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Committee on Innovation, Competitiveness and Public-Private Partnerships

Team of Specialists on Innovation and Competitiveness Policies

Tenth session

Geneva, 19 – 20 October 2017

Report of the Team of Specialists on Innovation and Competitiveness Policies on its tenth session

I. Attendance

1. The Team of Specialists on Innovation and Competitiveness Policies (TOS-ICP) held its tenth session on 19 –20 October 2017.
2. A total of 85 delegates participated in the session representing national government ministries and agencies, academic institutions, the private sector, non-governmental organisations and international organisations.
3. Representatives of the following UNECE member States attended: Armenia, Belarus, Czech Republic, Georgia, Germany, Italy, Kazakhstan, Kyrgyzstan, Montenegro, Poland, Romania, Russian Federation, Slovenia, Switzerland, Ukraine, United Kingdom, Uzbekistan.
4. The session was attended by representatives of the European Commission.
5. Representatives of United Nations Environment, the World Intellectual Property Organisation, and the World Trade Organisation participated in the session.
6. The following intergovernmental organizations also attended: European Bank for Reconstruction and Development, European Investment Bank, and the Organisation for Economic Cooperation and Development.

II. Adoption of the agenda and election of officers (agenda item 1)

7. The Team adopted its agenda as contained in document ECE/CECI/ICP/2017/1.

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8. The Team elected Mr Siarhei Shuba of Belarus as vice-chairman of its Bureau for a term of two years once renewable.

III. Substantive segment (agenda item 2)

9. The substantive segment of the tenth session of the TOS-ICP was devoted to an Applied Policy Seminar on “Towards the Circular Economy - Innovation Policies for Sustainable Production and Consumption”. It provided an opportunity for international knowledge sharing, exchanges of experience and policy learning in this area.

10. In September 2015, the General Assembly of the United Nations adopted the 2030 Sustainable Development Agenda, which set ambitious global goals that commit the countries of the world to work towards achieving economic prosperity while protecting our planet and ensuring social inclusion.

11. Not only is innovation at the core of Sustainable Development Goal (SDG) 9, but the 2030 Agenda for Sustainable Development has acknowledged the potential that innovation offers for achieving all its goals as a cross-cutting means of implementation. In particular, innovation is a key enabler for Goal 12, “Ensure sustainable production and consumption patterns” and for Goal 11 “Make cities inclusive, safe, resilient and sustainable”. In 2018, the United Nations global High Level Political Forum on Sustainable Development as well as the Multi-Stakeholder Forum on Science, Technology and Innovation for Sustainable Development, will be dedicated, among other Goals, to SDG 11 and SDG 12. Delegates shared experiences from the UNECE region on the role which innovation policies can play in advancing these goals.

12. Sustainable consumption and production is about promoting resource and energy efficiency, and sustainable infrastructure, and about providing access to green and decent jobs and a better quality of life for all. It supports economic development, reduces future economic, environmental and social costs, strengthens economic competitiveness and reduces poverty. Sustainable consumption and production aims at “doing more and better with less”, increasing net welfare gains from economic activities by reducing resource use, degradation and pollution along the whole product lifecycle, while increasing quality of life.

13. The circular economy model can play a strong role in achieving SDG 12. It offers a profitable opportunity to move away from resource-intensive processes, maximising the use of existing assets and creating new revenue streams, and thereby rendering production and consumption processes more sustainable and competitive.

14. Innovation is already driving the move to the circular economy and to sustainable consumption and production patterns. There are numerous examples of new technologies, processes, services and business models that are re-shaping product life cycles from design through production and usage on to disposal and re-cycling. Similarly, innovative forms of sustainable consumption, such as sharing platforms, are emerging in areas such as transport, housing and others.

15. However, the move towards the circular economy is still at an early stage in most of the ECE region, and the potential of innovation to make production and consumption fully sustainable is far from being fully exploited. For instance, even in the European Union the average manufactured asset still lasts only nine years, and still only 40 per cent of discarded materials undergo some form of recycling.

16. Fully realizing the potential of innovation in this critical area will require dedicated and sustained policy efforts to create enabling frameworks and incentives for private innovation efforts in circular economy fields and to encourage consumers to rapidly and

broadly adopt innovative sustainable consumption patterns. This will also require innovative approaches to regulation (regulatory innovation) to provide incentives and eliminate barriers and to financing (financial innovation) in order to mobilize private, public, and blended finance.

17. The meeting allowed for an interactive discussion among private and public sector stakeholders in the UNECE region to understand and agree on how better to promote and use innovation to move towards sustainable production and consumption and eventually to a circular economy.

18. The applied policy seminar was organised in four sessions:

- Overview - Setting the stage
- Policies to promote innovation for sustainable production and consumption
- Financing innovation for a circular economy
- Country experiences, smart cities and regional approaches

19. Among the issues discussed were the following:

(a) How can ECE countries further encourage innovative entrepreneurship for a circular economy – product innovation, process innovation, product life cycle innovation, innovation for consumption?

(b) How can ECE countries ensure the right regulatory framework for innovation – addressing regulatory barriers for activities and business models (the role of law, standards and norms)?

(c) What are the possible incentives to enable innovation to deliver new and more sustainable business practices (e.g. taxation, subsidies, green procurement)?

(d) How should ECE countries mobilize and scale up private and public finance - what are the innovative financing tools to finance the circular economy?

(e) How should countries ensure policy consistency (i.e. how to align policy support of entrepreneurship, innovation and sustainable development)?

(f) How can governments promote shifts towards a circular economy at the sub-national and local levels – best practices from smart cities?

(g) How can countries engage a wider circle of stakeholders – businesses, consumers, public authorities, academia and research institutes to incentivize the society to embed circularity in different processes?

Overview – Setting the stage

20. There are a range of definitions of the Circular Economy, which can result in challenges in determining the best targets for policy intervention, and desired outcomes. A Circular Economy may be broadly considered to be a system delivering outcomes where the value of products, materials and resources is maintained in the economy for as long as possible, and what is considered waste in the traditional linear economy is turned into an asset or resource. Innovation will be critical to achieving this.

21. There are a range of benefits that could be realized by the transition to a Circular Economy. Despite long-term, secular declines in the prices of most commodities, recent times have seen record volatility in commodity prices, with negative macroeconomic impacts. One way of addressing this is to reduce dependency on commodities as inputs to production. Other potential benefits include cost reductions and quality improvements when products and services are designed and developed from the beginning from a total life-cycle “cradle-to-grave” perspective.

22. The Circular Economy will be key to achieving SDG12. This is reflected by the indicators to monitor progress towards SDG12 – in particular those relating to reducing material footprints per capita and material footprints per unit of GDP, with equivalent measures for domestic material consumption. The UN Environment International Resource Panel has also recently noted that improving resource efficiency is indispensable for meeting climate change targets cost-effectively. 12 out of the 17 SDGs may be considered to depend on the sustainable use of natural resources.

23. The process of “decoupling” GDP growth from resource consumption is crucial, but progress remains uneven. Innovation has been a key driver of progress. However, progress has slowed in recent years, and there is even some evidence of “recoupling”, i.e. growth in global resource use again outstripping rates of economic growth. In high income economies there is evidence of progress towards uncoupling of economic growth and resources consumption. However, off-shoring in particular makes the interpretation of such evidence complex, and there is a need to take account of “hidden flows” in terms of resource use and pollution.

24. The de-coupling of GDP growth from resource consumption has been a focus of policy attention particularly in highly developed countries which have few natural resources, because for them, reducing resource use per unit of GDP not only benefits the environment but also reduces their dependency on resource imports. For some countries with economies in transition, which have large endowments of natural resources, the key objective is not necessarily to de-couple GDP growth from resource use, but to de-couple resource use from negative environmental impacts. Innovation again has a key role to play in achieving this objective.

25. A key policy challenge is how to “scale up” from innovative start-ups catering to niche markets to large scale, more environmentally and socially sustainable business models and consumption patterns. “Scaling up” the circular economy needs support and capacity building to move from policies to concrete implementation. Governments have a role to play in terms of creating markets (including financial markets), and coordinating between market participants. This will help to make opportunities at the “aggregate” level feasible in practice for firms and consumers.

26. There is also a need to tackle “rebound” effects, whereby the positive impact of efficiency gains on material footprints is partially or even completely offset by increased consumption. Ensuring that relative prices better reflect costs to society and internalise externalities can help address this issue. It is important that such costs be assessed throughout the production cycle and reflect interdependence across the value chain.

27. There will also be macroeconomic challenges in terms of structural changes in production and consumption creating winners and losers, as well as impacts in terms of size and distribution of GDP.

28. Despite the challenges, the potential economic benefits of moving to a Circular Economy are highly significant – estimated at up to 7 percent of GDP at the EU level.

Policies to promote innovation for sustainable production and consumption

29. The circular economy transition requires not only new, improved products, but innovative business practices overall – in design, production, delivery models, and life cycle management. Often, existing regulatory frameworks and microeconomic policies are ill-suited for this transition – often, well-intended policies in different areas may act as downright disincentives. Much more than before, policy makers, entrepreneurs and innovators need continuous, multi-level dialogue to understand opportunities, remove bottlenecks, and ensure that incentives are fit for purpose. The seminar explored the

regulation and incentives - taxation, subsidies, standards and norms – which enable new and more sustainable production and business practices.

30. Consumers' choices will also affect the transition to a circular economy. Consumers base their choices on the information available, product prices and the regulatory framework. The seminar also reviewed the incentives (e.g. labelling systems, standards, regulatory measures, or taxation) which enable innovation to deliver new and more sustainable consumption practices.

31. A range of typologies of circular economy business models may be applied. One is to consider the broad categories of opportunities to be exploited by innovative circular economy entrepreneurs. These include:

- Waste value creation
- Circular supply chains
- Product life models
- Using idle capacity
- Product service systems

32. Scale-up of these business models may require policy support, which may be through coordination rather than direct subsidy. Examples presented included producer consortia to share the costs of waste processing from both production and households.

33. Significant policy efforts have been made recently at the EU level. The Circular Economy Package of December 2015 included an EU Circular Economy Action Plan targeting five priority sectors: plastics, food waste, critical raw materials, construction and demolition, and biomass-biobased products. This represents a concrete and ambitious programme of action until 2019, with around 50 measures covering the whole cycle from production and consumption to waste management and the market for secondary raw materials, and an annual report on implementation.

34. The European Waste Framework Directive (Directive 2008/98/EC) also still offers an instructive example of policy principles to create markets to reduce waste on the production side, including: a waste management hierarchy, the polluter pays principle, and extended producer responsibility.

35. On the one hand, the move towards a Circular Economy requires “closing the loop”, i.e. to turn what was previously discarded as waste into a resource returned to the production process. This requires creating appropriate incentives not only for producers but also for consumers.

36. In addition, there may also be a need to “slow the flow”, i.e. to extend the useful life span of products without reducing their attractiveness to consumers. Innovative business models have a key role to play here. Examples where given where assets are built to rent their services rather than to sell the assets themselves, and the rental contract establishes a long-term relationship between the producer and the consumer, which gives the producer an incentive to design and produce the asset in a more sustainable way.

37. Behavioural economics in particular may offer a range of insights to make big changes to policy outcomes with relatively modest policy initiatives affecting consumer choice. Cultural initiatives that change aspirations, e.g. from owning to sharing of assets, can also be a powerful vehicle for change. Various countries have been successful in creating a culture of recycling among consumers – a “recycling society”. There is now a need to create a culture of minimising waste in the first place.

38. There was a discussion on the benefits of moving from an ownership to a sharing economy. Examples include car and home sharing services and home cooking platforms, all of which promise to make more efficient use of existing resources and assets. Questions

were raised of how to properly regulate these newly emerging markets and how to balance concerns about fair competition, consumer safety and labour standards.

39. The Netherlands presented the “Right to Challenge” as a good practice in this regard, wherein providers of sharing services, users, competing “ownership economy” incumbents and regulators come together to discuss how best to modify the regulatory environment to balance competing interests.

Financing innovation for a circular economy

40. A circular economy requires substantial public and private investment in hard and soft infrastructure, better technologies and processes for production and recycling. While ample global liquidity is available and investors remain eager to finance innovation across the world, businesses and governments are exploring new ways of blended finance – combining public and private capital, and allocating risk more efficiently. The seminar discussed the various financing sources, their strengths and weaknesses and ways to scale up private and public finance to support the transition to a circular economy. It also explored the role of innovative financing tools to finance the circular economy.

41. The Circular Economy offers a way of generating multiple cash flows from one commercial activity, i.e. cash flows from secondary products from waste materials. As such, it is fertile ground for innovative approaches to financing. These are likely to go beyond loans to guarantees (trade financing) and equity participation. In some cases there may be a need to “blend” such financial support with public grants, reflecting the public good nature of the desired outcomes, and the various market and coordination failures.

42. Circular Economy investments frequently have to cover longer time horizons and present different types of risk than linear economy projects. These differences need to be taken into account when designing financing instruments for the Circular Economy.

43. Sharing economy projects are often based on reciprocity and do not generate significant cash flows that could be the basis for contracting external finance, nor do they require large investments. However, there may be a rationale for the Government to make investments in key infrastructures such as testing labs or temporary materials banks that then enable the growth of a sharing economy “eco-system”.

44. Given the complex nature of many Circular Economy investment projects, supply of appropriate expertise alongside financing and solid public-private partnership are crucial to success.

45. The European Investment Bank provides project advisory services alongside financing in order to address some of these challenges, thereby improving the bankability and investment readiness of projects and providing earlier access to finance. The European Commission announced a Circular Economy Finance Support Platform in January 2017.

46. The European Bank for Reconstruction and Development (EBRD) has a target for 40 percent of its investment activities to be “green” by 2020. A significant share of existing EBRD projects include a Circular Economy component, with scope for further increase.

Country experiences, smart cities and regional approaches

47. The seminar showcased success stories of “smart” cities from UNECE member states, showing progress using a circular economy approach. It then discussed prospects and good practices at national and regional level and examined how these practices could work in other member countries, including less developed ones, and how UNECE and other entities could contribute to continued, productive dialogue on the issue.

48. Cities and regions are increasingly becoming the agents for change on the Circular Economy agenda. This reflects the fact that high-level strategies and concepts are often

incapable of addressing the complex regulatory requirements of a circular economy. It is necessary to make policy changes step by step, with a policy experimentation approach. Cities are key partners for such policy experimentation, all the more so due to the increasing share of population and GDP concentrated in cities.

49. Dialogue with non-governmental partners is crucial, and there is a need for platforms to share experiences between cities and regions in Europe and beyond. There is a need for “smart regulations” that stipulate the objectives and not the approach to achieve them.

50. UN Habitat III in Quito represented a key step forward on the international sharing of best policy practices on smart cities. Its Quito declaration reflected the important interface between urban and territorial planning and policy formulation and science, technology and innovation outcomes for sustainable development.

51. The Urban Agenda of the European Union has 12 priority themes: Air quality, urban mobility, inclusion of migrants and refugees, jobs and skills in the local economy, sustainable use of land and nature-based solutions, energy transition, circular economy, innovative and responsible public procurement, urban poverty, climate adaptation, digital transition, and housing. It focuses on three pillars:

- Better regulation
- Better funding
- Better Knowledge

52. Experts from Slovenia, Amsterdam and London presented examples of best practice in policy making for the Circular Economy at national and municipal levels.

IV. Review of the work of the Team of Specialists on Innovation and Competitiveness Policies since the ninth session (agenda item 3)

53. The secretariat briefed the TOS-ICP members on the outcomes of the activities carried out since the ninth session, which included:

(a) The Policy Document: “Good Practices and Policy Options on Impact Investing – Financing Innovation for Sustainable Development” (ECE/CECI/2017/CRP.1) submitted to the 2017 session of the UNECE Committee on Innovation, Competitiveness and Public-Private Partnerships;

(b) Publication of a collection of case studies and good practices on Innovation in the Public Sector (ECE/CECI/23);

(c) Launch of the Innovation for Sustainable Development Review of Belarus in Minsk and publication of the English version (ECE/CECI/24);

(d) Preparatory mission, fact finding mission and peer review of the Innovation for Sustainable Development Review of Kyrgyzstan;

(e) Findings and recommendations of the Innovation for Sustainable Development Review of Kyrgyzstan (ECE/CECI/ICP/2017/CRP.1);

(f) Policy workshop on the implementation of recommendations from the Innovation Performance Review of Armenia in Yerevan in December 2016 jointly with the State Committee on Science of Armenia and hosted by UNIDO;

(g) The second start-up competition Ideas4Change (together with other divisions of UNECE) in Geneva on the occasion of the 70th Anniversary Session of the Economic

Commission for Europe in cooperation with Startup Nation Central of Israel and the MassChallenge Accelerator;

(h) Ninth meeting of the SPECA Thematic Working Group on Knowledge-Based Development in Bishkek, Kyrgyzstan on 23 June 2017 (jointly organized with UNESCAP);

(i) Sub-regional policy conference on “Making Innovation Work for the SDGs” in Bishkek, Kyrgyzstan on 22-23 June 2017 (jointly organized with UNESCAP);

(j) Session on “International Experiences on Investing in Innovative Companies“ at the 11th Siberian Venture Fair and Technoprom Forum in Novosibirsk, Russian Federation on 20-22 June 2017 (jointly organized with the Russian Venture Capital Association).

54. The delegations of Armenia, Belarus, Kazakhstan and the Kyrgyz Republic expressed their great appreciation for activities under the UNECE programme of Innovation for Sustainable Development Reviews. Delegates in particular highlighted the high implementation rate of policy recommendations that were made, and their beneficial impact on their countries’ innovative development. The delegation of Belarus highlighted in particular the excellent cross-ministerial cooperation that was facilitated by the Review process, and the delegation of Kazakhstan reported an estimated rate of implementation of policy recommendations of around 70 percent.

55. The Team expressed its gratitude to the Government of the Russian Federation for their financial contribution to its work.

56. The Team expressed its satisfaction as to the outcomes of the work carried out, which has effectively responded to the needs of countries, and particularly those with economies in transition, in accordance with its mandate.

V. Inter-sessional implementation plan for 2017-2018 (agenda item 4)

57. The secretariat briefed the Team on the main outcomes of the eleventh session of the Committee on Innovation, Competitiveness and Public-Private Partnerships held in Geneva on 20-22 March 2017.

58. The secretariat presented proposals for work to be undertaken in the remainder of 2017 and in 2018 in accordance with the Inter-sessional Implementation Plan for 2017-2018 of the Committee on Innovation, Competitiveness and Public-Private Partnerships (ECE/CECI/2017/2, Annex II), including exploratory work on a possible sub-regional innovation policy index (ECE/CECI/2017/CRP.2).

59. The delegation of Kazakhstan expressed an interest in hosting a sub-regional workshop in 2018 on technology transfer in transition economies, to share best policy practices among peers.

60. The delegations of Armenia, Georgia, Kazakhstan, Ukraine and Uzbekistan expressed their interest in receiving Innovation for Sustainable Development Reviews.

61. The delegation of the Russian Federation expressed their continued interest in supporting the Team and increasing their involvement in its work, for example by sharing their recent experiences of policy initiatives in the areas of innovation and competitiveness.

62. The Team discussed and agreed on its implementation plan for work to be undertaken in the remainder of 2017 and in 2018 in accordance with the Inter-sessional

Implementation Plan for 2017-2018 of the Committee on Innovation, Competitiveness and Public-Private Partnerships (ECE/CECI/2017/2, Annex II).

63. The following outputs and activities will be delivered, subject to availability of extra-budgetary resources:

(a) A policy document to be submitted to the 2018 session of the Committee on Innovation, Competitiveness and Public-Private Partnerships on “Towards the Circular Economy - Innovation Policies for Sustainable Production and Consumption”;

(b) Publication of the Russian version of the Innovation for Sustainable Development Review of Belarus;

(c) Publication of the Innovation for Sustainable Development Review of Kyrgyzstan, and launch event in Bishkek;

(d) The 2017 SPECA Economic Forum, which will be held in conjunction with the 12th session of the SPECA Governing Council, with a focus on innovation for sustainable development in Dushanbe, Tajikistan on 5-6 December 2017;

(e) A pilot workshop on the methodological basis for a possible Sub-Regional Innovation Policy Index, and follow-up work on a pilot index as outline in the conference room paper (CRP.2). The delegations of Belarus, Georgia, Armenia, Ukraine and Kazakhstan expressed their support for and interest in this work.

(f) The 2018 session of the SPECA Working Group on Knowledge-Based Development, with date and venue subject to confirmation by the host Government;

(g) Initiation of at least one new national Innovation for Sustainable Development Review. The Team noted the very strong demand for Reviews from member States, and the need to prioritise on the basis of availability of extra budgetary funding;

(h) A training seminar for policy makers and practitioners on cross-border technology and knowledge transfer in Kazakhstan in the first half of 2018 to support the development of national legislation and a national strategy in this area;

(i) The delegation of Armenia expressed their interest in hosting a workshop on the role of Academies of Science in promoting best practices in innovation policy;

(j) A possible workshop on regional innovation policy to be organized together with the Russian Venture Capital Association for policy makers from Russian regions back to back with the 2018 session of the Committee on Innovation, Competitiveness and PPPs;

(k) Further capacity-building activities and policy advisory workshops to support the implementation of the recommendations contained in national Innovation Reviews subject to demand from the respective member States and subject to the availability of extra-budgetary resources;

(l) Sub-regional capacity-building and knowledge-sharing conferences and workshops on policies for promoting knowledge-based development, subject to demand from member States and the availability of extra-budgetary funding.

(m) A substantive contribution to the 2018 Multi-Stakeholder Forum on Science, Technology and Innovation for Sustainable Development to be held in New York in June 2018.

64. The Chair encouraged Team members to participate in the planned activities and events. He also reminded the Team that capacity-building activities require support through extra-budgetary funding and in-kind contributions and encouraged the Team to contribute to raising such extra-budgetary support.

VI. Other business (agenda item 5)

65. The Team agreed that its next session be held on 1-2 November 2018, subject to confirmation of room availability. Any changes in these dates will be made in consultation with the Bureau.

VII. Adoption of the Report of the session (agenda item 6)

66. The Team adopted the Report of the session.
