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Preparations for the United Nations Economic Commission for Europe High-level Meeting of Education and Environment Ministries in 2016: official substantive documents for consideration at the High-level Segment on Education for Sustainable Development

Learning from each other: achievements, challenges and ways forward*

Third evaluation report of the UNECE Strategy for Education for Sustainable Development**

Summary

The present document provides a synopsis of progress made by United Nations Economic Commission for Europe (ECE) member States in implementing the UNECE Strategy for Education for Sustainable Development from 2005 to 2015, paying particular attention to the third phase of implementation (2011–2015) on the basis of the 38 national implementation reports submitted by member States for that phase.

The national implementation reports reveal that many ECE member States now have education for sustainable development (ESD) policies and frameworks in place to support implementation of the Strategy for ESD. Hundreds of initiatives have been launched to integrate ESD into the content and process of formal, non-formal and informal education,

* The present report was submitted late owing to resource constraints.

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moving from policy to practice. However, the challenge of integrating ESD system-wide across all aspects and levels of formal, non-formal and informal learning still remains. For the next phase of work, member States should be encouraged to further develop and strengthen strategies, plans and mechanisms for ESD implementation; continue to promote the integration of ESD into education and sustainable development policy; pursue work on school plans, teacher preparation and technical and vocational education and training in support of greening economies; increase the availability of and open access to good quality online ESD resources; give more attention to ESD in non-formal and informal learning contexts; and address the need for ongoing ESD research, monitoring and evaluation.

The findings of this report have been taken into consideration in drafting the future implementation framework for the Strategy (ECE/CEP/AC.13/2016/4) and will be discussed at the high-level segment on ESD at the Environment for Europe Ministerial Conference in Batumi, Georgia, in June 2016.

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I. Introduction

1. The following report provides a synopsis of the progress of the United Nations Economic Commission for Europe (ECE)¹ member States in implementing the UNECE Strategy for Education for Sustainable Development (Strategy for ESD or Strategy) from 2005 to 2015, with particular attention to the third and final phase of the Strategy (2011–2015) and to opportunities for advancing education for sustainable development (ESD) into the future. The synopsis is drawn from the separately published full outcomes document, *Ten years of the UNECE Strategy for Education for Sustainable Development*,² which includes a quantitative and qualitative analysis of the data provided by member States, member State case studies, and a more detailed explanation of the methodology and findings.

A. Background

2. ECE has recognized the importance of education as a critical factor influencing change towards sustainable development. Citizens need to acquire the knowledge, skills and values necessary to support the transition to a more sustainable world. In order to promote ESD across the ECE region, in 2005 representatives at the Vilnius High-level Meeting of Environment and Education Ministries adopted the 10-year UNECE Strategy for Education for Sustainable Development (2005–2015).³ The Strategy was seen as a contribution to the United Nations Decade of Education for Sustainable Development (2005–2014), and served as the foundation for the regional implementation of the Decade.

3. The overall objective of the UNECE Strategy for ESD is to “equip people with knowledge of and skills in sustainable development, making them more competent and confident while at the same time increasing their opportunities for leading healthy and productive lifestyles in harmony with nature and with concern for social values, gender equity and cultural diversity” (CEP/AC.13/2005/3/Rev.1, para. 6). Six objectives were set for member States to consider:

- (a) Ensure that policy, regulatory and operational frameworks support ESD;
- (b) Promote sustainable development through formal, non-formal and informal learning;
- (c) Equip educators with the competence to include sustainable development in their teaching;
- (d) Ensure that adequate tools and materials for ESD are accessible;
- (e) Promote research on and development of ESD;
- (f) Strengthen cooperation on ESD at all levels within the ECE region.

4. A 10-year time frame was set with three phases for implementation and reporting:

¹ ECE brings together 56 countries located in Europe, North America and Central and Western Asia.

² Forthcoming in 2016.

³ Given member States’ interest in continuing to implement the Strategy beyond 2015, the period 2005–2015 is now referred to as the first, or original, implementation period.

- (a) *Phase I (2005–2007) Stocktaking*: Outcomes were reviewed in the 2007 evaluation report (ECE/BELGRADE.CONF/2007/INF/3–ECE/CEP/AC.13/2007/2);⁴
- (b) *Phase II (2008–2010) Integration*: Findings of the second reporting cycle, presented in a second evaluation report (ECE/CEP/AC.13/2012/3),⁵ were released in 2011;
- (c) *Phase III (2011–2015) Implementation*: Member States advanced their progress towards full implementation, following a work plan with three §priority action areas:
 - (i) To ensure that there is an ESD school plan in every school by 2015;
 - (ii) To promote the introduction of ESD into teacher education;
 - (iii) To reorient technical and vocational education and training (TVET) in support of sustainable development and the transition to a green economy.

5. Oversight of the implementation of the Strategy has been undertaken by the ECE intergovernmental Steering Committee on ESD. In addition to establishing the Committee, ECE member States agreed in 2005 that the Strategy should be accompanied by an indicator system to support reporting by member States. Development of the indicators was undertaken by a 10-member Expert Group on Indicators for ESD. The resulting guidance document, *Learning from each other: the UNECE Strategy for Education for Sustainable Development* (ECE/CEP/159),⁶ has provided the context, rationale and interpretation notes to assist governments and other stakeholders through the reporting process.

B. Methodology

6. The third evaluation report of the Strategy for ESD reviews the data collected through national implementation reports (NIRs) submitted by member States at the end of the third phase of the Strategy's implementation as well as supplemental information provided by member States to the secretariat through informal annual national reports, and reports of the ECE Steering Committee on ESD working groups.⁷ Consideration is also given to reporting to the United Nations Educational, Scientific and Cultural Organization (UNESCO) by UNESCO member States in the ECE region as part of the final monitoring and evaluation report for the Decade of ESD (UNESCO Final Report).⁸ The framework for assessment used in this third evaluation report is the same framework used for the 2007 and 2010 reports and follows the "Criteria to assess successful implementation of the UNECE Strategy for Education for Sustainable Development"⁹ set by the ECE Expert Group on Indicators, as well as the Guidance on Reporting on the Implementation of the UNECE

⁴ Available from <http://www.unece.org/env/esd/belgrade.html#/>.

⁵ Available from <http://www.unece.org/index.php?id=28258#/>.

⁶ Available from <http://www.unece.org/education-for-sustainable-development-esd/publications.html.html>.

⁷ NIRs submitted in the 2014 round, including informal reports by some countries, are available on the web page for the Steering Committee's tenth meeting: <http://www.unece.org/index.php?id=38322#/> (country reports and presentations tab).

⁸ UNESCO, *Shaping the Future We Want: United Nations Decade of Education for Sustainable Development (2005–2014), Final Report* (Paris: 2014). Available from <http://www.unesco.org/new/en/unesco-world-conference-on-esd-2014/esd-after-2014/desd-final-report/>.

⁹ *Learning from each other*, chap. IV, annex I.

Strategy for Education for Sustainable Development (ECE/CEP/AC.13/2009/5). The reporting format (ECE/CEP/AC.13/2014/5) was updated by the secretariat in consultation with the Expert Group on Indicators to meet the reporting needs of phase III.

7. Out of the 56 ECE member States, 38 submitted an NIR to the ECE secretariat for the third reporting period. This is a slight increase over the previous reporting periods, with 35 member States submitting reports in 2007 and 36 in 2010. Thirty-two member States contributed at least one informal report on progress on phase III priorities for 2012, 2013 and 2014, with 23 member States submitting detailed updates in 2014.

8. In order to gain insight into issues that are specific to subregions of ECE, the data has also been analysed by groupings of countries. This level of comparative analysis was used very cautiously because of the disparity in group sizes, with only six countries reporting in the Eastern Europe, the Caucasus and Central Asia group¹⁰ and four countries in the South-Eastern Europe group,¹¹ whereas 28 countries reported in the European Union, other Western European countries and North America group.¹²

II. Major findings

9. While 38 member States have submitted NIRs for the 2014 reporting round, during the period 2005 to 2014 another 13 member countries have reported at various stages to ECE and/or UNESCO on their efforts to address ESD. This suggests that at the end of the United Nations Decade of ESD and the UNECE Strategy's original implementation period, a total of 51 countries (91 per cent of ECE member States) have engaged wholly or in part to advance ESD. Since the Strategy was adopted, only five countries have never reported to either ECE or UNESCO on their progress — representing just 9 per cent of ECE member States.

10. The progress that ECE member States have made over 10 years has contributed to the advancement of the objectives of the United Nations Decade and the Strategy, as well as to a growing understanding across global education initiatives that education systems must respond to the social, environmental and economic challenges facing the world today. The five key findings of this report are set out in the following paragraphs.

Finding 1

11. **The securing of leadership and political will has been a critical factor in the success of the Strategy.** With the endorsement and support of political and administrative leadership, almost all (91 per cent) of ECE member States have participated to a greater or lesser extent in advancing ESD during the implementation of UNECE Strategy from 2005 to 2015. Furthermore, two thirds of member States have already provided indications to the ECE ESD secretariat of their desire and intention to continue working towards full implementation. Leadership and political will have contributed to member States' ability to sustain their commitment to ESD, although concerns are expressed by some that changes in government may adversely affect the level of ongoing participation.

¹⁰ Armenia, Belarus, Georgia, Kyrgyzstan, Republic of Moldova and Ukraine.

¹¹ Bosnia and Herzegovina, Montenegro, Serbia and Turkey.

¹² Andorra, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Romania, Slovakia, Slovenia, Sweden and Switzerland.

Finding 2

12. **At the end of implementation phase III, significant advancements have been made on four of the seven Strategy issue areas — policy integration, curricula, tools and resources, and cooperation and networking:**

(a) *Policy integration:* ESD is now reflected in national education policy documents by over 90 per cent of reporting member States and 89 per cent of reporting member States consider that education is now part of their countries' sustainable development policies and planning;

(b) *Curricula:* Member States (84 per cent) report that ESD has been included in national curriculum frameworks, with the majority of efforts focused on primary, lower and upper secondary levels. While the environmental dimension continues to receive most of the attention, it is encouraging to see the levels of effort to address social and economic themes as well;

(c) *Tools and resources:* Government, academic and civil society stakeholders in all reporting member States are involved in the development and production of ESD materials. However, while the supply may be growing, the demand is unknown: mechanisms to promote and disseminate the materials vary widely from country to country and to what extent these materials are being used is difficult to assess. Mechanisms to evaluate the quality of ESD materials are also limited;

(d) *Cooperation and networking:* Member States (95 per cent) report that ESD implementation is a multi-stakeholder process, and support a wide range of working groups, councils, networks and partnerships. Regional cooperation is strong, and the role of different stakeholders, especially civil society actors, is recognized and appreciated.

Finding 3

13. **Full integration of sustainable development knowledge, skills and values by all learners, while well in progress, has yet to be realized across all levels and types of education.** Many of the indicators of success for the Strategy as set out by the Expert Group on Indicators have been met, but reporting member States nevertheless cautiously consider that they are still “in progress” or “developing” towards a comprehensive implementation of ESD across all levels of education. The majority of advances reported by member States are in explicitly addressing ESD themes in the curricula (97 per cent), competences and learning outcomes (92 per cent) and pedagogical approaches (95 per cent) at the earliest levels of early childhood learning, as well as primary and secondary levels of formal education. Less is known about ESD in higher education, although member States report that higher education institutions in the region are increasingly engaged in ESD through high-level affirmations by university leaders and through networks of committed institutions.

14. Progress on non-formal and informal learning is less clear: on the one hand, close to 90 per cent of member States report that various ESD methods and instruments are available for non-formal and informal learning; on the other, at least half of member States suggest that they have either not started or are just in the first stages of progress on advancing ESD in non-formal and informal learning. Member States presented a wide range of non-formal and informal ESD learning initiatives, but acknowledged that many of these have been undertaken independent of, or in partnership with, a range of government agencies. Non-governmental organizations (NGOs) appear to be playing a significant leadership role in the promotion of ESD in non-formal and informal settings. However, less is known about the extent and effectiveness of these efforts as there is no central mechanism for documenting initiatives and they are rarely evaluated.

Finding 4

15. **The three priorities for phase III — ESD school plans, teacher competences and ESD in TVET — are proving to be challenging but necessary leverage points in whole-system change:**

(a) *ESD school plans*: Nearly three quarters (71 per cent) of member States are promoting whole-institution approaches. With respect to school plans, most continue to focus on enhancing sustainable development in the curriculum and classroom through projects, and/or promote voluntary schemes for individual schools to seek ESD recognition and certification;

(b) *Teacher competences*: close to 90 per cent of member States report that ESD is now a part of educators' initial and in-service training, although the qualitative comments provided suggest that many are cautious about how widespread and transformative the support is for ESD, given the autonomous nature of teacher education institutions in many countries. It is also not clear whether significant numbers of teachers have been trained to date;

(c) *ESD in TVET*: From 2012 to 2015, some member States have moved beyond discussions of what constitutes a green economy and green jobs to concerted efforts to retool TVET to support sustainability, in consultation and partnership with industry sectors and TVET institutions. However, while in some States new competences and skills are being defined, new courses developed and TVET programming revised, less than half of member States indicate that significant progress has been made.

Finding 5

16. **Recognition that ESD lies at the core of the purpose of education has increased; but remains to be fully secured across all member States.** Securing this recognition will require developing, refreshing and expanding ESD strategies and plans, developing new partnerships and collaborations, and supporting ESD research, monitoring and assessment as essential inputs to advancing ESD.

III. Progress towards meeting the Strategy's objectives**A. Issue 1: Policy, regulatory and operational frameworks**

17. Over the Strategy's original 10-year period, member States have laid the foundation necessary to advance ESD, with the establishment of focal points (84 per cent) and coordinating bodies (72 per cent) needed to champion, build relationships and sustain momentum on ESD. Roughly three quarters have also put in place national implementation plans (71 per cent). ESD has now been reflected in national education policy documents by over 90 per cent of reporting member States. Equally important, 89 per cent of reporting States consider that education is now part of their countries' sustainable development policies and planning.

18. Related tools for the implementation of ESD policy are also being developed and utilized, with three quarters (74 per cent) addressing ESD in national education legislation and regulatory instruments. Many member States go further to provide public budgets and other economic incentives to support ESD (76 per cent). However, some member States, such as Turkey, have indicated that a special budget is not allocated for ESD per se although individual and relevant projects are supported.

19. Twenty-eight member States reported the adoption of legislation and regulatory instruments for ESD. Nearly 85 per cent of reporting member States have moved beyond policy frameworks to ensure that ESD is included in curricula and/or standards, mostly at the primary and secondary levels of education. The first level of formal education — early childhood care and education (ECCE) — has been recognized in the Decade as “the foundation for sustainable development and the beginning point for ESD”,¹³ and it is encouraging to see 20 member States addressing ESD in legislative and regulatory arrangements for ECCE, and 25 addressing ESD in ECCE curricula and standards.

20. Progress at the tertiary levels of formal education is less clear, with lower numbers of member States reporting advances at these levels. Nevertheless, some member States (such as Finland and Sweden) have reported on important progress in promoting ESD in higher education institutions.

Opportunities for advancing Issue 1

21. **Consider new phases for national ESD strategies and plans:** Many member States have committed to build on what they have accomplished, through new phases for ESD strategies and plans, including Armenia, Manitoba (Canada), Germany, Ireland, Kyrgyzstan, Sweden, Turkey and Ukraine.

22. **Promote further integration of sustainable development into education and education into sustainable development objectives:** As the UNESCO Final Report asserts, increasingly education decision makers are reconsidering the overarching purpose of education and its relevance to the social, environmental, and economic challenges that the world faces. Simultaneously, “stakeholders for sustainable development are increasingly taking up education, public awareness and training to advance sustainable development.”¹⁴ ECE member States should continue to pursue the alignment and integration of education policy and sustainable development policy.

23. **Review the wide range of mechanisms for securing and leveraging public funds:** Financial support and incentives for ESD have varied widely among ECE members, ranging from mainstream education budget allocations, to project grants and co-financing with stakeholders. A review of experience in financing ESD may be helpful to those countries continuing to struggle with securing, sustaining or increasing public funds for advancing ESD.

B. Issue 2: Promotion of sustainable development through formal, non-formal and informal learning

24. ECE affirms that education must play a role in enabling people to live together sustainably,¹⁵ and that this will require working with learners across all levels and types of education.

¹³ UNESCO Final Report, p. 68; see also pp. 30 and 70.

¹⁴ Ibid. p. 28.

¹⁵ See Learning for the future: Competences in Education for Sustainable Development (ECE/CEP/AC.13/2011/6), para. 4, available from <http://www.unece.org/index.php?id=14896#/>; also available as a publication from <http://www.unece.org/index.php?id=31922>.

Sustainable development knowledge, learning outcomes and pedagogy across formal curricula

25. Within formal education, nearly all responding member States report explicitly addressing key sustainable development themes in curricula (97 per cent), broad competences and learning outcomes supportive of sustainable development (92 per cent) and the use of pedagogical approaches that support sustainable development (95 per cent). Further, these are not just one-off initiatives: the levels of effort are significant. Two thirds of member States have reported that the numbers of initiatives to address sustainable development themes in the curricula across International Standard Classification of Education (ISCED) levels of education fall into the highest ratings (“Progressing”; “Advanced” and “Maximum”) set by the Expert Group on Indicators. Over half (55 per cent) also recorded numerous interventions across ISCED levels to address the broad competencies of learning to know, learning to do, learning to be, and learning to live and work together. Progress on addressing ESD-supportive teaching/learning methods appears to be more limited.

26. In at least 50 per cent of reporting member States, all three dimensions of sustainable development (social, economic, environmental) are being addressed at a minimum of four of the ISCED levels. While the environmental dimension continues to receive the most attention, it is encouraging to see the levels of effort given to address social and economic themes as well, across all levels of education.

27. The UNECE Strategy for ESD also promoted an integrated approach to addressing sustainable development themes. Member States indicated a wide range of strategies, from addressing ESD in existing subjects, cross-curriculum approaches, provision of specific subject courses and programmes, and stand-alone projects. Nearly all (95 per cent) report that a cross-curriculum approach is taken at at least one or more ISCED levels of education, in addition to a mix of other strategies.

28. Most responding member States described the many approaches taken to addressing ESD in the curriculum — from embedding ESD in education frameworks and requirements for knowledge, skills, attitudes and competences, together with full integration across all levels of education up to upper secondary, to experimental curricula with sustainability-focused modules, to support given to extracurricular activities such as field studies and competitions. Several member States, such as Montenegro and Slovenia, mention how flexibility in the curriculum can contribute to advancing ESD.

Whole-institution approaches

29. Whole-institution approaches are also considered to be a highly effective means to instil the knowledge, skills and choices for learners to live and work sustainably. Whole-institution approaches have been considered so promising that the ECE Steering Committee on ESD put forward the adoption of ESD school plans in every school as a priority action area for the third phase of implementation of the Strategy. Outcomes of efforts to promote whole-institution approaches and institute ESD school plans are discussed together in section IV.A below.

Quality assessment for ESD in schools and learning outcomes for students

30. Including ESD in quality assessment for formal education would ensure both a rigorous review of how ESD is implemented and reinforce the connection between what is considered to be a quality education and ESD. As the UNESCO Final Report notes, “quality education for sustainable development is about what people learn, its relevance to

today's world and global challenges and how learners develop the skills and attitudes to respond to such challenges and prosper".¹⁶

31. However, while education quality assessment or enhancement systems are reported to be in place in most member States, not all address ESD. Still, there has been some progress. The ECE Expert Group on Indicators considered as a measure of success that ESD would be addressed in a statutory quality assessment system in at least one ISCED level: in fact, 60 per cent of reporting member States confirm that that target has been met, although approaches vary widely. In some member States, ESD is considered in mandatory school accreditation; in others, sustainable development is integrated into students' final examinations at the upper secondary level.

ESD in non-formal and informal learning

32. The Strategy for ESD also takes into consideration the importance of non-formal and informal learning. Member States responses in general acknowledge that sustainable development must be addressed in other forms of learning: that formal education alone is not sufficient to support a transition to more sustainable societies. Most countries, like Poland, consider that ESD requires the active participation of stakeholders not only from the field of formal education but also "non-formal and informal education, as well as employers, NGOs and local communities" (Poland, NIR). Progress on this issue is, however, unclear. Close to 90 per cent of member States report that various ESD issues, methods and instruments are available for informal and public awareness-raising activities. Support for work-based learning is also reported to be fairly strong (71 per cent). However, member States' overall assessment is that ESD methods and instruments have not as yet been widely adopted for non-formal and informal learning, particularly in cases where these activities have been seen to be outside of their immediate sphere of influence and the responsibility of other actors such as NGOs and the private sector.

Multi-stakeholder cooperation in ESD implementation

33. Multi-stakeholder cooperation has long been considered essential to the promotion of ESD, and was strongly encouraged in the Strategy. Member States agree, with 95 per cent reporting that ESD was implemented through a multi-stakeholder process. Models for cooperation have included ESD councils (Manitoba (Canada)), round tables (Germany), partnership networks (Ukraine), and special focus working groups (e.g., on indicators, in Belgium). Indeed, many, like Iceland, suggest that advancing ESD has only been possible because of the engagement and participation of a cross section of stakeholders.

Opportunities for advancing Issue 2

34. **Increase attention to promising practices and the transfer of experience:** The creation of a database of best practices on ESD would help to transfer knowledge of tools, methods and practices in order to support the development and adoption of ESD policies, instruments and curricula. Efforts might include a special focus on issues that continue to challenge most member States, such as financing mechanisms and addressing quality in ESD curricula.

35. **Develop means to identify, monitor and assess non-formal and informal ESD initiatives:** What is most evident in the reports from member States is that, while there is a rich diversity of non-formal and informal efforts across the region, no mechanisms were in place at either national or regional levels to track and evaluate such efforts in order to

¹⁶ P. 21

review and strengthen outcomes. Standards or guidelines for those educators working in non-formal and informal contexts may be helpful.

C. Issue 3: Competence within the education sector

36. Educator training is the second priority of the UNECE Strategy phase III workplan, which puts a special emphasis on the importance of this challenge. This is discussed in further detail in section IV.B below.

D. Issue 4: Education for sustainable development tools and materials

37. The UNECE Strategy considered both the availability and the quality of ESD teaching tools and materials to be important in the implementation of ESD across the region. Member States provided descriptions of a wide range of such tools and materials, including: textbooks for students that now incorporate ESD (e.g., Bulgaria and Kyrgyzstan); curriculum and learning outcomes guidance materials developed for teachers by ministries of education (e.g., Estonia and Greece); curriculum support materials (backgrounders for teachers on sustainable development themes, project ideas, etc.) developed by NGOs (e.g., the “Green Pack” developed by the Regional Environment Centre for Central and Eastern Europe and used in classrooms in member States such as Hungary, Montenegro and Serbia); web portals as mechanisms to draw attention to a broad range of ESD support materials (e.g., Canada, Denmark, Germany, Netherlands and Poland); training materials (e.g., for the tourism industry in Croatia); and public awareness materials (e.g., public information handouts on environmental issues in Slovakia).

38. While, like Cyprus, many member States report the existence of national strategies, institutions and mechanisms to produce and make available ESD-related materials, particularly for primary, lower and upper secondary levels, fewer have given attention to quality criteria and approval of those materials. In most cases, teaching materials that relate to ESD are subject to the same comprehensive quality criteria as all other education materials used in public education. But some member States indicate that specific strategies on quality criteria and guidelines for ESD materials do not exist (e.g., Austria, NIR). At the present time, targeted efforts to address quality in ESD materials are ad hoc and often led by NGOs and academic institutions rather than the curriculum developers in ministries of education. Kyrgyzstan provides a rare example of the introduction of quality standards for textbooks that meet not only education requirements but serve the requirements of the country’s National Strategy for Sustainable Development (Kyrgyzstan, NIR).

39. In some member States, ESD resources and materials are generally lacking. Resources developed by NGOs and other institutions are often project-based and only distributed through an institution’s project website; no central portal exists to provide easier access to what potentially could be thousands of kits, lesson and project plans and interpretative materials.

Opportunities for advancing issue 4

40. **Provide greater assurances on quality and utility of ESD resources:** Member States such as Switzerland and the Netherlands note that, while the production of ESD teaching material is considerable, the demand for it may be in question and the quality will vary widely. Where ESD has not been mandated or integrated across the curriculum, the concern is that only a few educators will make use of the material. In the future production of ESD teaching tools and materials, needs assessments should be considered together with guidelines for quality.

41. **Review the concept and practice of open access for ESD resources:** Several member States, such as the Czech Republic, Denmark and Poland, have pointed out that open access policies are strongly influencing the production and provision of access to ESD materials. Public access to ESD resources needs to be guaranteed, and support for the development of such resources should include requirements for open access. Following the examples of member States such as Cyprus, Poland and Slovenia, a good practice is to make all materials on ESD platforms available free of charge: in Poland, in particular, usage is based on Creative Commons licences (see <http://www.e-globalna.edu.pl>) (Poland, NIR).

E. Issue 5: Research on and development of education for sustainable development

42. Support for the promotion of ESD research in the Strategy's third phase of implementation remains the same as reported in the second evaluation cycle, at just under 70 per cent.¹⁷ Challenges in advancing ESD research are more evident in countries of Eastern Europe, the Caucasus and Central Asia and South-Eastern Europe, with only 50 per cent of the member States in those subregions reporting support for research, compared with 75 per cent of the States in the European Union, other Western European countries and North America group. Several of the countries in the latter group, such as Iceland and Slovenia, point to the ways that research is being used to guide ESD policy and practice.

43. Individual comments provided by member States suggest that, at present, areas of research include analysis of educational goals supporting sustainability, processes for reorienting education systems, development of active learning methods and evaluation of the outcomes and effectiveness of ESD. As Denmark observes, however, there is no designated database tracking ESD research either regionally or at the member State level. Germany is one of the few countries to have conducted a comprehensive review of ESD research, its deficits and potential (Germany, NIR). Ireland intends to conduct a similar audit as part of its National Strategy on ESD.

44. Many member States refer to the importance of the UNESCO ESD Chairs to ESD research, as well as the roles that the Regional Centres of Expertise on ESD are playing at the national and regional level. Regional cooperation on research has served to strengthen ESD practices at the member State level. Emerging networks of researchers are also gaining recognition, such as the Sustainability Education Policy Network in Canada.

45. The Expert Group on Indicators considered that the existence of post-graduate programmes on ESD was an essential enabling condition for building a culture and practice of research on ESD. In 2015, over half of member States report that ESD-related master's and doctoral programmes are now available; however, the number of States reporting scholarships supported by public authorities remains low. The Czech Republic identifies two significant barriers to advancing ESD research at the tertiary level that are rooted in the nature of ESD itself: first, ESD is interdisciplinary, but the evaluation panels at the grant agencies require researchers to submit disciplinary-oriented projects; and, second, ESD is a multi-stakeholder endeavour, often with NGOs in lead roles, but lacking the academic credentials and channels to access research granting agencies.

¹⁷ See the second evaluation report (ECE/CEP/AC.13/2012/3), para. 58. Available from <http://www.unece.org/index.php?id=28258#/>.

Opportunities for advancing issue 5

46. **Urge grant makers to recognize ESD:** Engagement of decision makers in grant-making agencies may help to advance the recognition of ESD as a legitimate avenue of inquiry, including recognition for the interdisciplinary and multi-stakeholder nature of ESD and the involvement of non-academic actors in research.

47. **Strengthen networked and collaborative approaches to ESD research:** Joint research initiatives should be stimulated across higher education institutions and include non-academic ESD actors.

48. **Consider how research can be translated into practice:** An efficient interface between research and the practice of education and awareness-raising is needed, with attention given to having expert knowledge translated into practically oriented knowledge for educators, policymakers and other social actors.

F. Issue 6: Cooperation on education for sustainable development

49. Across the ECE region, the ECE ESD secretariat has played a central role in promoting ESD among member States and maintaining the focus on the Strategy over the original 10-year implementation period. The Steering Committee on ESD has kept member States engaged and accountable; has championed research into key issues, such as ESD indicators and teacher competences; has provided essential guidance to member States in the implementation of the three phase III priority areas; and has fostered the sharing of information among member States.

50. Other regional forums and agreements across the ECE region have also proven to be important arenas for advancing ESD interests. The Organization for Economic Cooperation and Development Annual Meeting of Sustainable Development Experts now has ESD as one of its central focuses; the Benelux Union (Belgium, the Netherlands and Luxembourg) has established an environmental education/ESD working group; ESD is assuming a central focus in the Nordic Sustainable Development Strategy of the Nordic Council of Ministers; and ministers of environment of the Union for the Mediterranean have provided an important endorsement of the Mediterranean Strategy on ESD. However, both Latvia and the Netherlands observe that a concrete agenda on ESD from the European Union may be missing (Netherlands, NIR). In November 2010, at the Education, Youth, Culture and Sport Council meeting in Brussels, 27 ministers of education invited European Union member States and the European Commission “within the limits of their respective competencies to support ESD and promote these council conclusions”.¹⁸ Lack of awareness of, or stronger European Union member State commitments to this recommendation may be limiting the response from the European Commission.

51. The nature and purpose of regional cooperation has ranged from the exchange of expertise and sharing of lessons learned, to financial support for research and implementation projects. Legislation and frameworks have been reviewed through cooperative efforts, teaching and curriculum support materials have been developed, capacities of teachers and trainers have been strengthened through workshops and exchanges and good practice guidelines have been compiled.

¹⁸ See document 14947/1/10/REV 1, available from <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2014947%202010%20REV%201> (accessed on 4 December 2015).

52. Much of the regional cooperation on ESD policy and practice takes place through networks, involving ESD policymakers and practitioners, such as the Regional Network on ESD, which unites partners from Belgium, France, Germany and Luxembourg, and the programme of the Regional Environment Centre for Central and Eastern Europe “ESD in the Western Balkans”. International initiatives, such as the nomination of Regional Centres of Expertise, have also supported the exchange of knowledge and expertise within the region.

53. Higher education networks are helping to advance ESD within the higher education sector in the region, with common objectives to mainstream environment and sustainability practices into curricula and learning, and to undertake sustainable development research. Many member States acknowledged the work of the Copernicus Alliance (a network of 55 post-secondary institutions in 33 countries); the Baltic University Programme (a network of about 225 universities and other institutes of higher learning throughout the Baltic Sea region); the Network of the Mediterranean Universities for Sustainable Development; the University Educators for Sustainable Development (a consortium of higher education institutions, organizations, agencies and associations gathered around four regions across Europe); and the Global Universities Partnership on Environment and Sustainability.

54. The networking of schools is also an important facet of cooperation across the region, providing mechanisms for students themselves to exchange views and learn from each other across countries and regions. Member States pointed to the importance of the Baltic Sea Region Schools Network, the International Schools Network of the Global Learning and Observations to Benefit the Environment (GLOBE) programme, the UNESCO Associated Schools Project Network and the Foundation for Environmental Education’s Eco-Schools.

Opportunities for advancing issue 6

55. **Increase networking opportunities and the sharing of knowledge across the region:** Many member States suggest that there is a need for strengthening regional and international connections further, through the provision of more opportunities to meet and related financing. Such networking opportunities would help to increase access to knowledge and the sharing of experience.

G. Issue 7: Conservation, use and promotion of knowledge of indigenous peoples

56. Out of the 38 reporting States, 22 gave some consideration to not only indigenous but also local and traditional knowledge in ESD. Those member States with indigenous populations commented on two facets of the issue: first, efforts to recognize and include indigenous perspectives across the curriculum; and, second, the need to strengthen education and ESD for indigenous populations as a necessary component of sustainable development. As Canada observes, “there remains a significant gap in including First Nations/indigenous peoples in ESD/environmental education across Canada” (Canada, NIR). Other countries such as Romania, Croatia, Hungary and Poland shared common observations on the promotion of local and traditional knowledge and skills in the curricula, classroom and community.

Opportunities for advancing issue 7

57. **Strengthen the understanding of indigenous, local and traditional knowledge in ESD:** Member States with indigenous populations should be encouraged to share research and collaborate to raise the profile of indigenous knowledge in ESD. The outcomes of this

collaboration would serve not only to strengthen the understanding of indigenous knowledge in their own countries, but would inform countries without indigenous populations of the global value of such knowledge.

58. **Consider broadening the scope of this issue to include addressing multicultural perspectives in the classroom:** Of particular note were responses from some member States that touched on the impact of immigration and the growing awareness of the importance of the knowledge and traditions of other cultures.

IV. Phase III priorities

A. Priority 1: Whole-institution approaches implemented through education for sustainable development school plans

59. Whole-institution approaches involve the learners, the institution and the community working together to embed sustainability in the curriculum, learning approaches, facilities, operations and community interaction. Today, nearly three quarters (71 per cent) of reporting member States indicate that not only are whole-institution approaches adopted, but incentives are being provided to encourage and support their adoption. Whole-institution approaches are being adopted more often at the primary and secondary levels, with nearly half of member States also including whole-institution approaches at the ECCE level.

60. Member States report a range of efforts, with many referring to international programmes such as the GLOBE programme and Eco-Schools that have encouraged participation of individual schools and students. Home-grown recognition programmes have also been influential, such as Austria's National Environmental Performance Award for Schools and Canada's Learning for a Sustainable Future national ESD innovation awards.

61. While in most member States, higher education institutions have considerable autonomy, many now consider sustainable development "as a wide-ranging issue covering all of their activities and they have their own action plans, programmes as well as quality systems" (Finland, NIR). In Canada, a major driver for whole-institution approaches at higher education institutions has been the Sustainability Tracking, Assessment and Reporting System of the American Association for Sustainability in Higher Education. Other countries apply principles of environmental management systems (e.g., International Organization for Standardization (ISO) standard 14001), or sign on to mechanisms such as the Sustainable Campus Charter, developed by the International Sustainable Campus Network and the Global University Leaders Forum.

62. Member States have learned that whole-institution approaches embed ESD where the learner is, and change the culture of the school and the surrounding community. School plans are seen to be the instruments for implementing the "whole-institution approach" in school operations, particularly in pre-primary, primary and secondary levels of education. As defined by the ECE ESD working group on school plans, "ESD school planning is a means to move beyond sustainability awareness-raising and to actively engage in a continuous cycle of planning, implementing and reviewing approaches to sustainability as part of every school's operations."¹⁹ The working group identified a number of core

¹⁹ Information Paper 4, "Working Group on 'ESD School Planning': Outcomes", submitted to the Steering Committee at its ninth meeting (Geneva, 3–4 April 2014). Available from <http://www.unece.org/index.php?id=34306#/>.

dimensions for such plans, including school governance arrangements, curriculum, teaching and learning, facilities and operations, partnerships and cooperation — particularly with the surrounding community — and self-assessment.

63. Member States have taken different approaches to addressing this priority. Many continue to focus primarily on sustainable development across the curriculum and how it is rolled out at individual school levels, together with learning resources (primarily online) to support teachers. Linking curricula and learning with facilities and operations is often achieved through participation in international programmes such as Eco-Schools; several countries have also introduced their own national programmes for recognition and certification of individual schools. Most of these efforts are voluntary, and while they are encouraged at the national level, participation remains a decision of the individual schools.

64. Those member States that have taken a more systematic approach to developing and implementing school plans across all schools include Canada (Manitoba), Cyprus, Finland and Hungary. In Hungary, the 2011 Public Education Act expressly legislates the whole-school approach, tasking the ministers responsible for education and environment to develop the Green Kindergarten and the Eco-School programmes across the country; based on this promotion it would appear that the number of Green Kindergartens has increased to 633 (17.6 per cent of all kindergartens); and approximately 700 schools are now part of the Eco-Schools programme (14.6 per cent of all schools) (Hungary, 2014 informal report). The Department of Education in Manitoba (Canada) has developed a Sustainable Schools Guide which has a template for schools to use when developing ESD school plans. Finland has likewise included ESD plans in its overall ESD strategies, and provides schools with models and practical support in drawing up a sustainable development plan. In Cyprus, the preparation of ESD school plans is now mandatory for each school across the country: they have been officially incorporated in primary education and are currently being piloted in pre-primary education; at a later stage, ESD school plans will be introduced in secondary education (Cyprus, 2014 informal report).

Looking forward on priority 1

65. **Review and consider how to address more widely and systemically the recommendations of the school plans working group:** In 2014, the school plans working group undertook a comprehensive review of work to date. Its findings are consistent with comments provided by the member States through their NIRs and informal national reports. As suggested by the working group, member States should consider how to:

- (a) Raise the profile of this issue;
- (b) Integrate whole-school approaches into regulatory frameworks and curricula;
- (c) Ensure adequate financial means and technical support and incentives;
- (d) Develop monitoring and assessment systems.¹⁹

B. Priority 2: Education for sustainable development in teacher education

66. The role of the educator is central to ESD implementation and requires interventions at both the initial, pre-service stage as well as through in-service and continuous learning opportunities. The Steering Committee established the ECE Expert Group on Competences, to define more clearly the ESD competences for educators and policy recommendations for promoting those competences across the education system. The resulting Expert Group report, “Learning for the Future: Competences in ESD” (ECE/CEP/AC.13/2011/6) has served to guide a number of ECE member States as they seek to strengthen the competences of educators, and has had significant influence globally. Most member States

report that ESD is now part of initial training (33 member States — 87 per cent) and in-service training (34 member States — 89 per cent), with over half also addressing ESD competences in training programmes for education leaders and administrators.

67. While these numbers appear high, some caution is warranted: the information on ESD training for educators, particularly for initial training, is often limited by the lack of knowledge of the activities of faculties of education, given the autonomous nature of higher education institutions in many member States. Where such information is available, many suggest that ESD in initial training is not systemic but rather made available through elective courses. Therefore, while ESD may be reported as being part of teacher education by close to 90 per cent of reporting member States, it is not clear where it has been fully integrated in teacher education by all teacher education institutions. Rather, the qualitative comments provided by member States suggest that ESD is being promoted in teacher education, but that in many jurisdictions it is not yet fully integrated. It is also not clear whether significant numbers of teachers have been trained to date. Member States such as Canada, Cyprus, the Czech Republic, Malta and Norway all specifically noted the lack of knowledge of ESD principles and the lack of ESD competences among teachers as an ongoing challenge.

68. Efforts to address teacher education are continuing. Setting teacher education as a priority during the third phase of the UNECE Strategy appears to have contributed to the progress made during this period. From 2013 to 2014 alone, 50 per cent of member States providing informal reports indicated that there have been significant advances made with regard to ESD in both initial and in-service training.

69. Legislative changes, including changes to standards and certification requirements in some member States, have been helpful to move teacher education institutions to reorient their programmes to support ESD. In other jurisdictions, education policymakers have taken more of a consultative and partnership approach, bringing the teacher education institutions together in a dialogue to explore the importance of ESD. Universities in some countries, such as Switzerland and Austria, have taken on the challenge independently. Nevertheless, in many teacher education institutions, ESD continues to be offered as an optional discipline or a topic of seminars rather than an integrative principle, with individual teacher-educators providing their own curricula.

70. Approaches to introducing ESD through in-service training and continuous learning for teachers vary widely across member States, with many taking more than one approach to reach out to and build the competences of teachers who are already in the classroom. In-service professional development for ESD for teachers and education leaders/administrators is often voluntary, ad hoc and delivered by NGOs, or supported primarily through the provision of web-based resources. In some jurisdictions, like Monaco, training may be mandatory at one level (primary) but voluntary at another (secondary) (Monaco, NIR). Less is known about the actual content of these initiatives — e.g., do they focus primarily on curriculum content, instructional approaches or whole-school thinking, etc.?

71. Over half of the responding countries have reported including ESD competences in the training of education leaders and administrators, through training institutes such as the Cyprus Pedagogical Institute, through government-sponsored programmes and through initiatives managed by NGOs.

72. Network models are also providing support for peer-to-peer learning among educators — both those involved in teacher preparation and networks of teachers themselves. Chapters of the International Network of Teacher Education Institutions, led by the UNESCO Chair in Reorienting Teacher Education towards Sustainability, are starting to emerge in countries such as Germany. Nearly all member States in the the European Union, other Western European countries and North America group and two thirds of

member States in the Eastern Europe, the Caucasus and Central Asia group report the existence of networks and platforms of educators involved in ESD, but none were reported for the South-Eastern Europe region.

Looking forward on priority 2

73. **Review and consider how to address the recommendations of the teacher education working group on “Introducing ESD to Teacher Education”.** The findings of the working group’s 2014 review²⁰ are consistent with many of the comments provided by member States in the NIR and informal reports. The following working group recommendations should therefore be considered:

- (a) Make teacher education visible in ECE strategic policy documents;
- (b) Reaffirm the importance of political support and leadership for teacher education;
- (c) Develop professional development and national mentoring programmes for teachers in ESD;
- (d) Promote partnerships and multi-stakeholder engagement in teacher education programmes.

74. **Strengthen and support professional development networking opportunities for teachers and administrators:** The importance of peer support for educators should be recognized and reinforced. Given the limited availability of government support for teacher and leader/administrator networking on ESD, particularly in member States in Eastern and South-Eastern Europe, the Caucasus and Central Asia, consideration should be given to mechanisms to foster such networks.

C. Priority 3: Technical and vocational education and training in support of sustainable development and the transition to green economies

75. Technical and vocational education and training for sustainable development considers the technical skills and competences required for work in new sectors (such as renewable energy technologies), as well as for work in reorienting existing sectors to operate more sustainably (such as construction, manufacturing, tourism, hospitality services and others). However, ESD in TVET encompasses more than the acquisition of sustainable development-related skills; it includes the fostering of understanding and values necessary to change the workplace, the community and home: investments in TVET have benefits throughout all of society, and not just for the learner’s employability.

76. Reviewing progress on this third priority sheds light on the challenges and opportunities member States have faced in addressing this priority. In the first year, many countries focused on conceptual challenges, seeking to understand more clearly what constitutes a “green economy” and “green jobs” and how these interface with the broader societal goals of sustainability. Only a year later, countries were describing how sustainability thinking was beginning to emerge in TVET, with programming influenced by both government policies promoting the green economy and the growing private sector demand for a workforce trained in a range of environment-related skills. In 2014/15, new competences and skill sets are being defined, with a wide range of new courses and training

²⁰ See Information Paper 3, “Working Group on ‘Introducing ESD to Teacher Education’: Outcomes”, submitted to the Steering Committee’s ninth meeting. Available from <http://www.unece.org/index.php?id=34306#/>.

programmes being offered. Nevertheless, progress on this third priority has been slower than actions reported for priorities one and two: less than half of responding member States (44 per cent) indicate in their 2014 informal reports that there has been significant progress on TVET in the past year.

77. Government policies for greening economies are part of several factors that appear to be instrumental in advancing TVET in support of sustainability. Member States such as Armenia, Bulgaria, Canada, Finland, France and Switzerland, or local governments therein, all mention the influence of national/provincial policies and/or European Union standards and directives that have required or encouraged changes to TVET to comply with environmental regulations, clean technology development and new business opportunities. Equally significant has been pressure from the private sector to address the need for skilled workers in new fields, as noted by member States such as Austria, Finland, France, Romania and Sweden.

78. Multi-stakeholder cooperation has been essential to retool TVET to support greening economies. Engagement of multiple partners among member States has involved: governments working with industry sectors to define new competences and skills profiles; working with TVET schools to revise curricula and upgrade equipment; working with trade unions to ensure fair and safe development of workers in new “green jobs”; TVET schools working with the private sector to secure apprenticeships and work placements and meet labour demands; and working with local communities to undertake demonstration projects, such as sustainable buildings and renewable energy installations.

79. While progress has been encouraging, there are still major challenges to advancing TVET in many countries: Armenia, Georgia, Romania and Ukraine all suggest that TVET in general needs reform and strengthening, and more guidance is needed. While the demand for skilled workers in green industries may be growing across the ECE member States, and government policies for green economies are more prevalent, there remains a gap in the ability of many TVET institutions to respond to the new opportunities.

Looking forward on priority 3

80. **Consider how to address the recommendations of the information paper “Aligning technical and vocational education and training with sustainable development”:**²¹ In 2014, an information paper was developed by the United Nations University Institute for Advanced Science and ECE to review progress on ESD in TVET. Their findings are consistent with the comments provided by the member States through their informal national reports. The following recommendations should therefore be considered:

- (a) Strengthen in-service training of TVET teachers;
- (b) Reflect national development goals in TVET policy and include TVET in national planning processes;
- (c) Encourage diversity of learning paths including between educational levels and across sectors.

81. **Align TVET with international efforts to retool TVET towards sustainable development:** In addition to the above recommendations, the UNESCO Final Report recognizes the considerable work under way internationally, through which sustainable development policy and planning and TVET policy and planning are now aligning in the

²¹ Information Paper 5 submitted to the Steering Committee’s ninth meeting. Available from <http://www.unece.org/index.php?id=34306#/>.

green economy and green skills agenda. These efforts are leading to new research and capacity-building efforts.²² Aligning ECE member States TVET work with international efforts will be important. In continuing to work towards promoting ESD in national TVET systems, opportunities should be sought to work with the United Nations and related agencies, as well as with the private sector, to further define the new economic opportunities that are arising and the need for, and value of, a skilled and committed workforce inspired to change the world around them.

V. The future of education for sustainable development across the region

82. Progress by ECE member States during 10 years of the Strategy has been recognized globally,²³ particularly the innovations shared on ESD indicators, whole-school planning and teacher competences, as well as the significant advances made in reorienting education policy and curricula and aligning education objectives with national sustainable development visions and goals. However, ESD is a long-term process — one decade is not enough time to reorient and transform complex education systems. Moving forward will require actions to address the challenges and obstacles that continue to slow progress on ESD, as well as creating opportunities to advance the ESD agenda beyond 2015.

A. Challenges and obstacles

83. **Securing and sustaining long-term leadership and political will among key decision makers:** Leadership and political will have been critical success factors contributing to advancing ESD over the past 10 years. However, sustaining long-term leadership and political will on ESD going forward is one of the foremost challenges facing ECE member States, particularly in view of policy and staffing changes in governments. A number of member States, including the Czech Republic, the Republic of Moldova and Sweden, note the difficulty of maintaining political support and the prioritization of ESD at decision-making levels in key ministries. This includes the need for economic and finance departments to recognize the importance of investing in ESD.

84. **Achieving structural reform of education systems:** Even in places where the leadership and political engagement in support of ESD have been high, member States (e.g., Finland and Germany) and provinces (e.g., Manitoba (Canada)) find that the structural embedding of ESD throughout education systems and budgets continues to be a challenge. There are three elements to the structural reform challenge: ongoing financial resources from both government sources and the donor community; skilled professionals to advance ESD policies and practices, and more time to continue the work.

85. **Putting in place mechanisms for cooperation, engagement and support for formal, non-formal and informal learning:** The importance of interdepartmental cooperation to strengthen ESD implementation was highlighted in the UNESCO Final Report.²⁴ In 2015, ECE member States described mechanisms they have used, both formal and informal, to overcome difficulties in creating and implementing a shared interdepartmental agenda on ESD. Gaps in communication continue to exist, but member States are also finding ways to promote policy coherence and coordination of work across

²² Final report, p. 31.

²³ Ibid.

²⁴ Pp. 58 and 167.

environment, sustainable development and education interests. Member States have also recognized that ESD requires the participation of a broader cross section of stakeholders beyond government departments; however, facilitation skills and mechanisms continue to be needed to help align expectations and agree on common goals.

B. Opportunities for advancing implementation

86. In 2013 and again in 2014, at its eighth and ninth meetings, the ECE Steering Committee on ESD committed to continue implementing the Strategy beyond the conclusion of phase III (see ECE/CEP/AC.13/2013/2),²⁵ within an extended framework.²⁶ All reporting member States indicate that they have not yet achieved full implementation of ESD, and 24 have provided more specific information on their future priorities. In the future implementation of the UNECE Strategy, consideration should be given to the recommendations set out in the following paragraphs.

87. **Review and strengthen existing mechanisms for implementation, refresh national strategies and plans and expand regional and international cooperation:** A number of member States, such as Ireland, have ESD strategies in place that will cover activities over the next three to five years, including actions supporting the UNESCO Global Action Programme. Others have yet to consider what mechanisms will be needed to continue work. At the national level, each member State should be encouraged to review their progress on ESD and identify the critical success factors including those mechanisms for multi-stakeholder dialogue and engagement, both across government departments and among external groups.

88. Some thought should be given to how to strengthen capacities for collaboration, engagement, regional and international cooperation. Continued partnerships with UNESCO to align shared priorities and advance ESD work will be important, particularly in those areas of expertise of the ECE Steering Committee on ESD such as teacher competences and whole school approaches.

89. **Continue to strengthen the integration of ESD into education policy and sustainable development policy:** Member States should reinforce sustainability in the purpose of education and embed education in national sustainable development strategies, plans and international commitments. While some countries such as Finland have integrated education into their national visions, commitments and strategies for sustainable development, changes at the operational level will need to demonstrate how education will “take its responsibility in advancing sustainability seriously” (Finland, NIR). More work will be needed by member States to support the targets on education in the new global Sustainable Development Goals, and advance education provisions in related regional environmental conventions, and international sustainable development conventions and programmes.

90. **Continue to strengthen and intensify efforts to address the three priority action areas from Phase III:** Ensure an ESD school plan in every school, encourage and support ESD in teacher education and reorient TVET in support of sustainable development and the transition to green economies.

91. **More attention should be given to strategies and plans to promote sustainable development in non-formal and informal learning:** The limited attention given to non-

²⁵ Available from <http://www.unece.org/index.php?id=31914#/>.

²⁶ See draft future implementation framework (ECE/CEP/AC.13/2016/4), available from <http://www.unece.org/index.php?id=41587#/>.

formal and informal learning has been reflected in member States' reporting (50 per cent of States have either not started or are just in the first stage of progress). Creating awareness of sustainable development across other learning communities and the general public should be considered jointly with formal education in a new phase of work.

92. **Address the need for ESD research, monitoring and evaluation:** The limited availability of ESD research and the need for robust approaches to monitoring and evaluation of ESD initiatives have been identified as significant barriers to ESD implementation. Most member States in 2015 recognize the need for more research on ESD and the need for monitoring, assessment and evaluation of ESD actions and learning outcomes. Theories of learning, new methodologies for teaching, and evidence of progress need to be systematically collected, rigorously reviewed and disseminated through open access mechanisms. ESD research needs to be seen as a legitimate and important field of inquiry. Promoting the need for and value of, ESD research, monitoring and evaluation should be a priority in a new phase of work.

C. Placing education for sustainable development at the core of education systems

93. Throughout 10 years of the UNECE Strategy for ESD, member States have committed to integrating sustainable development into education and learning. The outcomes of their efforts are consistent with those achieved around the world through the United Nations Decade of ESD: ESD is being recognized as an enabler for sustainable development; ESD is spreading across all levels and areas of education and is changing approaches to learning; and a broad range of stakeholders are being engaged in the process as a necessary and effective implementation mechanism for ESD. Across the ECE region, ESD is now reflected in the national education policy documents of the majority of member States, and has led to its inclusion in curriculum frameworks, particularly at the primary, lower and upper secondary levels. ESD tools and resources are widely available in many member States, with some methods and instruments also in place for non-formal and informal learning. Efforts are also under way to promote whole-institution approaches, address educator competences and retool TVET in support of sustainability.

94. In a new phase of work, opportunities to integrate ESD further into education and sustainable development policy may be driven by growing national sustainable development and green economy planning, commitments to regional and international sustainable development conventions and the new Sustainable Development Goals. Sharing lessons from the ECE experience will be an important contribution to the UNESCO Global Action Programme on ESD, and to the growing national and international networks and partnerships of ESD champions and practitioners. The considerable experience and success of member States from 2005 to 2015 is an important foundation upon which to build the future ECE ESD implementation framework. This third evaluation report and its companion publication, the *Ten years of the UNECE Strategy for Education for Sustainable Development* full outcomes document, should be a useful tool in guiding member States to consider the evidence, learn from experience, build on what is working and address gaps in strategy and action.
