivers, pressures, state, impacts and responses) are discussed much less frequently.

39. Countries worst affected by the global recession emphasize green jobs and growth in their recent assessments. Assessments covering the energy sector are widespread and focus on renewable energies and energy efficiency. In addition countries dependent on primary and extractive sectors also tend to emphasize natural resource efficiency.

40. Effective assessments require a green economy strategy to be at the very heart of the national or regional decision-making process. Currently, assessments address policy questions in specific but generally narrow areas, for example, related to an increased proportion of renewable energy, to green public procurement or to green jobs. It is less clear how assessments, even those of the more strategic variety, are being used to drive economic policy in general. If the green economy is about transforming the way a nation produces and consumes, trades and is governed, then assessments should be at the very heart of economic and political strategies, rather than at the fringes.

Main findings of green economy related assessments

41. Although there are no fully integrated green economy assessments in the pan-European region, the following findings can be drawn from the mainly theme-based assessments:

- A framework to promote a green economy is lacking. Currently, assessments are largely driven from the bottom up and do not generally form part of a clear “top-down” framework.
- Green economy is not defined clearly and consistently. It is still a novel concept and refers to a mix of existing and emerging sectors, topics, principles and concepts. Most assessments focus on one or more of these topics, but very few take a more integrated approach, encompassing a range of concepts or the whole of the DPSIR framework.
- There is often no clear link between an assessment and the decision-making process, and many assessments do not articulate objectives or key questions to address, following rather than informing policy-making.
- Institutional arrangements are unclear, with a wide range of organizations and ministries involved, but limited coordination either between or within regions and countries, or between the public and private sectors. This leads to some overlap in assessments and reduces effectiveness in policy-making.
- The objectives of the assessments are not always clearly defined. This contributes to a lack of focus in many assessments. There are also relatively few ex post

assessments that evaluate policy or consider how assessments have led to adoption of policies.

- Assessments are numerous, but often large and unfocused, producing a mosaic of fragmented, overlapping and divergent assessments. In addition, the assessment universe is constantly expanding, but in an uncontrolled way and there is currently a lack of consistency in and comparability of the basis, format and frequency of data being collected and used.
- There are clear regional differences in assessments, with some themes (e.g., sustainable consumption and production (SCP), innovation) concentrated in EEA countries and others (e.g., governance, energy) most prevalent in Eastern Europe, Caucasus and Central Asia and the Russian Federation.

42. A large number of assessments also identified concerns and emerging needs including:

- Countries and organizations tend to be selective in the themes considered. This flexibility may “water down” the green economy concept to the point that it becomes almost meaningless.
- Institutional complexity associated with undertaking assessments leads to poor coordination, overlapping competencies and lack of effective change.
- Progress towards a green economy is hampered by insufficient financing, a limited use of economic instruments or political emphasis on other issues.
- There are information gaps at both spatial and temporal levels, partly due to the lack of monitoring systems, inconsistent data and inadequate data flow mechanisms.

IV. Key findings from Chapter 4 — “Cross-thematic analysis”

43. A cross-cutting overview of the EE-AoA results around the two key themes of the Astana Ministerial Conference leads to a number of key observations including commonalities and differences in a number of areas.

44. Clearly, there is a margin of uncertainty arising from the methodology’s application, given the impossibility of identifying and capturing in the process everything available at all scales and for all related themes and of reviewing all of these consistently. With these limitations recognized, the assessment and conclusions presented here are believed to be robust and pertinent for the objectives of this exercise.

Assessment of Assessments relevance for other themes

45. The characteristics of the problems faced by water and green economy assessments are not topic specific; rather, they depend on the underlying institutional make-up and approaches in countries and organizations across the MDIAK reporting chain.⁶ Similarly, common challenges are shared by different geographical regions.

⁶ The M-D-I-A-K reporting chain helps to specify and distinguish between the different types of information needed:

M: What Monitoring is needed to deliver the required data?

D: What Data is needed?

I: What Indicators are needed?

A: What Assessments are needed?

K: What do we need to Know?

46. The EE-AoA has confirmed the validity of the AoA approach to very diverse themes, beyond the marine environment, underscoring its potential for being applied more broadly to address other environmental priorities. Additionally, the results are relevant to the international environmental governance debate globally, such as discussed at the 2011 UNEP Governing Council on the world environment situation and UNEP-Live.⁷

Looking across scales offers interesting insights

47. Water assessments are found at all geographical and institutional levels, while the green economy, as a theme still under conceptual debate, is mostly on the agenda of international organizations (UNEP, OECD, EU, UNECE, the Economic and Social Commission for Asia and the Pacific (ESCAP)), with international players at the forefront of publishing reports on the topic.

48. Water reporting is primarily a national obligation and is mostly carried out by environment ministries, the water department in these ministries, or environment (protection) agencies. In contrast, and due to the breadth of interpretation of the green economy, a wide range of actors and institutions are involved in green economy processes, often with a different role, from implementation to the actual production and/or coordination of assessments.

Accessibility of information improving

49. Improved accessibility is driven by more information and reports being available online. Nevertheless, the production of hard copies is still significant. With regard to water, several of the environment ministries and their collaborating institutions have websites providing information on water resources, water pollution and the state of water, usually in the form of downloadable publications and increasingly in the form of access to (aggregated) data and near real-time monitoring. On the other hand, the cross-cutting institutional nature of the green economy implies that there are very few, if any, points of convergence (websites or portals) where all related information can be reached and integrated.

Multitude of assessments but limited relevance

50. There is evidence of a multitude of assessment documents available for the two priority themes, yet policy relevance and use remains limited with many reports commissioned and produced without a clear policy demand or target focus.

51. As the number of issues related to water management, state, trends, pressure and policies grows, so does the amount and type of information that needs to be compiled and aggregated, with some 50 to 100 assessment reports being produced annually across Europe at different levels. Despite this number, the assessment of water-related ecosystems is still weak in many countries and vulnerability, ecosystem services and restoration is not much discussed. For the green economy, a multitude of documents exist which address the various individual priority areas, broadly grouped under the two categories of resource efficiency and aspects of environmental sectoral integration. With only a few exceptions at the international level, there appears to be no national assessment which brings together in an integrated and coherent fashion all the elements of the green economy, by any definition of that term.

⁷ See, e.g.: "Draft decision approved by the drafting group: World environment situation" (UNEP/GC.26/CW/L.4/Add.2).

Differing demands hamper integrated use of information and policy influence

52. Among the multitude of assessments available for water, redundant collection of information and incomparable results are sometimes noted; further, integrated assessments, though increasing, are not the norm and the focus tends to be largely on description rather than on analysis. Many assessments appear to be of limited use in relation to policy-making due to their focus on the “state” of the environment rather than on drivers and responses.

53. Assessments related to the green economy often do not clearly articulate the objectives and scope, or the key questions to be answered, and seem to follow rather than inform policy-making; although this theme would offer ideal opportunities for integrated assessment, this is only starting to emerge. Also, for the green economy, descriptions focus on the “state” of the different priority sub-topics, in particular for the more well-established or traditional areas.

Several information contrasts are apparent

54. In some 90 per cent of cases, water assessments are based on the use of indicators, commonly produced according to standard/agreed methodologies, also at the international level; nevertheless, the data is not always updated and data gaps are frequently acknowledged in the assessments. An information system was available in only about a fifth of the assessments to support data management, data sharing and/or data exchange. Water assessments often fit within existing legal frameworks, dedicated policies, strategies and targets.

55. Green economy experiences a more fragmented situation in terms of data consistency, frequency and comprehensiveness, as well as with regard to existing frameworks and corresponding targets. Information and knowledge gaps also exist in a range of areas such as, for example, the understanding of the relationship between ecosystems and economic systems. However, green economy assessments have a relatively higher reliance on forward-looking modelling than water, probably reflecting its conceptual stage of development.

Integrated assessment is not a sum of the parts

56. Over time, water assessments have widened their scope as scientific understanding, data availability and policy interest have interacted; an integrated assessment process, though still limited generally, has allowed the underlying complexity of water issues to be more fully evaluated helping to frame, and not follow, the policy debate. In contrast, green economy is early in the policy cycle, but is already broad conceptually; integration, in this case, could thus mean simplifying the concept and breaking it down into its component parts to allow the policy process to tackle it practically and for the concept to be more easily assessed.

Making the Shared Environmental Information System work for assessments

57. There is evidence that SEIS would support the improved efficiency and effectiveness of environmental assessments, in particular, with regard to the following dimensions: (a) the generation of compatible content across themes and geographical scales; (b) the diffusion of comparable methods for measuring progress towards a green economy and its many natural resource components; (c) the deployment of various technologies as the information infrastructure to underpin information gathering, use and assessment processes; (d) the organization of and easy access to relevant knowledge, including assessments, between institutions and the public (implementation of the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention)); and (e) the improved coherence in and use of assessment findings by giving better access to existing results and assessment approaches and by strengthening the web of relationships among stakeholders.

V. Chapter 5 — Recommendations

58. Based on a cross-cutting overview of the results of the EE-AoA, EEA, in consultation with the UNECE Committee on Environmental Policy, has identified 14 key recommendations for improving how environmental assessments at the country, subregional, pan-European and global levels are organized.

59. The recommendations provide a framework within which the pan-European environment can be kept under review in a more efficient and effective manner in support of relevant policy processes.

60. The recommendations are grouped into three blocks covering: (A) enhancing the knowledge base; (B) improving assessment tools and processes to underpin the knowledge base; and (C) Europe's participation in global environmental knowledge and assessments.

A. Enhancing the Knowledge Base

Recommendation 1

Improve the linkage and use of assessments in the policy process

61. Future assessments should be explicitly commissioned by policy-makers, specifying the policy needs at different stages of the policy cycle. By translating these policy needs into relevant policy objectives, and relevant indicators, assessments can then be targeted to provide more pertinent input to the policy debate. For water and the green economy, more investment in policy performance and effectiveness indicators and analysis is needed. The exchange of established practice examples to demonstrate the cost-efficient use and benefits of different approaches for tackling key issues should be promoted.

Recommendation 2

Develop a Regular Process of environmental assessment and a shared environmental information system across the pan-European region

62. Overall, the EE-AoA demonstrates the need for a system of assessments designed to address multiple needs and policy processes from national to pan-European levels, as well as globally, and one which is closely interlinked with and served by a shared environmental information system for the whole of Europe.

63. Consequently, a Regular Process of environmental assessments should be established with countries, organisations and other stakeholders, to keep the pan-European environment under review, and promote the development of a shared environment information system across the pan-European region. This should be supported by the necessary capacity-building and by further assessments of assessments as required in different fields.

Recommendation 3

Commission new assessments as part of a new Regular Process

64. In future, the commissioning of new environmental assessments should address multiple policy needs in order to improve the balance between their efficiency of production and the effectiveness of their use. Thus, the Ministerial Conference in Astana is invited to consider putting in place a process of ongoing assessments that serve multiple purposes, underpinned by SEIS principles and practices, rather than call for a new pan-European assessment report for the next "Environment for Europe" conference.

65. Such a Regular Process should be based on the development of a suite of coordinated products from subregional to pan-European levels, with a synchronicity and timing suitable to maximizing their use in multiple policy processes. At country level a

basic requirement of the Regular Process will be national state of the environment reports in accordance with the Aarhus Convention.

Recommendation 4

Promote national state of the environment reports

66. SoE reports were shown by the EE-AoA to promote an integrated and comprehensive overview of environmental issues and sectors. As such, SoEs play a vital role in the policy process, by delivering a regular assessment of the overall environmental status at the national level as underlined by the Aarhus Convention, including the status of water and many aspects of the green economy.

67. To these ends, the further development by countries of regular SoE reports with components covering the sub-topics of the green economy and of water and related ecosystems should be promoted. This should become a basic requirement for any Regular Process for keeping Europe's environment under continuous review, supported with relevant capacity-building.

Recommendation 5

Promote national/regional-level green economy assessments

68. Water assessments are found at many geographical and institutional levels, reflecting the (relatively) well-balanced attention to policy implementation and developments in this area. In contrast, the green economy as a theme is still under conceptual debate and is mostly on the agenda of international organizations (EU, OECD, UNECE, ESCAP, UNEP, etc.), with international players at the forefront of publishing reports on the topic.

69. Consequently, to even out this imbalance and support green economy decision-making down to the country level, there is a need to promote national-level integrated green economy assessments. These should combine international approaches to indicators for consistency and comparability, while at the same time recognizing diversity in the focus of sectoral interests within and between countries. Such assessments should accommodate policy demands that focus on managing shared natural resources (international seas, rivers, mountain ranges, etc.).

B. Improving assessment tools and processes to underpin the Knowledge Base

Recommendation 6

Strengthen integrated assessment

70. To support the policy process across the policy cycle, assessments of broad systemic issues, such as water and ecosystems and the green economy, require integrated assessments which cover the whole DPSIR framework and are more analytical in nature. To complement the many descriptive reports available, and in line with the tendency of water assessments over the past years to become more integrated, the development of integrated green economy assessments should be promoted, as opposed to assessments of component parts of the green economy. A common conceptual understanding of the green economy is needed to support this (see Recommendation 8). Priority should be given to capacity-building in the field of integrated assessment itself, with the aim of mainstreaming these practices into regular assessments and SoE reporting.

Recommendation 7**Promote and strengthen forward-looking activities**

71. There is inadequate use of scenario and modelling tools in the assessments, limiting the forward-looking component of reporting and policy support. This needs to be improved since forward-looking information is vital for dealing with the challenges of global developments, multiple systemic challenges, crisis prevention and robust and flexible environmental management responses to uncertainties and risks. A spectrum of possible tools and outputs is available, ranging from the use of driving forces and megatrends to quantitative modelling and qualitative scenario building.

72. Work is required in all the following areas: capacity-building; exchange of information and practices; training in the development and use of forward-looking techniques; and understanding of their added value for policy-makers. The development of forward-looking components of SEIS should be a part of this to maximize the benefits and use of forward-looking components in environmental assessments, including regular SoE reports.

Recommendation 8**Improve understanding of the underlying concepts**

73. For consistent assessments across scales to function effectively, a clear understanding is needed of the policy objectives, as well as their translation into common indicators that allow assessment practitioners to operate coherently — though not in a straitjacket.

74. For the green economy such agreed objectives and common indicators do not yet exist. There is a need to develop a common operational understanding of the concept of green economy and its critical elements. Based on this, key policy objectives should be identified from the different stakeholders and then translated into indicators to underpin the development of more consistent and relevant green economy assessments. A tool-kit and guidelines for capacity-building and implementation should be developed.

75. Compared with green economy, water is a traditional sector of environmental concern and management whose components are rather clearly defined and mostly agreed upon, often within well-established regulatory frameworks. For water and water-related ecosystems a clear categorization of the scope of issues to be dealt with in the assessment process is needed because of the relatively new and complex ecosystem perspective. Future assessments could also usefully include assessing the contribution of water and related ecosystems to the green economy and vice versa.

Recommendation 9**Clarify roles of different organizations in green economy assessments**

76. For the main part, water reporting is carried out by a relatively limited number of institutions, including hydrological services, water, agriculture and environment ministries and statistical agencies. In contrast, a wide range of actors are involved in reporting on the green economy and with it a diversity of institutions. For example, environment, economic, finance, energy, industry and trade ministries all have a legitimate interest in such assessments.

77. This reflects the breadth of interpretation of the green economy at the national and international levels, and the fact that the concept encompasses multiple sectors. Many different and possibly clashing priorities are involved. The multiple actors have different roles: some may be responsible for implementation within the individual sectors and others for the actual production and/or coordination of assessments. Other relevant players are international organizations and civil society, including non-governmental organizations, the

private sector and trade-related stakeholders, as well as research and think-tanks and international organizations.

78. Consequently, the leadership roles and responsibilities at national and international levels for carrying out green economy assessments should be clarified with inter-institutional agreements to support their implementation.

Recommendation 10

Close gaps in knowledge, reduce duplication of effort and increase the use of the rich diversity of environmental assessments in Europe

79. While there is a quantitative richness of reports, there remain gaps and duplications. Given the number of assessments being produced in the fields of water and related ecosystems and resource efficiency and the green economy, and being mindful of the resources being invested by organizations, countries, scientists and experts, it is important that requests for new assessments take into consideration existing and other relevant assessments. Consequently, those involved in these assessments should actively seek to coordinate, share and link their information and results with others.

80. The interconnectedness of assessments at different geographical levels as well as between themes needs to be improved, and the responsibilities of data and information providers better defined. Common indicators offer appropriate “scaffolding” for achieving these goals.

81. The overarching objective of this recommendation is to improve the quality and consistency of results, close gaps in knowledge and increase the multiple uses of assessments and of the underpinning information. To achieve this, there is a need to identify and map the demand for new assessments in the fields of water and the green economy in order to streamline the policy process and agree common indicators to support strategic planning.

Recommendation 11

Address information shortcomings

82. There are some significant gaps in information concerning water and related ecosystems and the green economy, such as defining and measuring natural capital and ecosystem services, resource efficiency, the economics of resources, including water pricing, the relationship between ecosystems, economic systems and social cohesion and policy performance. Since the green economy is viewed differently by countries depending on specific political priorities, there are variations in information, needs and shortcomings, on, for example, economic sectors and themes, e.g., mobility/access and social well-being.

83. The development of common indicators, which are harmonized at a minimum across the pan-European region and which address the key policy objectives in the relevant fields, can help address gaps as well as prioritize the underpinning priority statistical information and data flows to support these indicators and the related institutional responsibilities.

84. Moreover, there is a need to promote regular updating to improve timeliness of data flows and automate this where possible, identify common needs between geographical levels and devise ways to interconnect assessment needs at different levels through common indicators.

Recommendation 12

Improve the accessibility of environmental assessments and related data and information

85. By making reports available online, accessibility by the general public to assessments is currently satisfactory, although the production of paper-only reports is still significant. With regard to water, environment ministries and other public authorities have

websites that provide information on water resources, water pollution and the state of water, usually in the form of downloadable publications and increasingly in the form of access to (aggregated) data and near real-time monitoring information. For the green economy, even if the information is available online, there are very few, if any, points of convergence (websites or portals) where all related information can be reached and integrated.

86. Consequently, online publication of assessments and their underlying information and data should be promoted. Inter-institutional agreements should also be developed to share and connect relevant data, information and assessments to facilitate the development of integrated green economy assessments and to allow more timely access. Where available, the link with relevant near real-time information should be developed.

Recommendation 13

Apply the Europe's Environment Assessment of Assessments findings to other environmental themes and issues

87. The water and green economy priorities covered by the EE-AoA do not cover all environmental issues. However, the breadth of their scope and preliminary analysis of the virtual library lead to the conclusion that the often crowded and uneven landscape of disconnected environmental assessments observed is a common problem across all issues. Furthermore, the characteristics of the problems faced are not specific to the topics themselves, but to the underlying institutional arrangements and approaches in countries and organizations across the reporting chain. There is therefore a significant opportunity for improving knowledge support to the policy process across the environmental domain, since improvements in one area, such as water, have the potential to spill over and affect others.

C. Europe's participation in global environmental knowledge and assessments

Recommendation 14

Transfer findings to other areas, regions and globally through outreach and communication

88. The current diagnosis resonates with environmental assessment challenges in other geographical regions. Also, globally, the results have a strong relevance to the international environmental governance debate coming up at Rio 2012 and as already discussed at the 2011 UNEP Governing Council on the world environment situation and on UNEP-Live.

89. Consequently, there is a need to promote the translation and interpretation of these results into other geographical regions, and also globally. Targeting UNEP and Rio 2012 discussions on this diagnosis appear to be the most promising short-term opportunities.
