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Fourth evaluation report of the United Nations Economic Commission for Europe Strategy for Education for Sustainable Development

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

Fourth evaluation report of the United Nations Economic Commission for Europe Strategy for Education for Sustainable Development**

Summary

The present document provides a summary of progress made by the United Nations Economic Commission for Europe (ECE) member States in implementing the ECE Strategy for Education for Sustainable Development (ESD) during the implementation phase 2017–2019 (also referred to as “phase IV of implementation”). The present synthesis report is based on the analysis of 34 national implementation reports submitted by member States for that phase.

The national implementation reports reveal that many countries have policies in place to support ESD but the challenge remains of coordinating those policies and increasing the number of countries with national implementation plans for ESD, as observed during the previous phases of implementation. Many countries have expanded policies to the non-formal and informal levels, encouraged synergies and involved various stakeholders in ESD. However, the “whole-institution approach” needs to be re-examined and further implemented in the context of some countries, mainly in relation to incentives and policies. In almost all countries, educators have reported having received training on ESD competences during pre- and in-service training. Tools and materials for ESD are widely produced through the encouragement of national strategies and investment of public money,

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but more needs to be done in terms of dissemination and accessibility of materials and the establishment of quality control criteria. Many Governments recognize the need to connect research to ESD policy and practice. Concerning promotion of research and development, the weakest element is the evaluation of the Strategy's outcomes. Only a limited number of countries place particular emphasis on recognizing indigenous components across the curriculum. Among reported challenges in carrying out national implementation plans on ESD, countries mainly refer to financial and time constraints, the need to disseminate good practices and experience and the establishment of synergies.

The findings of the present report will be taken into consideration in drafting the future implementation framework of the ECE Strategy for ESD up to 2030 and will be discussed at the Third High-level Meeting of Education and Environment Ministries at the Ninth Environment for Europe Ministerial Conference, to be held in Nicosia, from 5 to 7 October 2022.

I. Introduction

1. The present report provides a review of the progress of the United Nations Economic Commission for Europe (ECE) member States in implementing the ECE Strategy for Education for Sustainable Development (“Strategy for ESD” or “Strategy”) during phase four of implementation (2017–2019), with reference to the summary progress made by and notable achievements of ECE member States during the first three phases of implementation and reporting, set within the initial 10-year time frame (2005–2015).

A. Background

2. Since the adoption of the Strategy for ESD (CEP/AC.13/2005/3/Rev.1) in 2005 by the First High-level Meeting of Environment and Education Ministries (Vilnius, 17 and 18 March 2005), the ECE member States have worked together to promote ESD across the ECE region and to undertake a regular assessment of the Strategy’s implementation at the national level that is overseen by the intergovernmental Steering Committee on ESD, a body charged with monitoring progress in the Strategy’s implementation.¹

3. The framework for assessment is based on the unified reporting format and a set of indicators² developed by the Expert Group on Indicators for ESD, established at the Vilnius High-level Meeting of Environment and Education Ministries (CEP/AC.13/2005/2, para. 23). The first three national implementation reporting cycles were completed in 2007, 2010 and 2014, within the initially agreed 10-year span of implementation and in accordance with the workplans of implementation for each of the corresponding phases, which set out the timelines for the reporting exercises.³ The national implementation reporting examines the progress achieved and identifies the main successes and challenges of the Strategy’s implementation at the national level in terms of implementing all objectives of the Strategy and its priority action areas.

4. The progress in implementing the Strategy during the period 2005–2015 was acknowledged by the Third High-level Meeting of Education and Environment Ministries, held on 8 June 2016 within the framework of the Eighth Environment for Europe Ministerial Conference (Batumi, Georgia, 8–10 June 2016), where the ministers and heads of delegation supported the continuation of the Strategy’s implementation at the regional level beyond its first decade, its alignment with the 2030 Agenda for Sustainable Development, the Sustainable Development Goals and the first 5-year phase of the Global Action Programme on Education for Sustainable Development led by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Participants at the High-Level Meeting in Batumi, Georgia, extended the mandate of the ECE Steering Committee on ESD until 2030, and requested it to prepare, with the support of the secretariat, a workplan and budget for the Strategy’s implementation for the period 2016–2019.⁴ As the draft workplan could not be approved before the next meeting of the Steering Committee held in 2017, it was agreed to consider the first phase of the new implementation period (referred to in the present document as “phase IV of implementation”) as starting from 2017.

5. The fourth mandatory reporting cycle was carried out in 2018, by the end of phase IV of implementation. The original deadline for the submission of national implementation reports of 1 November 2018 had been extended to mid-June 2019 following requests for more time from several member States. Preliminary results of the report were presented at the

¹ See ECE/CEP/BATUMI.CONF/2016/11, annex II, para. 4 (d), available at <https://unece.org/DAM/env/documents/2016/ece/ece.batumi.conf.2016.11.e.pdf>.

² See *Learning from each other: The UNECE Strategy for Education for Sustainable Development* (United Nations publication, ECE/CEP/159).

³ For the workplans for the implementation of phases I, II and III of the ECE Strategy for Education for Sustainable Development, see, respectively, CEP/AC.13/2005/8, ECE/CEP/AC.13/2008/5 and ECE/CEP/AC.13/2011/4.

⁴ See ECE/BATUMI.CONF/2016/2/Add.2, paras. 1 and 10, available at <https://unece.org/DAM/env/documents/2016/ece/ece.batumi.conf.2016.2.add.2.e.pdf>.

fourteenth meeting of the Steering Committee in 2019 and during its online consultation held on 7 May 2020. The pre-final results were presented at the fifteenth meeting of the Steering Committee (Geneva, 19 and 20 October 2020).

B. Methodology

1. Format of reporting - data collection instrument

6. The present report reviews the data collected through national implementation reports submitted by member States at the end of the fourth implementation phase, 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. The framework for assessment used in this evaluation report is the same as that used for the phase I, phase II and phase III reports (respectively, ECE/BELGRADE.CONF/2007/INF/3–ECE/CEP/AC.13/2007/2 and Add.1 and Corr.1, ECE/CEP/AC.13/2012/3 and ECE/CEP/AC.13/2016/3) and follows the Criteria to assess successful implementation of the UNECE Strategy for Education for Sustainable Development set out by the ECE Expert Group on Indicators, as well as the Guidance for Reporting on the Implementation of the UNECE Strategy for Education for Sustainable Development (ECE/CEP/AC.13/2009/5). The format for reporting on implementation of the Strategy during phase four of implementation (2017–2019) was developed based on the procedure for the review of implementation contained in the draft workplan for 2017–2019 (ECE/CEP/AC.13/2018/3). The reporting format also took into account the two previous reporting exercises in 2010 and 2014, the related reporting templates (ECE/CEP/AC.13/2009/10, annex, and ECE/CEP/AC.13/2014/5, annex, respectively) and the feedback from countries following those exercises on the workability and feasibility of the indicators and the requested information for reporting. In 2014 and 2018, the format for reporting on the implementation of the ECE Strategy for ESD (ECE/CEP/AC.13/2018/4) was updated by the secretariat, in consultation with the Bureau and Expert Group on Indicators, to reflect the requirements of phase III (2011–2015) and the priorities of the 2017–2019 implementation phase, outlined in the framework for the future implementation of the Strategy (ECE/BATUMI.CONF/2016/11).

8. As complementary sources for the preparation of the fourth evaluation report, the following documents were used in addition to the national implementation reports:

(a) The UNECE Strategy for Education for Sustainable Development (CEP/AC.13/2005/3/Rev.1);

(b) The format for reporting (ECE/CEP/AC.13/2018/4);

(c) The guidance for reporting on the implementation of the UNECE Strategy for Education for Sustainable Development (ECE/CEP/AC.13/2009/5);

(d) The first progress report on the implementation of the Strategy (2005–2007), “Learning from each other: Achievements, challenges and the way forward” (ECE/BELGRADE.CONF/2007/INF/3–ECE/CEP/AC.13/2007/2 and Add.1 and Corr.1);

(e) The second evaluation report on the implementation of the Strategy (2008–2010), “Learning from each other: Achievements, challenges and ways forward” (ECE/CEP/AC.13/2012/3);

(f) The third evaluation report on the implementation of the Strategy (2011–2015), “Learning from each other: Achievements, challenges and ways forward” (ECE/CEP/AC.13/2016/3);

(g) The publication *Ten Years of the UNECE Strategy for Education for Development: Evaluation Report on the Implementation of the UNECE Strategy for Education for Sustainable Development from 2005 to 2015*.⁵

⁵ United Nations publication, ECE/CEP/179.

2. Participation and analysis approach

9. Out of the 56 ECE member States, 34 submitted a national implementation report to the ECE secretariat for the fourth reporting period. In order to gain insight into issues specific to ECE subregions, the data were also analysed by groupings of countries. This level of comparative analysis was used very cautiously because of disparity in group size, with eight countries reporting in the Eastern Europe, the Caucasus and Central Asia group (Armenia, Azerbaijan, Belarus, Georgia, Kyrgyzstan, Russian Federation, Tajikistan and Ukraine), four countries in the South-Eastern Europe group (Bosnia and Herzegovina, Montenegro, Serbia and Turkey), one country in the Western Asia group (Israel), and 21 countries in the European Union, other Western European countries and North America group (Andorra, Austria, Belgium, Bulgaria, Croatia, Cyprus, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Malta, Netherlands, Romania, Slovakia, Slovenia and Switzerland).

10. Although participation of member States has slightly decreased over the previous reporting rounds, with 35 member States submitting reports in 2007, 36 in 2010 and 38 in 2015, it is important to note that six countries that had not participated in the third reporting cycle, successfully participated in the fourth evaluation cycle. Specifically, the member States concerned were Azerbaijan, Belarus, Tajikistan and the Russian Federation (Eastern Europe, the Caucasus and Central Asia group), Italy (European Union, other Western European countries and North America group) and Israel (Western Asia group). Eleven (11) countries that had submitted national implementation reports for phase III did not submit reports for the fourth phase of the reporting. Additionally, due to the late submission of the national implementation reports from Ukraine (October 2020) and Armenia (December 2020), it was not possible to incorporate data from these member States into the present report.

II. Progress towards meeting the Strategy's objectives

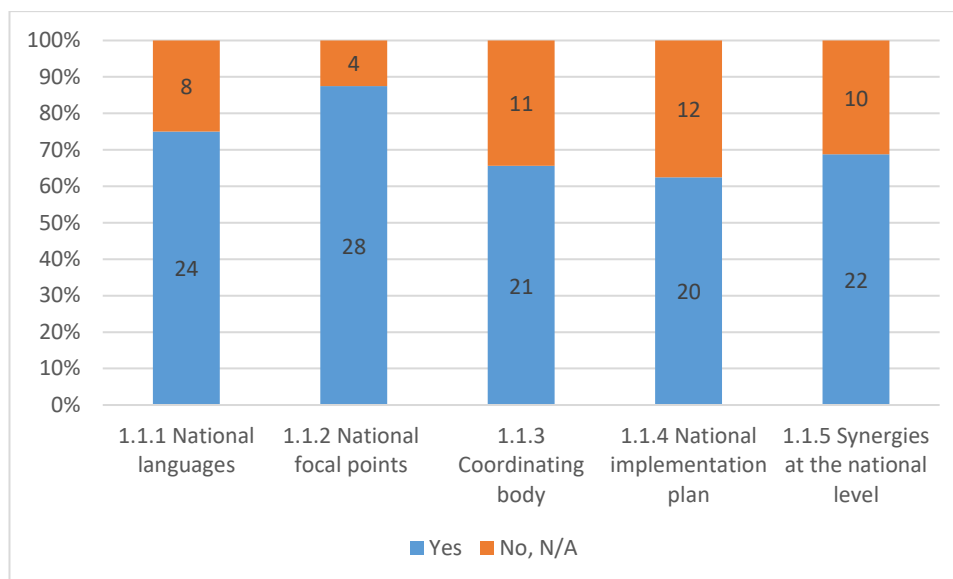
A. Issue 1: Policy and regulatory framework

11. Issue 1 is aimed at diagnosing member States' status regarding whether they ensure that policy, regulatory and operational frameworks support the promotion of ESD through: prerequisite measures (indicator 1.1); policy, regulatory and operational frameworks supporting the promotion of ESD (indicator 1.2); and national policies that support synergies between processes related to the Sustainable Development Goals, sustainable development and ESD (indicator 1.3).

12. The most widely implemented prerequisite measure taken to support the promotion of ESD (indicator 1.1) was the appointment of the national focal point(s) (28 member States – 87.5 per cent), followed by the availability of the Strategy for ESD in the national language (24 member States – 75 per cent). Other prerequisite measures include synergies at the national level on policy processes related to ESD (22 member States – 68.75 per cent), the existence of coordinating bodies for the implementation of ESD (21 member States – 65.62 per cent) and national implementation plans (20 member States – 62.50 per cent). Figure I below presents data on indicator 1.1.

Figure I

Prerequisite measures for the promotion of education for sustainable development (indicator 1.1)



13. Although most countries appoint national focal points, more work needs to be done regarding the coordinating bodies. Focal points come from various backgrounds and are mostly appointed through ministries related to education and/or the environment and/or science. Despite the fact that, for a number of member States, adopting national implementation plans for ESD remains a challenge, it is important to note that the majority of countries have sought synergies between policy processes in ESD in their national context.

14. A variety of policy, regulatory and operational frameworks supporting promotion of ESD are in place in member States with national policy documents (30 member States – 93.70 per cent), with national curricula, standards, ordinances and requirements (29 member States – 90.62 per cent) being the most popular such frameworks (indicator 1.2). Evidently, these frameworks are included in national educational or legislative documents and national curricula at all levels of education, however, through the reports, a lack of adequate information about higher education is reported (Romania and Slovenia).

15. Other relevant frameworks include non-formal and informal national policies/documents and public awareness addressed in national documents, as well as public budgets, each reported by 24 member States (75 per cent), followed by the establishment of formal structures of interdepartmental cooperation related to ESD and of mechanisms for multi-stakeholder cooperation on ESD, each reported by 22 member States (68.75 per cent). For example, in Cyprus, a standing Unit for Education for the Environment and Sustainable Development was established in 2018, responsible for implementing ESD in a systematic, comprehensive and long-term manner in formal, non-formal and informal education. The creation of the Unit has contributed to tackling problems such as the fragmentation of issues within each directorate, overlap and the absence of a unified policy in the field of ESD at all levels of education. In Belgium, the Government has established a multisectoral public administration working group on sustainable development to guarantee that comprehensive, coordinated sustainable development policy objectives are formulated, so that a converging policy approach can be applied at the public administration level.

16. National policies support synergies between processes related to the Sustainable Development Goals, sustainable development and ESD (indicator 1.3) either through the existence of a national, stand-alone sustainable development policy (25 member States – 78.2 per cent) or through ESD being part of sustainable development policies (24 member States – 75 per cent).

17. National policy documents are often correlated with the Sustainable Development Goals (Andorra, Belarus, Belgium, Cyprus, Germany, Hungary, Iceland, Kyrgyzstan, Latvia, Montenegro, Netherlands, Romania, Slovenia, Switzerland and Turkey), with the UNESCO

Global Action Plan on ESD (Ireland, Latvia, Malta, Netherlands and Switzerland) and with other governmental policies referring, for example, to: climate change (Cyprus, Greece, Iceland and Montenegro); energy efficiency (Belarus, Latvia), to biodiversity (Cyprus, Greece, Hungary, Israel and Serbia); and the sea (Cyprus, Greece and Latvia).

18. One interesting example is that of Germany, where the National Action Plan established in 2017 defines 130 objectives and 349 measures to scale up ESD in local areas and at all levels of the German education system. The participatory development, adoption and implementation of this National Action Plan by the National ESD Platform triggered federal States and local authorities, as well as relevant stakeholders from society, science and industry in Germany, to initiate or further develop their own ESD strategies or strategic documents.

19. ESD is gaining attention in terms of its implementation at the preschool level, with more countries establishing regulatory frameworks for addressing implementation at that level. For example, in Georgia a major effort is being made to introduce changes at the preschool education level promoting ESD, with more than 400 kindergartens provided with guidebooks and ESD-oriented training sessions for educators. Similarly, in Croatia, Finland, Greece, Hungary, Iceland, the Russian Federation, Serbia, Slovenia and Switzerland national implementation plans are extended to or particularly address preschool education.

20. Challenges ensuring that policy, regulatory and operational frameworks support the promotion of ESD include aligning State targets with the implementation of the Sustainable Development Goals (Estonia and Iceland), lack of evaluation systems to measure achieved outcomes (Belgium and Finland) or coordination of initiatives or sectors within the State (Slovakia).

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

21. Issue 2 referred to promoting sustainable development through formal, non-formal and informal learning and included six indicators (2.1 to 2.6).

22. Indicator 2.1 examined whether key themes of sustainable development are addressed explicitly in the curriculum/programme of study at various levels of formal education through sustainable development themes, learning outcomes and teaching and learning methods.

23. Twenty-nine (29) member States (90.62 per cent) reported that key themes of sustainable development are addressed explicitly in the curriculum/programme of study at various levels of formal education (subindicator 2.1.1). However, the way in which sustainable development themes are defined depends on the context of each country and thus more emphasis could be placed on environmental issues (Slovakia and Serbia), social issues (Belarus, Estonia and Turkey), economic issues (Romania and Tajikistan) or a mixture of the three (Belgium, Croatia, Cyprus, Finland, Greece, Hungary, Kyrgyzstan, Latvia, Russian Federation and Switzerland).

24. In the Romanian vocational education and training system, the “Local Development Curriculum” is adapted to local development needs. It is developed by schools in partnership with companies, considering labour market trends and local needs.

25. In Montenegro, the vocational education and training centre developed 26 modularized curricula, 10 of which have been implemented since the 2017/18 academic year, all of which ensure the attainment of key competences through specific modules. The curricula contain a range of modules through which students are able to familiarize themselves with sustainable development.

26. Subindicator 2.1.2 examined whether learning outcomes (skills, attitudes and values) that support ESD are addressed explicitly in the curriculum/programme of study at various levels of formal education. Twenty-nine (29) member States (90.62 per cent) responded positively. Some countries referred to thinking skills, problem solving and group work skills (for example, Belarus, Bulgaria, Cyprus, Estonia, Greece, Kyrgyzstan, Russian Federation and Switzerland).

27. In Latvia and Romania, learning outcomes are standardized. Specifically, in Latvia, there is an 8-level Latvian Qualifications Framework, established in 2012. The developed level descriptors, which address national education and occupational standards, as well as the European Qualifications Framework level descriptors, are based on learning outcomes, and formal education qualifications are linked to these levels.

28. The Swiss national implementation report describes cross-cutting competences referring to ESD, such as systems thinking, anticipatory, normative, strategic and interpersonal competences.

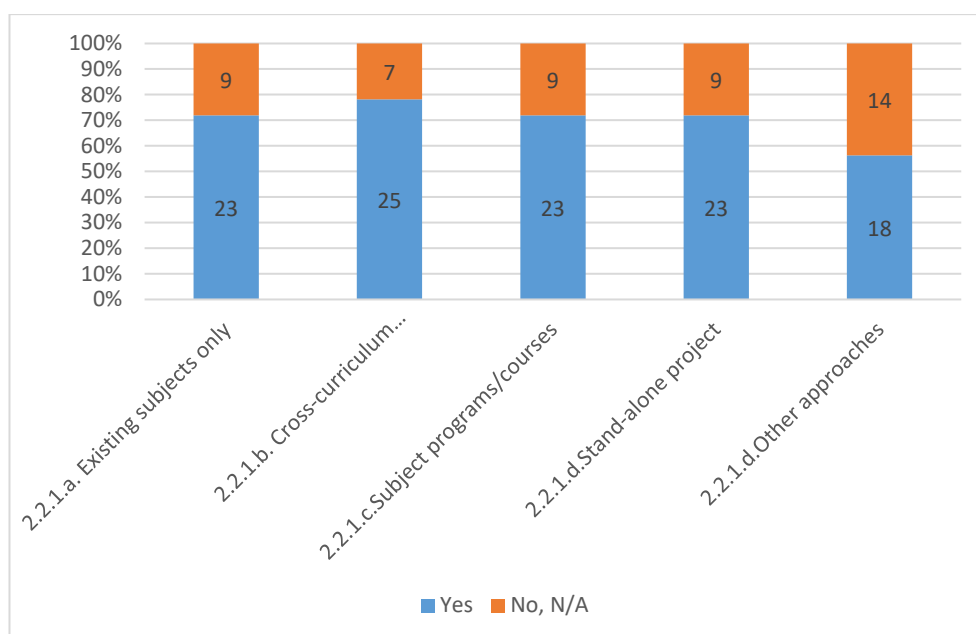
29. In Bulgaria, acquiring competences for implementing sustainable development principles is one of the main objectives of preschool and school education set out in the Preschool and School Education Act of 2015.

30. Subindicator 2.1.3 referred to whether teaching and learning methods that support ESD are addressed explicitly in the curriculum or programme of study at various levels of formal education. Twenty-four (24) member States (75 per cent) responded positively, referring to a variety of approaches implemented both at the formal and non-formal levels. For most countries, it is usually left to the teacher to choose the learning methods supporting ESD. For example, in Finland, schools, education institutions and teachers have autonomy regarding the learning methods they use. In the Netherlands, under article 23 of the Constitution guaranteeing freedom of education, the national curriculum only describes the “What” (content) in highly general/abstract terminology; the “How” and “When” are the responsibility of individual schools.

31. Some countries refer to specific teaching methods in their curricula, the majority of which promote learner-centred teaching (Estonia, Finland, Hungary, Latvia, Netherlands, Romania and Slovenia). Approaches of particular significance include excursions and outdoor learning (Bosnia and Herzegovina, Cyprus, Greece and Romania), learner-driven projects such as problem solving, surveys, simulations, role playing, games, conceptual and perceptual mapping, information and communications technology, case study, campaigning, etc. (Croatia, Ireland, Malta, Montenegro, Russian Federation and Slovakia).

32. Indicator 2.2 examined whether strategies to implement ESD are clearly identified. Member States were required to report on whether ESD is addressed through: (a) existing subjects only; (b) a cross-curriculum approach; (c) the provision of specific subject programmes and courses; (d) a stand-alone project; or (e) other approaches. Figure II below presents data pertaining to indicator 2.2.

Figure II

Identified strategies to implement education for sustainable development

33. Specifically, as indicated in figure II above, according to the national reports: in twenty-three (23) member States (71.87 per cent) ESD is addressed through existing subjects; in twenty-five (25) member States (78.12 per cent) ESD is addressed through a cross-curriculum approach; in twenty-three (23) member States (71.87 per cent) ESD is addressed through subject programmes or courses; in twenty-three (23) member States (71.87 per cent) ESD is implemented as a stand-alone project; and in eighteen (18) member States (56.25 per cent) other approaches are in use.

34. Whole institution approaches to ESD were reported in indicator 2.3. As stated in the third evaluation report, whole-institution approaches are considered to be “a highly effective means to instil the knowledge, skills and choices for learners to live and work sustainably”.⁶ Thus, whole-institution approaches were acknowledged by the ECE Steering Committee by putting forward the adoption of ESD school plans as a priority action area for phase II of implementation of the Strategy. Whole institution approaches involve all stakeholders within the school and the community environment working collaboratively to embed sustainability in the curriculum; the pedagogical approaches implemented; facilities; and interactions with the community.

35. Data were collected regarding whether a “whole-institution approach” is adopted by institutions (subindicator 2.3.1), whether incentives that support a “whole-institution approach” to sustainable development and ESD are in place, including the implementation of ESD school plans (subindicator 2.3.2) and whether institutions develop their own sustainable development and ESD indicators (subindicator 2.3.3). A “whole-institution approach” is adopted by institutions in the majority of member States (20) (62.50 per cent) in which there are incentives supporting it, including ESD school plans (21 member States).

36. ESD school plans have been adopted in member States such as Austria, Azerbaijan, Belarus, Cyprus, Finland, Hungary, Latvia, Romania and Slovenia, and are basically used as a means of school self-monitoring and assessment. However, the way in which ESD school plans are viewed by Governments varies. For example, in Cyprus, since 2011, the Sustainable Environmental Educational Policy for schools, based on the “whole-institution approach” has been implemented by the Ministry of Education, Culture, Sport and Youth on a mandatory basis in pre-primary and primary education.

37. In Austria, there are legal regulations on school quality management in general, whereas in countries such as the Netherlands or Switzerland, a more open-ended approach

⁶ ECE/CEP/AC.13/2016/3, para. 29.

towards the “whole-institution approach” has been adopted. Specifically, in the Netherlands, as ESD is a voluntary task under the constitutional right to “freedom of education”, there are numerous good practices at all levels of education on how ESD is implemented in the school system and organizations, reflecting “whole-institution approaches”.

38. As predicted in the third evaluation report,⁷ it seems that more countries are placing emphasis on implementing “whole-institution approaches” at the kindergarten level, such as Finland, where the National Agency for Education has required that all schools create a sustainable development plan. In Germany, Hungary, Ireland and Slovenia, the Green Kindergarten Network has been established. A number of member States (for example, Austria, Estonia, Hungary, Latvia, Romania and Switzerland), as also observed in the third evaluation report,⁸ implement the “whole-institution approach” at the tertiary level through various actions. However, due to the autonomy of these institutions, member States report a lack of data in this field.

39. Incentives for promoting the “whole-institution approach” (subindicator 2.3.2) are varied. In most of the member States (for example, Andorra, Austria, Belarus, Cyprus, Estonia, Finland, Greece, Hungary, Italy, Malta, Netherlands, Russian Federation and Slovenia) incentives for implementing “whole-institution approach” mostly take the form of guidelines and support material, education material, guidance on entering ESD programmes and recognition schemes. For example, in Slovenia, there are quality criteria for schools, which are divided into three sets, referring to: the quality of the learning process; school policy/organization; and school relations with the environment. Other forms of incentives include award schemes (for example, the Austrian Sustainability Award for Higher Education or various awards schemes offered in Germany) and funding (for example, Austria, Croatia, Latvia, Montenegro and Romania).

40. Regarding institutions developing their own sustainable development and ESD indicators, most member States report that this occurs on a voluntary basis. The number of member States in which institutions develop their own sustainable development and ESD indicators is evidently low (17 member States – 53.12 per cent).

41. Indicator 2.4 is aimed at diagnosing quality assessment systems for ESD. The importance of incorporating ESD into quality assessment for formal education was acknowledged by the ECE Steering Committee and addressed in the previous reporting cycle as a means of strengthening the connection between what is considered to be a quality education and ESD.⁹

42. Specifically, under subindicator 2.4.1, 27 (twenty-seven) member States (84.37 per cent) reported that education quality assessment/enhancement systems exist in their country, 20 of which explicitly address ESD. It is therefore evident that quality assessment/enhancement systems are generic in most countries and do not explicitly address ESD, as only 16 (sixteen) member States (53.12 per cent) reported that education quality assessment/enhancement systems that address ESD exist in their national systems (Andorra, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Greece, Hungary, Iceland, Ireland, Israel, Malta, Romania, Russian Federation, Slovakia and Tajikistan).

43. Member States plan to reinforce various ESD-related parameters in student assessment/examinations in the next five years, specifically: knowledge (27 member States – 84.37 per cent); skills and competences (20 member States – 62.5 per cent); values and attitudes (21 member States – 65.62 per cent); and behaviours (17 member States – 53.12 per cent). Therefore, in terms of student assessment, it seems that member States place more emphasis on knowledge and less on values, attitudes and behaviours.

44. Under indicator 2.5, data was collected regarding whether ESD methods and instruments for non-formal and informal learning are established to assess changes in knowledge, attitude and practice. The importance of non-formal and informal learning in ESD is a strand emphasized throughout the ECE Strategy for ESD and reflected upon in

⁷ Ibid., 64.

⁸ Ibid., para. 20.

⁹ Ibid., para. 30.

previous reporting cycles.¹⁰ Thus, member States have long recognized the insufficiency of addressing ESD only through formal education and have emphasized non-formal and informal learning as a means by which societies can be oriented towards sustainable development.

45. In the third reporting cycle,¹¹ an emergent need to establish mechanisms to track and evaluate non-formal and informal ESD initiatives, at the national or regional level, was identified. The evaluation and monitoring of such efforts is a means to strengthen and improve them. Evidently, member States have since started to address this as 15 countries (46.87 per cent) report instruments to assess ESD outcomes as a result of non-formal and informal learning. In the current reporting cycle, 25 (twenty-five) member States (78.12 per cent) reported that sustainable development issues are addressed in informal and public awareness-raising activities, 24 (twenty-four) member States (75 per cent) reported that there is support for work-based learning for small companies (Greece, Hungary and Malta), farmers (Bosnia and Herzegovina), unions (Croatia and Kyrgyzstan), associations/organizations (Kyrgyzstan, Switzerland), employers (Russian Federation) sustainable development. Only 14 (fourteen) member States (43.75 per cent) reported that instruments (research, surveys, etc.) are established to assess the outcomes of ESD resulting from non-formal and informal learning (Croatia, Cyprus, Estonia, Georgia, Greece, Hungary, Iceland, Ireland, Latvia, Malta, Netherlands, Russian Federation, Slovenia and Turkey).

46. Multi-stakeholder cooperation has been vital in the promotion of ESD and is strongly encouraged throughout the Strategy. Under indicator 2.6, 28 (twenty-eight) member States (87.5 per cent) reported that ESD implementation is a multi-stakeholder process.

47. In short, key themes addressed in education mostly refer to sustainable development and learning outcomes and less to teaching and learning methods in ESD. Strategies to implement ESD are more clearly identified in existing subjects and as cross-curricular approaches for most countries and less as stand-alone projects or subject programmes. The whole institution approach needs to be further endorsed, with provision of more incentives. In a number of countries, institutions develop their own sustainable development/ESD indicators. For example, in Belarus, the preschool education training programme determines development indicators for each age group (for example, junior and senior preschoolers) and, analogously, there are indicators for vocational, secondary, higher and tertiary education.

48. Although in most member States there are education quality assessment/enhancement systems, these systems often do not address ESD and in many countries there are no education quality assessment/enhancement systems addressing ESD at the national level. Concerning dimensions of learning where there are plans to place more emphasis on exams in the future, such dimensions refer mainly to skills/competences, less to knowledge, values and attitudes and even less to behaviours. Although member States seem to emphasize the role of non-formal and informal learning in promoting knowledge, attitudes and practices in ESD, there is a need to create instruments to assess ESD as a result of informal and non-formal education.

C. Issue 3: Equip educators with competences to include sustainable development in their teaching

49. Indicator 3.1 refers to how member States address the development of educators' competences to include sustainable development in their teaching. Two major areas were examined, referring to educator training (indicator 3.1, subindicators 3.1.1, 3.1.2 and 3.1.3) and to opportunities for educators to cooperate on ESD (indicator 3.2, subindicators 3.2.1 and 3.2.2).

50. At its fourth meeting (Geneva, 19 and 20 February 2009), the Steering Committee established the ECE Expert Group on Competences in ESD, to define more clearly and prepare a range of core competences in ESD for educators and general recommendations for

¹⁰ Ibid., para. 32.

¹¹ Ibid., para. 35.

policymakers for promoting those competences across the education system.¹² The resulting Expert Group report, “Learning for the Future: Competences in Education for Sustainable Development” (ECE/CEP/AC.13/2011/6) has served to guide a number of ECE member States as they seek to strengthen educators’ competences. Most member States report that ESD is now part of initial training (26 member States – 81 per cent) and in-service training (28 member States – 87.5 per cent), with twenty-two (22) member States (68 per cent) also addressing ESD competences in training programmes for education leaders and administrators.

51. ESD is part of educators’ initial training in many countries (26 member States – 82.2 per cent). Caution is required when interpreting this finding as pre-service is mainly offered by higher education institutions that have autonomy over their curricula. Information regarding how ESD competences are incorporated into educators’ initial training is fragmented and further systematic analysis of such study programmes is needed. Interestingly, some member States have established regulatory or legislative changes, including certification changes requiring ESD competences to be an integral part of initial teacher training (Austria, Finland, Georgia, Greece, Hungary, Malta, Romania, Switzerland and Tajikistan). In some countries (Bosnia and Herzegovina, Ireland, Slovakia, Slovenia and Russian Federation) ESD competences at the initial stages of teacher training are addressed but not explicitly referred to as ESD. For example, the Faculty of Education, University of Malta, is the main teacher training institution in the country and offers mandatory and optional study units on ESD as part of the “Master in Teaching and Learning” programme for students to become early childhood, primary and secondary school teachers.

52. Although, according to reporting, addressing ESD competences at the initial stages of teacher training occurs in percentages similar to the results of the third reporting cycle,¹³ it appears that there has been progress in how ESD competences are explicitly addressed through initial teacher training. This has mainly been achieved through modifications to certification requirements in some member States, which have promoted coordination between university programmes and requirements for teacher employment. In some member States (Finland and Germany), this has also reinforced multi-professional collaboration to change initial teacher training regarding ESD competences and to connect initial and continuing teacher training programmes in this sector.

53. Approaches to in-service training in ESD competences vary and are offered as part of teacher professional development education in twenty-eight (28) member States (87.5 per cent). This high percentage should be interpreted with caution as, in some of the member States, ESD in-service training is offered on a voluntary basis, such as in Austria where lectures, courses and seminars on sustainable development and ESD topics are offered, among others, through summer academies, or through specific programmes offered by local universities. Similarly, in Estonia, training courses are offered by the main education universities implementing holistic learning approaches. Despite their optional nature, such training courses have been attended by an impressively high number of in-service educators. In Israel, the Ministries of Environmental Protection and of Education train more than 2,700 teachers per year how to incorporate ESD into their teaching.

54. In-service training on ESD is offered on a mandatory basis in several member States and through specific, accredited courses (Belarus, Bulgaria, Cyprus, Montenegro, Romania, Slovenia and Tajikistan). This is the first time such a finding has been reported, which is an indication of the importance placed on developing in-service teachers’ ESD competences.

55. Therefore, although the percentage of countries in which ESD competences are addressed through in-service training is similar to that in the previous reporting cycle,¹⁴ it seems that member States are emphasizing this aspect of ESD Strategy implementation and are delivering such training in various forms. Teacher ESD competence training is offered through university courses, non-governmental organizations (NGOs), synergies between ministries, in-service training providers, etc. Such training involve different approaches, such

¹² ECE/CEP/AC.13/2009/2, para. 33.

¹³ ECE/CEP/AC.13/2016/3, paras. 15 (b) and 66.

¹⁴ Ibid.

as lectures, seminars, online modules, in-classroom teaching, and provides approaches to ESD teaching outside of the classroom setting.

56. As stated in the Irish national implementation report, competences addressed involve generating and passing on new knowledge and insights and promoting critical thinking, identifying values and the emotional dimensions associated with education for global citizenship and ESD, taking appropriate action consistent with a value stance that is congruent with an articulated sense of social justice and the Sustainable Development Goals, promoting participatory and active teaching and learning methodologies to engage young people in ESD. Meanwhile, the Georgian national implementation report states that in-service training develops analytical, critical and creative thinking and collaboration.

57. The number of member States offering education opportunities regarding ESD competences in the training of education leaders and administrators increased significantly as reported during phase IV compared to phase III,¹⁵ from just above half member States offering such education opportunities in the period 2011–2015 to 22 (68.7 per cent) in the period 2015–2018. This is indicative of the emphasis placed on implementing the Strategy. Through such courses, the organizational structure of the implementation of the Strategy is communicated, facilitating its top-down application. For example, in Cyprus and in Germany, the concept of ESD is integrated into basic training for new and established school principals. In other member States, relevant training of school leaders and policy makers is offered on a voluntary basis (Bulgaria, Hungary, Latvia and Malta).

58. Twenty-six (26) member States (81.2 per cent) affirmed that networks of/platforms for education leaders and/or administrators are established in their country (subindicator 3.2.1.). Specifically, such networks exist in 18 European Union member States and Western European countries not European Union member States (Austria, Belgium, Croatia, Cyprus, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Malta, the Netherlands, Romania, Slovakia, Slovenia and Switzerland), in 4 South-Eastern European countries (Bosnia and Herzegovina, Israel, Serbia and Turkey) and in 4 member States located in Eastern Europe, the Caucasus and Central Asia (Belarus, Kyrgyzstan, Tajikistan and Ukraine). This finding is particularly important for the South-Eastern Europe region, as, prior to 2015, there were no reports of any such synergies existing.

59. Governmental support for ESD networks and platforms (subindicator 3.2.2) mainly takes the form of coordination and/or financing. Specifically, 21 (65.6 per cent) of member States reported that such support exists for specific initiatives (17 ECE member States either member States of the European Union or West European countries not member States of the European Union (Austria, Belgium, Croatia, Cyprus, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Malta, the Netherlands, Romania, Slovenia and Switzerland), 3 member States from Eastern Europe, the Caucasus and Central Asia (Belarus, Kyrgyzstan and Tajikistan) and 1 member State from South-Eastern Europe (Israel). This indicates that countries of South-Eastern Europe need to develop governmental structures to support the Strategy's implementation, especially in equipping educators with ESD competences either in terms of guiding and/or coordinating such efforts or of funding.

60. Challenges in equipping educators with ESD competences are linked to the fact that training opportunities are offered on a voluntary basis (Iceland and Netherlands). Although the number of courses is increasing, the challenge is to attract teachers to attend (Latvia and Malta). Funding and time constraints are also significant. Another challenge is that ESD is only referred to implicitly in many courses. It needs to be a more "visible" topic (Slovenia). The structure of education systems provides for different policies within each country (Switzerland). Lastly, Cyprus indicated the challenge of providing adequate training for school inspectors on ESD integration, allowing for improved monitoring thereof at the school unit level.

¹⁵ Ibid., paras. 66 and 71.

D. Issue 4: Tools and materials for education for sustainable development

61. Issue 4 was aimed at diagnosing the status quo in member States regarding aspects related to tools and materials for ESD, particularly production (indicator 4.1), quality control (indicator 4.2) and accessibility (indicator 4.3). Similarly to the phase III report,¹⁶ a variety of tools/materials were described by member States, such as student textbooks, curriculum and learning outcomes guidance materials, training materials, etc., reflecting the importance placed by the Strategy on the availability and quality of teaching tools across the region. Although progress has been achieved since the previous report, national strategies in several member States seem to lack provisions for support for development/production of tools/materials for ESD. Specifically, only 21 member States (65.6 per cent) reported that there are national initiatives to encourage the development and production of ESD tools/materials, whereas in 23 (71.8 per cent) countries public money is invested in this sector.

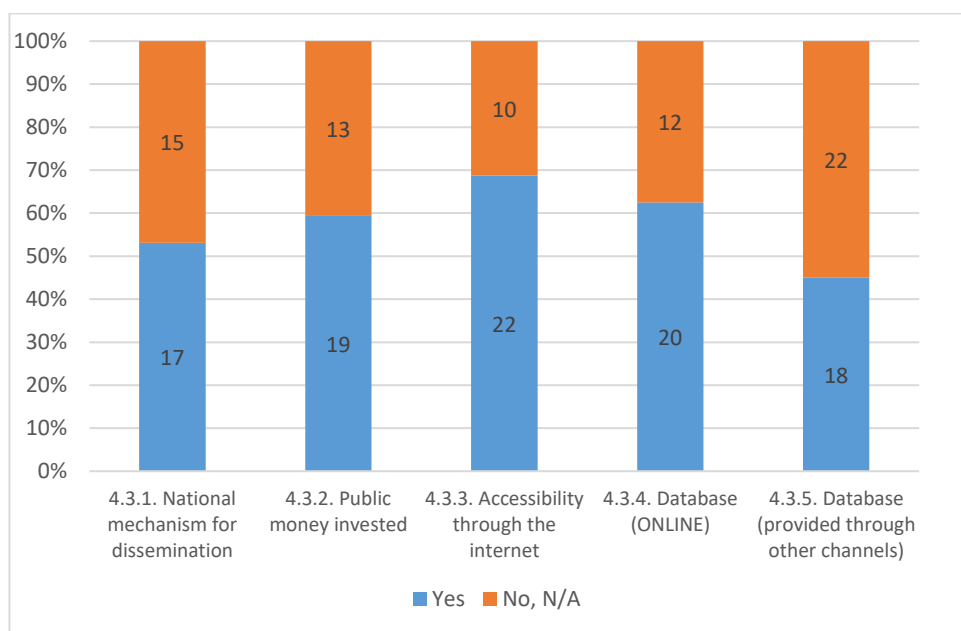
62. Although ESD tools/materials are widely produced, quality control criteria need to be established. In all, 17 member States (53.1 per cent) reported that they have quality criteria and/or guidelines for ESD-related teaching tools/materials that are supported by public authorities, in 15 member States (46.8 per cent) quality criteria and/or guidelines are approved by public authorities and in 13 member States (40.6 per cent) these criteria and/or guidelines are tested and recommended for selection by educational institutions (subindicator 4.2.1).

63. ESD teaching tools/materials are available in the national languages in 26 member States (81.2 per cent) and in 22 member States (68.7 per cent) they are available for all education levels (subindicator 4.2.2).

64. As indicated in figure III below, seventeen (17) member States (53.1 per cent) reported that there is a national mechanism for dissemination (subindicator 4.3.1), in 19 member States (59.3 per cent) public money is invested to make materials and tools available (subindicator 4.3.2). In 22 (68.7 per cent) member States, ESD-related tools/materials are available online (subindicator 4.3.3). Databases of ESD-related tools/materials in national languages are available online in 20 member States (62.5 per cent) and in 18 member States (56.2 per cent) databases are provided through other channels (subindicator 4.3.4).

Figure III

Dissemination and accessibility of teaching tools and materials on education for sustainable development



¹⁶ Ibid., paras. 37–41.

65. Challenges refer to: establishing programme and materials assessment (identifying learning outcomes and possible mechanisms) and a materials evaluation mechanism for all education levels (Hungary, Netherlands and Slovenia); and disseminating materials and training educators in their use (Cyprus and Montenegro). Formal education should be more closely connected to the informal, non-formal and NGO systems, since the productivity of the latter two in ESD is strong, often very innovative and of high quality (Slovenia).

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

66. Issue 5 examined ESD Strategy implementation in terms of research and development through three indicators: promotion of research on ESD (indicator 5.1); development of ESD in terms of innovation and capacity-building (indicator 5.2); and dissemination of research results (indicator 5.3).

67. The promotion of research on ESD (indicator 5.1) was examined through four parameters: research on contents and methods of ESD (subindicator 5.1.1); evaluation of Strategy implementation outcomes (subindicator 5.1.2); post-graduate programmes (subindicator 5.1.3); and scholarships (subindicator 5.1.3).

68. Implementation of research on contents and method of ESD was reported in 17 member States (53.1 per cent). Research on evaluation of Strategy implementation outcomes was reported by 7 countries (21.8 per cent). Therefore, there is a lack of evaluation systems on Strategy implementation outcomes.

69. Post-graduate programmes on ESD at the master's degree level are offered in 20 member States (62.5 per cent), whereas post-graduate programmes on ESD at the PhD level are offered in 15 (46.8 per cent) member States. Post-graduate programmes addressing ESD are offered in 22 (68.7 per cent) member States. At the PhD level, such programmes are reported by 17 (53.1 per cent) member States. Interestingly, in reporting phase III¹⁷ it was pointed out that advancing research in ESD in higher education faced challenges related to the nature of ESD itself, such as, first, its interdisciplinary nature, which poses a problem in terms of evaluation panels at grant agencies requiring researchers to submit disciplinary-oriented projects and, second, the fact that ESD is a multi-stakeholder endeavour often with NGOs in lead roles, but lacking academic credentials and channels to access research granting agencies. In reporting phase IV, these challenges are addressed through the creation of need-based programmes, such as in Ireland, Romania and Tajikistan, where such programmes are focused more on vocational education.

70. Scholarships for students attending master's degree programmes are offered in 9 member States (28.1 per cent), whereas for the PhD level the number increases to 11 (34.3 per cent) member States. Evidently, member States offering scholarships for programmes in or addressing ESD are limited. Member States widely recognize the need for more research on ESD, especially addressing monitoring, assessment and evaluation of ESD actions and learning outcomes.

71. The weakest part in terms of promotion of research and development in ESD is the evaluation of the Strategy's outcomes. Countries report weaknesses in available scholarships on and addressing ESD, especially at the master's degree level. The limited funding provided for scholarships in ESD-related fields prevents young specialists from engaging with research on a full-time basis and is probably an obstacle to the promotion of promoting ESD-related research.

72. Research on ESD is mostly focused on the methods and contents of ESD. Especially in countries of Eastern Europe and the Caucasus, scholarships in ESD-related fields are scarce, however it is reported that in some countries (Belarus, Georgia, Tajikistan), State budget funding for scholarships on sustainable development-related issues is increasing, with particular reference to ESD. For example, in Belarus there was a national competition for scholarships of the President of the Republic for talented young researchers.

¹⁷ Ibid., para. 45.

73. Development of ESD (indicator 5.2) was examined through innovation and capacity building (subindicator 5.2.1). Many governmental departments responsible for ESD acknowledge the importance of ESD development through research and recognize the need to connect research to ESD policy and practice. In all, 20 member States (62.5 per cent) reported actions taken in this direction. Emerging networks or researchers are gaining attention. One example is the support programme “U Change” (2017–2020) implemented in Switzerland, which fosters initiatives and projects for sustainable development. A series of student projects are allocated in two categories, namely student development and action-based projects (14 projects) and web-based support platforms for student projects (7 projects). In other instances, ESD innovation and capacity-building are adjusted to the needs and specificities of the area, such as in Croatia where there are programmes aimed at improving travel agents’ knowledge and competences in order to ensure the successful implementation of corporate social responsibility in their day-to-day business practices.

74. Dissemination of research results (indicator 5.3) was examined through public authority support (subindicator 5.3.1) and scientific publications (subindicator 5.3.2). The need to share good practices in ESD among authorities and stakeholders was identified in reporting phase III¹⁸ through addressing specific aspects of dissemination, which were materialized during the current reporting cycle. Specifically, public authority support for dissemination of research results was reported by 16 member States (50 per cent). Scientific publications on ESD were reported by 16 member States (50 per cent) and publications addressing ESD were reported by 17 member States (53.1 per cent).

75. As indicated in the Latvian national implementation report, one major challenge is introducing research and innovation policy horizontally in other national sectoral policies, such as energy, transport, agriculture, forestry, etc., to broaden understanding of added value of research and to attract more funding for developing research capacity. Lastly, Cyprus and Malta identified a gap between policies and utilization of research outcomes to improve practice.

F. Issue 6: Strengthening of cooperation on education for sustainable development in the United Nations Economic Commission for Europe region

76. Issue 6 referred to strengthening cooperation on ESD in the ECE region in reference to four indicators: international cooperation, namely public authority support for international networks on ESD (subindicator 6.1.1); education institutions’ participation in international networks (indicator 6.1); cooperation mechanisms with ESD components (subindicator 6.1.3); and Government actions promoting ESD forums outside the ECE region (subindicator 6.1.4). Across the ECE region, the ECE ESD Steering Committee, with the support of the secretariat, has: played a central role in promoting ESD; kept member States engaged and accountable; championed research into key issues, such as ESD indicators and teacher competences; provided essential guidance to member States; and fostered the sharing of information.¹⁹

77. Public authority support was reported in 22 member States (68.7 per cent). Specific mechanisms were described for organization and support of international networks by public authorities, such as quality assurance mechanisms with funding provided by ministries. International cooperation actions reported include the UNESCO Associated Schools Network (Andorra, Germany, Latvia and Malta), the Global Education Network Europe (Germany, Slovakia and Slovenia) and the Environment and School Initiatives (Austria and Croatia).

78. Education institutions’ participation in international networks was reported in 24 member States (75 per cent), with significant reference to the NGO and university networks.

¹⁸ See ECE/CEP/AC.13/2016/3, paras. 43, 44, 47, 55 and 92.

¹⁹ *Ibid.*, para. 49.

International cooperation is heavily promoted through university partnerships and networks, which are helping to advance ESD within the higher education sector in the region.²⁰

79. Cooperation mechanisms with an ESD component were referred to by 18 (56.2 per cent) of member States. Evidently, there is a lack of data in the field for some of the reporting countries.

80. Government actions promoting ESD forums outside the ECE region were reported by 20 member States (62.5 per cent), with some countries again reporting a lack of data on this issue. However, there was extensive reference by member States to the work of UNESCO (for example, Belarus, Finland, Germany, Russian Federation and Switzerland) and the Education 2030 Agenda. Additionally, member States referred to the Action Plan of the Mediterranean Strategy on ESD (for example, Cyprus and Greece).

81. In general, member States call for an increase of networking opportunities and the sharing of knowledge across the ECE region as an opportunity to advance Issue 6. Many member States suggest that there is a need to further strengthen regional and international connections through the provision of more opportunities to meet and related financing.

G. Issue 7: Fostering conservation, use and promotion of knowledge of indigenous peoples, as well as local and traditional knowledge in education for sustainable development

82. Issue 7 referred to fostering cooperation, use and promotion of knowledge of indigenous peoples, as well as local and traditional knowledge in ESD. Reference to this issue was made by 18 member States (56.2 per cent).

83. Seemingly, knowledge of indigenous peoples and traditional knowledge on ESD is viewed holistically and extends to indigenous languages, traditional lifestyles, folk art, dance and nature. Particular emphasis is placed on recognizing indigenous components across the curriculum. Addressing the issue of fostering cooperation, use and promotion of knowledge of indigenous peoples was particularly of high importance to countries of Eastern Europe, the Caucasus and Central Asia, where 4 out of 6 reporting member States (66.6 per cent) referred to relevant actions taken.

84. For example, in Belarus, there is a State policy in the field of education based on both national and cultural education principles endorsing an environment in which education is acquired with due consideration for national tradition.

85. Kyrgyzstan has held the World Nomad Games every two years since 2014. The basis of the competition is the folk games of the historically nomadic peoples of Central Asia.

86. In the Russian Federation, the Fund for the Preservation and Study of the Indigenous Languages of the Peoples of the Russian Federation was created in 2018 to endorse the study and the preservation of the indigenous languages of the peoples of the Russian Federation.

87. In Hungary, ESD programmes build on integrating the traditional knowledge of indigenous peoples (for example, an ethnobotany programme also involving intergenerational learning of plant use), whereas in Finland, the Ministry of the Environment has set up a working group to promote the implementation of article 8 (j) of the Convention on Biological Diversity on respect for and preservation and maintenance of knowledge of indigenous peoples related to biodiversity.

H. Issue 8: Challenges and obstacles encountered in the implementation of the Strategy

88. The main challenges and obstacles encountered in the implementation of the Strategy reported refer to coordination between stakeholders in the field of ESD (Montenegro, Netherlands and Slovenia), the lack or insufficiency of evaluation mechanisms (Hungary and

²⁰ Ibid., para. 53.

Montenegro), funding (Kyrgyzstan, Latvia, Montenegro, Slovakia and Switzerland), and deficits in expertise, counselling, exchange of good practices and personnel (Kyrgyzstan, Latvia and Slovakia).

89. Research outcomes on Strategy implementation across educational levels are fragmented (Hungary and Switzerland), especially regarding higher education, which is closely connected to ensuring the continuity of ESD policies. Thus, a major challenge is to strengthen forms of cooperation between the higher education and primary and secondary education systems.

90. There is also a lack of coordination and description of social criteria that need to be incorporated into lessons and project plans (Netherlands), and low coverage at the early childhood level, especially in terms of infrastructure and human resources (Tajikistan).

91. A lack of a solid evaluation basis was identified regarding results of non-formal education actions to further endorse systematic monitoring of activities on ESD across all education levels. The need for further systematic analysis of curricula implementation across education levels was also identified. Thus, coordination between stakeholders involved in the production and implementation of ESD-related activities in formal and non-formal settings is a prerequisite.

92. In-service teacher education courses on ESD competences are often attended on a voluntary basis, despite changes in some countries' teacher certification requirements. Another challenge refers to training teachers how to use educational material produced and disseminated on ESD.

93. The majority of countries recognize the role of leadership and political will as critical factors contributing to advancing ESD and the Strategy implementation. This also refers to the need for economic and finance departments to recognize the importance of investing in ESD.

I. Issue 9: Future implementation of education for sustainable development

94. Issue 9, an open-ended item, offered suggestions regarding future implementation of the Strategy. In all, 10 member States (31.2 per cent) reported on this item. Main parameters of assistance required included capacity-building for Government institutions (Georgia), and mobilizing financial and human resources in ESD initiatives (Georgia, Kyrgyzstan, Latvia, Malta and Slovakia). Quality monitoring of ESD implementation has been suggested, especially to ensure the full commitment of education institutions and to further promote ESD action plans in schools (Malta), with particular reference to vocational education and training (Malta and Switzerland). Future implementation of ESD could be also be promoted through the dissemination of experience and materials, further support for synergies and exchange of good practices, but also through the strengthening of internal cooperation (Belarus and Latvia).

95. Currently, sustainable development and ESD outcomes are still sporadic. In Slovakia, assistance with the dissemination of best practices in ESD worldwide is needed, in order to showcase them and have them serve as an inspiration for educators and managers of education. The dissemination of educational materials would also be of great help. One of the biggest obstacles to the implementation of the Strategy in Slovakia remains the establishment and long-term maintenance of a multi-stakeholder group, a cooperating body that would play more than just a formal role.

III. Conclusions

96. This fourth evaluation cycle report aims to give an overview of ESD Strategy implementation in the countries of the ECE Region and was based on analysis of the 32 national reports submitted by the member States. Despite the slight decrease in the number of member States submitting national reports, it is important to mention that 6 countries, the majority of which come from the Eastern Europe, Caucasus and Central Asia region that had

not participated in the third phase of the evaluation, submitted a report. Compared to the previous reporting cycles, there seems to be an increase in political commitment to ensure successful implementation of ESD. Policy, regulatory and operational frameworks promoting ESD are present in the majority of member States. This is demonstrated mainly through the appointment of national focal points in most countries and in the availability of the Strategy in national languages. A significant number of member States promote policy-oriented synergies at the national level, establish coordinating bodies for ESD implementation and have national implementation plans in place. Further effort needs to be invested in coordinating policies promoting ESD in member States and in facilitating implementation of the relevant policies through national plans.

97. Operational frameworks promoting ESD in member States come in various forms, such as national curriculum standards, legislative documents, etc., mainly addressing school education. However, a lack of information was reported for higher education due to the institutions' high degree of autonomy. ESD-related policies are not always under the umbrella of sustainable development policies and are often encountered as stand-alone policies in member States. One of the major challenges reported was that of coordinating various policies at the national level. National plans are generally in place but further effort is needed in facilitating their implementation.

98. Interestingly, a number of member States correlate national policy documents to the Sustainable Development Goals, a practice not reported in previous reporting cycles. Regulatory and operational frameworks for ESD implementation refer mostly to national policy documents, present in almost all reporting countries, national curricula, standards and requirements.

99. In formal education, key ESD themes are explicitly addressed in national curricula at all levels of education in most member States. However, the emphasis placed on their environmental, social and economic aspects varies and depends on the local context. Formal education curricula place more emphasis on learning outcomes (skills, values, attitudes) compared to teaching and learning methods that support ESD. ESD is addressed equally through a cross-curricular approach, as a stand-alone project or through specific subject programmes.

100. The "whole-institution approach" is gaining attention, with more countries adopting ESD school plans compared to the previous reporting cycles. School plans are highly regarded as a means for school self-monitoring and assessment. The "whole-institution approach" is more widely incorporated at the preschool level in the current reporting cycle. Member States offer different forms of incentives for implementing the "whole-institution approach" such as guidelines, support and education material and funding. Guidance is needed on how it could be implemented in institutions in a valid and well-structured way, as institutions generally prefer to use established sustainable development and ESD indicators rather than developing their own.

101. Quality assessment/enhancement systems are generally in place in most member States, however these are often generic and do not explicitly address ESD. In the next five years, most member States plan to reinforce student assessment in relation to ESD, mostly addressing knowledge, with less emphasis on addressing skills and competences and even less on addressing behaviours.

102. Member states emphasize the importance of non-formal and informal learning in ESD. Evaluation and monitoring initiatives at the non-formal and informal levels are gaining attention.

103. Developing educators' competences to include ESD in teaching is mainly addressed through pre- and in-service training for teachers. Training programmes for education leaders/administrators are offered in more than half of the reporting countries, a significant increase since the previous reporting cycle.

104. Further analysis is recommended regarding the content of pre-service training programmes, as information coming from higher education institutions is often fragmented or insufficient. There seems to be some progress in ways in which ESD competences are explicitly addressed in the initial stages of teacher training, as there have been modifications

in teacher certification requirements in some member States. Caution is required on how ESD competences are addressed during in-service teacher training, as participation in such programmes is often voluntary. For the first time, it seems that in some member States practicing teachers are required to attend courses/programmes on a mandatory basis, showing that some member States acknowledge the need to reorient their in-service training towards ESD competence-based courses.

105. Tools and materials are widely produced, however there is a lack of governmental support to encourage this process. Additionally, although some member States indicate that they have some form of quality criteria, the majority point to a lack of control criteria as well as of accessibility tools.

106. Research on ESD conducted in member States is mostly focused on the content and methods of ESD and less on evaluation of Strategy implementation outcomes. For the first time, research programmes oriented towards needs in the national context are being implemented in some member States. One of the main challenges reported is the introduction of research policies horizontally within State sectors/departments. Also, there is currently a gap between theory and practice.

107. There is a need to strengthen regional and international cooperation on ESD further, by providing networking opportunities and by fostering cooperation mechanisms both within and among member States.

108. Knowledge of the specific historical, linguistic and cultural characteristics of indigenous populations is viewed holistically across member States' curricula, extending to indigenous languages, traditional lifestyles, folk art, dance and nature.

109. Main challenges in strengthening the implementation of the Strategy include coordination between stakeholders and lack or insufficiency of evaluation mechanisms, funding and expertise, and suggest the promotion of mentoring, practices and personnel on ESD.

110. Parameters of assistance required include capacity-building for government institutions, mobilizing financial and human resources, research to document outcomes of Strategy implementation, dissemination of experience and materials, synergies and exchange of good practices.

111. Countries recognize the role of leadership and political will as crucial factors in advancing ESD and promoting Strategy implementation. Major challenges in implementing the Strategy refer to coordination between stakeholders, lack of evaluation mechanisms and quality control criteria and deficits in expertise, mentoring and exchange of good practices.

IV. Main recommendations

112. The present section includes main recommendations based on the analysis of the data obtained through the national implementation reports. Main recommendations are presented in priority order per issue and are grouped into six main categories, namely: policy, regulatory and operational frameworks to support the promotion of ESD; promotion of ESD through formal, informal and non-formal learning; educators' competences to address ESD; tools/materials for ESD; research and development; and youth engagement.

A. Policy, regulatory and operational frameworks to support the promotion of education for sustainable development

113. At the level of policy, regulatory and operational frameworks supporting ESD promotion, the most important recommendation is to invest more effort in establishing coordinating policies within countries for promoting ESD. For example, horizontal structures responsible for implementing ESD in an organized, systematic way among the different parts of the public, private and voluntary sectors could prevent fragmentation or overlapping of policies regarding ESD at the national level.

114. National mechanisms could be established for monitoring progress achieved regarding policies implemented or to measure outcomes. More specifically, the need to shed light on how ESD is implemented in higher education has been pointed out by a number of member States.

B. Promotion of education for sustainable development through formal, informal and non-formal learning

115. In the near future, it is evident that countries plan to reinforce student assessment focusing more on knowledge, skills and competences and less on values and attitudes. Therefore, a third recommendation is that quality assessment systems need to be further developed to explicitly address ESD. Furthermore, more emphasis should be placed on assessing how values and attitudes are affected by the implementation of the Strategy in the future so as to not only to focus attention on the cognitive outcomes of ESD Strategy implementation but also on affective outcomes that possibly have an effect on learners' beliefs on ESD-related issues. If a dramatic change of mindset is targeted for students and future citizens regarding sustainable development issues, more emphasis should be placed on forming their values and attitudes, as currently the emphasis is placed more on developing their knowledge, skills and competences.

116. Although non-formal and informal education are gaining attention in ESD, as predicted in previous evaluation cycles, there is an emergent need to establish mechanisms to monitor and assess non-formal and informal initiatives.

117. Standardization of the learning outcomes pursued is needed, especially addressing attitudes and values. There is also an emergent need to address attitudes and values on sustainable development issues more explicitly through formal education.

118. Quality criteria could be created for whole-institution approaches, addressing various parameters of ESD implementation such as learning outcomes, school policy, the learning process, collaboration with local stakeholders, etc. Alternatively, stakeholders involved in education institutions could be trained to plan and implement "whole-institution approaches" so that they can tailor approaches to better fit their organization's needs and particularities.

C. Educators' competences to address education for sustainable development

119. ESD is incorporated into initial teacher training, however, further research is required on the content of programmes offered at the tertiary level. Teachers' competence development is further strengthened by legislative changes regarding teacher certification and, in some countries, ESD is a required part of teacher training. There is also an emergent need to reinforce Government support to create synergies addressing leaders and administrators, equipping them with competences to facilitate ESD implementation, enabling them to better monitor it at the school level.

D. Tools and materials for education for sustainable development

120. Regarding tools and materials for ESD, there is a need to establish universal quality control mechanisms across countries and to coordinate evaluation mechanisms across member States. Also, there is a need to further train educators to use these materials.

E. Research and development

121. More research should be conducted on the evaluation of Strategy outcomes and more funding allocated to both research and dissemination of good practices. To this end, member States point out the need for increased networking opportunities and sharing of knowledge across the ECE region.

F. Youth engagement

122. The issue of youth engagement in implementing the Strategy needs to be further promoted, with the purpose of further engaging young people in ESD in the ECE region. Member States should be encouraged to nominate youth delegates to be part of the Steering Committee and further initiatives should be developed to ensure youth participation and engagement in implementing the Strategy for ESD. In particular, funds could be allocated to youth, for implementing ESD projects. Internships and experience-oriented opportunities could be further promoted so that youth could gain expertise and be mobilized towards further ESD advocacy.
