



Economic and Social Council

Distr.: General
12 February 2013

Original: English

Economic Commission for Europe

Sixty-fifth session

Geneva, 9–11 April 2013

Item 2(a) of the provisional agenda

Follow-up to Rio+20 and post-2015 development agenda

The future of sustainability: from transition to transformation

Note by the secretariat*

I. Mandate

1. The rules of procedure of the Economic Commission for Europe (ECE) require basic documents to be prepared in relation to the agenda items, as appropriate. This document is being submitted to support the discussion on the follow-up to the Rio+20 Conference and the post-2015 development agenda under item 2 (a) of the High-level segment.

II. Introduction

2. The United Nations Conference on Sustainable Development (UNCSD, Rio+20) took place in Rio de Janeiro, Brazil, from 20 to 22 June 2012. It resulted in a focused political outcome document (“The Future We Want”, A/RES/66/288) that puts considerable emphasis on the importance of regional action in the implementation of sustainable development. It stipulates that the United Nations Regional Commissions have a significant role to play in promoting a balanced integration of the economic, social and environmental dimensions of sustainable development in their respective regions. Regional Commissions have specifically been given the mandate to strengthen their work in a number of cross-cutting areas, like capacity-building, development and implementation of regional agreements, and supporting the exchange of information, good practices and lessons learnt on sustainable development (para. 100).

3. In Rio, Member States also decided to launch a process to develop a set of Sustainable Development Goals (SDGs), which will build upon the Millennium Development Goals and converge with the post-2015 development agenda. While these goals and targets need to be developed under the auspices of the United Nations system, the

* This document has been submitted after the official documentation deadline due to the need to await the completion of the intergovernmental process of the Executive Committee.

outcome document points to a number of sectors and issues that are crucial for advancing sustainable development and in which activities should be continued and further strengthened without any delay. At the same time, these sectors and issues are expected to constitute the framework for the goals. Energy, water, transport, agriculture, forests and biodiversity, sustainable consumption and production, chemicals and waste, gender equality, public participation, to name just a few, are among them.

4. The Conference also adopted guidelines on green economy policies.
5. The Secretary-General in his five-year action agenda identifies progress on sustainable development as a top priority, with energy, food and nutrition, water and transport as key building blocks in a broader post-2015 sustainable development framework. Universal access to modern energy services, doubling the rate of improvement in energy efficiency and the share of renewables in the global energy mix by 2030 are ambitious goals of his Sustainable Energy for All initiative.
6. ECE has been working actively for a number of years in the field of sustainable development providing the services requested by its member States at the interface of the economic, environmental and social pillars of sustainable development, with particular focus on the elaboration of a regulatory framework and its implementation, and on general monitoring, review and measurement of performance and policy advice.
7. ECE also has expertise and experience to offer in many of the sectors that have been identified as crucial for the transition to sustainable development both at the Rio+20 Conference and in the Secretary-General's five-year action agenda: greening the economy, sustainable energy, sustainable transport, water, sustainable forest management, gender, statistics, sustainable cities and food security. As time would not allow to discuss ECE's contribution to the Rio+20 follow-up in each of these sectors under a single agenda item, the following were selected for discussion under agenda item 2 (a): greening the economy, sustainable energy, sustainable cities, and food security through trade. Some other areas will be addressed in the context of agenda items 2 (b) and 3, respectively.
8. The Commission may wish to discuss how in these areas ECE can best contribute to the follow-up of the Rio+20 Conference and the Secretary-General's five-year action agenda, including through enhancing its work across sectors and subprogrammes.

III. ECE's contribution to Rio+20 follow-up in specific areas

A. Greening the economy: improving resource efficiency, strengthening the knowledge base and integrating sectoral policies

9. Green economy in the context of sustainable development and poverty eradication was one of the key themes of the UNCSD. Despite different understanding of the concept of 'green economy', the Conference recognized the need to strengthen efforts for the transition to a green economy worldwide. One year earlier, the 'Environment for Europe' Ministerial Conference in Astana, organized by ECE, had been the first initiative at the pan-European level to start discussions on what could be possible actions, both individual and joint ones, to enable the region's transition to a green economy.

10. A major objective of the green economy is to stimulate investments in and across various economic sectors in a way that economies use natural capital and ecosystems more efficiently. This should particularly be the case when there is a risk of depletion or degradation of the natural capital or ecosystems, and limits should be introduced as protection measures. Efficiency should ensure that natural resources and pollution

associated with the production and use of goods and services are reduced over the full life cycle of products.

11. What are “green investments”? These are, for example, investments into innovation, research and development on improving resource efficiency and clean technologies, into deployment of existing resource efficient and clean technologies, into training and reskilling for enhanced use of new technologies, as well as investments into greening infrastructure across sectors.

12. To stimulate the green investments and subsequently foster the transition to green economy, countries can apply different policy mixes of economic, legal and regulatory, voluntary and information-based instruments. These policy mixes should at the same time support generation of decent jobs and contribute to social equity. Appropriate economic instruments can alter relative prices to change production and consumption patterns. Legal and regulatory instruments include bans or limits, and norms or standards. Such are, for example, the ECE multilateral environmental agreements. Voluntary instruments refer to optional commitments of companies to improve their environmental performance. Information-based instruments can influence behaviours by modifying consumers’ preferences towards more resource efficiency, or can be used to inform the workforce about the benefits of greening the economy and to provide reskilling programmes for the transition. Such reskilling programmes are, for example, a priority action area of the ECE Strategy on Education for Sustainable Development.

13. The choice of instruments, the appropriate policy mix, must be tailored to individual country’s needs, its natural resource endowment, level of socioeconomic development, environmental conditions, state of human health, dominant economic sectors, strengths of institutions, etc. There is no one-size-fits-all instrument mix that can ensure transition to green economy. Therefore actions that countries need to design in order to ensure green and at the same time socially sound futures need to be based on robust knowledge and assessment of their socioeconomic, environmental and health conditions and trends as well as a good understanding of the impacts of chosen instruments across the environmental, social and economic dimensions.

14. Monitoring and assessment are important tasks of the authorities who need to be provided to this end with adequate capacity and tools. An effective monitoring and assessment process requires that reliable time-series data are collected and that effective indicator sets are available allowing for sound analysis in and across environmental, social and economic dimensions. The ECE current activities on environmental monitoring and indicators are a basis for helping countries in Eastern and South-Eastern Europe, Caucasus and Central Asia to measure progress towards the green economy. Another important ECE programme, Environmental Performance Reviews, is being already refocused, according to the Astana Ministerial Conference decision, to help countries measuring performance on green economy issues.

15. Strengthening cooperation and coordination between national authorities are crucial for moving towards a green economy. To achieve this, innovative approaches are needed to better integrate sectoral policies, such as transport and energy policies, with environmental and health policies. The Pan-European Programme on Transport, Environment and Health is a good example of an international initiative to promote cross-sectoral cooperation.

B. Sustainable energy: a key sector for the transformation

16. Energy is essential for economic development and for improving the quality of life. Ensuring sufficient, reliable and environmentally responsible supplies of energy at prices that reflect market conditions is a challenge for all. At the same time it is necessary to

reduce greenhouse gas (GHG) emissions by 50 per cent to avert a climate change disaster while supporting economic development and energy access. These ambitions require deep public-private engagement in the form of effective framework conditions for investment and industrial commitments. They also highlight the importance of improving energy efficiency from source to use on a global scale and of increasing the share of renewables in the global energy mix.

17. The final use of energy has been increasingly electric over the past 50 years, and because all new uses of energy are electric, the pace of the shift to electricity will continue. This trend both highlights and addresses the range of challenges faced in energy in the ECE region, including access to modern and reliable energy services, increasing the share of renewables in the global energy mix, reducing the carbon intensity of the energy sector, improving energy efficiency, and developing innovative, cross-cutting solutions.

18. Access to modern energy services is often measured by the percentage of populations served by either national or local power networks. Access also includes an economic dimension related to the ability to pay the full costs of energy services if subsidies were removed and a quality dimension if services are not adequate.

19. Increasing the share of renewables in the global energy mix is an important part of reducing the carbon intensity of the energy sector. It involves both enhancing the contribution of renewables in a networked world and improving their performance in distributed generation applications. Renewable energy currently comprises 15 per cent of the global energy mix. In order to meet the objective of the Secretary-General's Sustainable Energy for All initiative to double that share by 2030, sustained efforts are required from all stakeholders. Investments in renewables are often blocked by risks of various sorts, including political and regulatory risks, and there should be a concerted effort to remove these blockages. ECE could contribute to enabling the shift to sustainable energy by working to remove the investment barriers, including through the establishment of needed normative instruments and standards while promoting innovation.

20. Improving energy efficiency is often described as the easiest way of improving energy security and reducing the environmental consequences of the production, transport, and use of energy. It stands out in promoting both sustainable development and economic competitiveness, and in reducing poverty. Though the technological side is well understood and investments would pay for themselves quickly, they are not undertaken for many reasons, including legal, regulatory and fiscal frameworks, tariffs and contract structures, subsidies, opaque information, financing constraints, and market structure. ECE is working with its partners to promote a doubling of the rate of improvement in energy efficiency. There is a clear need for technological, policy, and regulatory innovation, as well as appropriate investment by industry to enhance the role of electricity and its primary fuels in order to achieve an electric future that is smart, distributed, clean and wireless.

21. Policymakers and market participants must recognize the potential for fundamentally changed circumstances not only to be prepared for changing market realities but also because the pre-conditions for changing market realities are clear. An excellent example is the shift in the United States of America gas markets that has occurred since 2008. The shift was sudden and was completely unexpected, and as a consequence the United States is moving to become a gas exporter and to achieve self-sufficiency in oil. Both parts of that equation affected global markets and surprised market participants. A major benefit of the shift has been a reduction in the carbon footprint of the energy sector in the United States. The key driver in the shift has been investments in response to high market prices as innovative investors sought income.

22. Securing affordable and sustainable energy means mobilizing global capital markets, which means there needs to be a business case that justifies investment, whether by

traditional market players or by new entrants with new approaches. The governments of member States need to create the investment framework conditions that enable companies to invest. There is a clear linkage between investment and energy security issues. Engaging a dialogue among governments, industry, the public, and non-governmental organizations (NGOs) will contribute more substantially to the kind of debate and outcomes that can lead to an efficient shift to a sustainable energy future.

23. World markets have been trending towards liberalization and free trade. In such a world prices are the right indicators, and they provide important signals to both buyers and sellers. They therefore must reflect the real consequences if they are to perform their signalling function. If we overburden the market with subsidies and obligations to buy or sell, we slide inexorably toward a command market where outcomes are dictated by planners. There is a clear need to institute coherent energy governance with rules that enable sustainable production and consumption decisions. The development of the governance framework, the market rules, and investment conditions must occur with public engagement if major change is to be enabled.

24. Each country has its own circumstances and therefore different views on what is to be done to achieve the objectives of sustainable energy for all. Achieving real change will require clear, mandatory goals based on “sustainability” that can mean different things in different places. There must be political will in order to act, and since political will ultimately derives from the population, creating political will obliges engagement with the people. Targets must be segmented so that politicians can “own” the policy, and short-term, action-oriented plans need to be supported by the public. There is thus a need for a full and honest engagement with the public. If we put together visions for the future, we will find ourselves running up against the deadlines if we do not put in place intermediate, staged targets that the public supports and that the relevant political bodies can own.

C. Climate neutrality as a new urban agenda

25. Promoting climate adaptation and mitigation measures was a priority for discussion at the Rio+20 Conference. Its final outcome document the “Future We Want” also recommended that significant attention be given to the sustainable development of human settlements, especially in urban areas.

26. By 2050, 70 per cent of the world’s 9 billion people will live in cities, up from 50 per cent of today’s 7 billion. Urban dwellers will rise from 3.5 billion today to 6.3 billion by 2050, the equivalent of adding 270 cities the size of greater Paris in 35 years. City-based energy consumption was 72,649 TWh in 2009 (75 per cent of world total) and is set to increase as urbanization rises. Efficiency gains of up to 10 per cent are possible. Cities generate around 50 per cent of world GDP, so even small efficiency gains would improve energy intensity significantly.

27. Climate neutral cities are critical to achieving global sustainability. Cities are responsible for a significant part of GHG emissions – both directly as generators of such emissions and indirectly as end-users of fossil fuel-based energies and other goods and services, the production of which generates emissions elsewhere. With 73 per cent of the ECE population living in urban areas, cities should, therefore, be considered as strategic vehicles for climate change mitigation.

28. Urban communities are also themselves vulnerable to climate change. Urban areas, concentrating people and infrastructure – often in hazard-prone areas – experience some of the most severe impacts from both gradual climatic changes and abrupt natural occurrences and it is often the poorer and more disadvantaged people who suffer the most. Cities should also, therefore, embrace socially-oriented policies for adaptation. Mitigation and adaptation

are two sides of an urban strategy for climate neutrality. Such a strategy suggests that (a) cities shall aim to move towards net zero emissions of GHG by reducing GHG emissions as much as possible and by developing trade-off mechanisms to offset the remaining unavoidable emissions; and, (b) cities shall aim to become climate-proof, or resilient to the negative impacts of the changing climate, by improving their adaptive capacities.¹

29. Spatial planning is itself at the heart of urban adaptation and mitigation measures. Urban layout, public transit provisions and integrated district heat-electricity systems have long been acknowledged to be amongst the principal instruments to reduce urban energy intensity. Planning is also instrumental to identify risk-prone zones and to support spatial strategies to safeguard urban infrastructure. Urban planning and spatial strategies for climate neutrality should aim to:

(a) Limit urban sprawl and car-dependency by achieving appropriate levels of building density and mixed-use development, organizing and improving transport flow, promoting non-motorized transportation options;

(b) Provide an integrated system of green spaces and other natural infrastructure, which should protect the city from adverse weather conditions, mitigate the urban heat island effect and provide spaces for natural habitat;

(c) Develop integrated energy infrastructure for renewable sources of energy, district heat-cooling-electricity systems and waste-to-energy systems;

(d) Deliver comprehensive programmes for rehabilitation and regeneration of problematic areas (such as former industrial sites) and to ensure better standards for energy efficiency in the built environment;

(e) Encourage and support eco-towns or sustainable settlements, for which explicit definitions and codes of practices can be established;

(f) Ensure that the advancement towards climate neutrality is based on principles of social inclusion and socio-spatial integration.

30. Urban resilience is a general feature needed by a city's social, economic and natural systems. With regard to climate and energy, "urban resilience" may be understood as a product of successful policies for achieving adaptive capacities in cities, to a level that enables them to withstand both climate challenges and the challenges of post-carbon transformation, with no or minimal losses to their functionality and well-being. As solutions designed for the climate of the past may no longer be relevant, all major capital investment decisions should be subject to a climate robustness test. It is also important that each city undertakes a climate risk assessment to investigate the exposure of the city to climate, energy and environmental risks. Social impacts assessment can identify vulnerable groups and locations, and outline physical and social protection measures.

31. Building robust and transparent institutions to promote climate neutrality is a prerequisite for achieving the goal of climate neutrality. Cooperation needs to be established between national and local governments as well as across the economic sectors. National governments need to delegate to cities sufficient enabling capacities, such as taxation, revenue generation authority and regulatory mandates, in order for them to be actively involved in building a coordinated response to climate change. Many cities in the ECE region already show determination to transform themselves into sustainable and low

¹ See more on climate neutral cities in UNECE, *Climate Neutral Cities: How to make cities less energy and carbon intensive and more resilient to climatic challenges*, 2011. Available from www.unece.org/hlm/publications.html.

carbon areas. Lack of political will, awareness and resources, along with fragmentation of the administration of larger urban areas across multiple municipal jurisdictions and a lack of horizontal coordination are serious barriers for such actions. In view of these challenges, urban policies are being re-integrated in the national development policies in a growing number of countries.

D. Enhancing food security through trade

32. Over 1 billion tons of food (about one third of the world's food production) is wasted every year due to inefficiencies in the agricultural/food sector. Therefore, streamlining and improving the efficiency of international trade in food is an increasingly important requirement for achieving sustainable economic, environmental and social development.

33. Food imports form a large share of world trade. For a wide range of different reasons, many countries are either historically net food importers or have become net food importers in the recent past. According to a report of the International Centre for Trade and Sustainable Development (ICTSD) from August 2012, based on data provided by the Corporate Database for Substantive Statistical Data of the Food and Agriculture Organization (FAOSTAT), a large number of countries switched from being net agricultural exporters to net agricultural importers in the first decade of the third millennium. These include the following transition economies: Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan.

34. In addition, food imports comprise over 10 per cent of total merchandise imports in many ECE countries, including: Georgia (18 per cent), Kyrgyzstan (17 per cent), Cyprus (16 per cent), Azerbaijan (14 per cent), Moldova (13 per cent), Estonia (10 per cent), Luxembourg (10 per cent) and the United Kingdom of Great Britain and Northern Ireland (10 per cent). As a result, trade has a major impact on food security in all of these countries. At the Rio+20 Conference, United Nations Member States reaffirmed their "commitments regarding the right of everyone to have access to safe, sufficient and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger" and acknowledged that food security and nutrition had become a pressing global challenge.

35. The international community in Rio also resolved to increase sustainable agricultural production and productivity by improving the functioning of markets and trading systems and by strengthening international cooperation. The Summit recommended, among other approaches, to develop cooperation and value chains in order to reduce post-harvest and other food losses and waste throughout the food supply chain. Harnessing trade to support food security in transition and developing economies will require concerted policy and practical efforts in a wide range of areas including the following where the ECE can make important contributions and, in particular, to the first three:

- (a) Reducing procedural and regulatory barriers to trade which result in higher costs and higher spoilage rates for food shipments;
- (b) Enabling producers to comply with internationally recognized quality and environmental standards;
- (c) Providing physical access to international markets (i.e. adequate transport infrastructure and services);
- (d) Promoting innovative agricultural production and delivery;
- (e) Addressing supply and demand side risks.

36. In January 2013, the Institution of Mechanical Engineers in the United Kingdom estimated that some 30 to 50 per cent of global food production (or 1.2 to 2 billion metric tonnes), was lost or wasted every year.² This waste is the result of a range of factors that include poorly designed processes in agriculture, inadequacies in the infrastructure and management as well as inadequate or counter-productive policies and regulations. Another organization, SITPRO, concluded in 2008 that paper documentation costs the perishable food industry in the United Kingdom around £1 billion annually in lost sales and spoiled merchandise.³ As a result of these problems and, in the context of food security, countries are not receiving the maximum benefits from their domestic production nor from their foreign exchange spent on food imports. In addition, policymakers do not have a comprehensive view of which combinations of regulatory, normative and trade facilitation tools are available to support food security, or of the most effective ways in which these could be deployed.

37. ECE's work responds to this need in a number of areas:

(a) The ECE's trade facilitation recommendations and standards are a renowned source of practical instruments that help countries streamline their trade transactions and reduce processing times and costs;

(b) The ECE's work on regulatory cooperation and standardization policies has identified best practices for regulations that are effective and enforceable while imposing the minimum possible burden on business;

(c) The ECE's agricultural quality standards cover a wide spectrum of products including: fresh fruit and vegetables; dry and dried produce; seed potatoes; meat; cut flowers; eggs and egg products. These are used by governments, producers, traders, importers, exporters and international organizations in Africa, China, Europe, Latin America and Commonwealth of Independent States (CIS) countries to support trade through mutually agreed product classifications and codes. Using these resources to reduce the current level of food waste could make a significant contribution toward meeting the challenge of feeding the world's increasing population, as well as conserving diminishing resources.

IV. Questions for discussion

38. ECE is invited to consider the following questions:

(a) What are good examples of green investment throughout the ECE region, and how could these be replicated in other parts of the region?

(b) Which policy instruments aiming at transitioning the economy to a green and more resource efficient one, have proven successful? What were the enabling conditions and the processes put in place to implement them?

(c) What kind of assistance do lower-income ECE member States need in order to move toward a green economy?

(d) What are effective means of mobilizing the required capital, technology, and management to enable the shift to a sustainable energy future? What are the key barriers to the shift, and are there examples from countries that have succeeded in addressing them?

² Global Food, Waste Not, Want Not, 2013.

³ The Cost of Paper in the Supply Chain: "Project Hermes" Perishable Foods Sector Research Report, 2008.

- (e) How can ECE assist national governments to better support local government/local level initiatives for sustainable urban development?
 - (f) Which policy instruments aiming at climate neutral urban development have proven successful?
 - (g) What are the main trade instruments and policies that could improve food security?
 - (h) What do you see as being the main food security issues that can be addressed through intergovernmental cooperation in the ECE region?
 - (i) Which cross-sectoral activities will contribute most to the transition to a sustainable future, and how can ECE help to organize them?
-