2020 Evaluation of the Sustainable Energy Subprogramme of the UNECE

Evaluation of UNECE Collaboration with

UN and other Partners in Delivering on Energy for Sustainable Development

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Content

Acronyms

ADB	Asian Development Bank
BE-Ex	Building Energy Exchange
C2E2	Copenhagen Centre on Energy Efficiency
COP21	21st Conference of the Parties
DAC	Development Assistance Committee
DG DEVCO	Directorate-General for International Cooperation and Development
EA	Expected Accomplishment
EBRD	The European Bank for Reconstruction and Development
EERA	The European Energy Research Alliance
EGRM	Expert Groups on Resource Management
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
EXECOM	Executive Committee
GABC	Global Alliance for Buildings and Construction
GBA	Green Building Alliance
GECES	Group of Experts on Clean Electricity Systems
GECMM	Group of Experts on Coal Mine Methane
GEEE	Group of Experts on Energy Efficiency
GEG	Group of Experts on Gas
GERE	Group of Experts Renewable Energy
GEF	Global Environment Facility
GIG	Central Mining Institute of Katowice
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IBRD	International Bank for Reconstruction and Development
IAEA	International Atomic Energy Agency
ICE	International Center of Excellence
ICE-CMM	International Center of Excellence on Coal Mine Methane
IEA	International Energy Agency
IFC	The International Finance Corporation
IFESD	International Forum on Energy for Sustainable Development
IIASA	International Institute for Applied Systems Analysis

IRENA	International Renewable Energy Agency
LoE	Level of Effort
NSEAP	National Sustainable Energy Action Plan
OECD	Organization for Economic Co-operation and Development
OIER	Organization for International Economic Relations
OSCE	The Organization for Security and Cooperation in Europe
PIG-PIB	Polish Geological Institute – National Research Institute
PPP	Public-private-partnership
REN21	Renewable Energy Policy Network for the 21st Century
PGNiG	Polish Oil and Gas Company
SAEE	the State Agency on Energy Efficiency and Energy Saving of Ukraine
SDG	Sustainable Development Goal
SED	Sustainable Energy Division
SE4All	Sustainable Energy for All
ToC	Theory of Change
ToR	Terms of Reference
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNDESA	United Nations Department of Social and Economic Affairs
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEG	United Nations Evaluation Group
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCWA	The United Nations Economic and Social Commission for Western Asia
UNFPA	The United Nations Population Fund
UNGA	UN General Assembly
UN HABITAT	The United Nations Human Settlements Programme
UNICEF	The United Nations International Children's Fund
UNIDO	The United Nations Industrial Development Organization
UNITAR	The United Nations Institute for Training and Research

UNWOMEN	The United Nations Entity for Gender Equality and the Empowerment of Women
USAID	The United States Agency for International Development
WHO	World Health Organization
WP6	Working Party on Regulatory Cooperation and Standardization Policies

Tables and Figures

Tables

Figures

I. Summary

1. The evaluation of the collaboration between the United Nations Economic Commission for Europe (UNECE), the United Nations (UN) and other partners in delivering on energy for sustainable development was carried out by an external evaluator in March – July 2020.

2. Pursuant to the Terms of Reference (ToR) of the evaluation (Annex 1), the evaluation was conducted in accordance with the Development Assistance Committee's (DAC) following criteria for evaluating development projects and programs: relevance, coherence, effectiveness, efficiency, sustainability, and impact. The evaluation covered the UNECE's activities and its collaboration practices in the sustainable energy domain from 2016 through 2019.

3. The evaluation resulted in the following key findings and conclusions:

(A) The cooperation and partnership practices of the Sustainable Energy Division (SED) of the UNECE with internal or external entities were coherent with the resolution 67/215 ("Decade of Sustainable Energy for All") and highly relevant to the attainment of the 2030 Agenda for Sustainable Development and the Paris Agreement as well as for delivering on the expected accomplishments and outputs. However, few changes at the national level could be solely attributed to the UNECE's interventions, as most result from collective efforts at national and international level.

(B) The introduction of 2030 Agenda for Sustainable Development with a specific focus on gender equality (SDG[1] 5) and the adoption of the UNECE's key documents on gender parity and mainstreaming in 2015[2] and 2017[3] shifted the organization's attention towards women's empowerment in the energy sector and spurred several relevant publications, the gradual incorporation of gender-focused agenda items into high-level sessions of the regional commissions and the project outputs.

(C) No specific evidence was found of the perspectives of vulnerable groups being afforded particular attention during the sessions of the Committee on Sustainable Energy and its subsidiary bodies specifically. Although, the majority of stakeholders claimed that the cooperation practices of the UNECE were relevant to improving the living standards of the population including marginalized groups. The degree of such change (i.e. whether it be substantial and meaningful) to vulnerable groups in all member States cannot be answered conclusively without conducting a full-scale impact evaluation.

(D) In 2016-2019, the number of full-time staff, dropped from 13 in 2016 to 12 in 2019. The number of consultants[4] engaged varied from nine in 2017 to 21 in 2019. The human and financial resources allocated for the SED were effectively used to fulfil the mandates of the division in delivering on energy for sustainable development.

(E) All of the SED's staff and several external stakeholders highlighted a shortage of financial and human resources in 2016-2019 which was perceived to be crucial with

[1] Sustainable Development Goal.
[2] UNECE Policy for Gender Equality and the Empowerment of Women: Supporting the SDGs implementation in the UNECE region (2016-2020), UNECE 2016.
[3] UNECE Gender Parity Strategy, UNECE 2017.
[4] With different level of effort (LoE).

respect to the activities listed in the workplans of the different groups of experts facilitated by the SED.

(F) The UNECE has applied, and continues to follow, a decentralized resource mobilization approach to reduce its dependency on a regular budget and to attract extrabudgetary sources of funding. However, more aggressive efforts are required to increase the share of the SED revenues in the UNECE's income gained through extrabudgetary funding.

(G) The sustainability of the UNECE's partnership with its member States and external parties depends on the value added by the UNECE and its recognition by stakeholders as a leader in sustainable energy.

(H) The UNECE's interventions and all of its joint initiatives implemented with international and national partners contributed to building the capacity of the member and non-member States to deliver on sustainable energy and to achieve the relevant SDGs and the targets set out in the Paris Agreement.

4. Based on the findings and conclusions, the evaluation issues the following recommendations on the UNECE's continuing operational practices:

(A) To continue its focus on developing and diversifying sources of funding. Particular attention should be given to attracting extrabudgetary sources for mid- to long-term (3-5 years) technical assistance and advisory interventions that would focus on the continuity of multilevel assistance (macro: policy and legal framework; meso: institutional strengthening, and micro: individual capacity building).

(B) To adjust the existing business model for resource mobilization and engage in pilot hiring of a P2-P3 level partnership officer/consultant within the SED who will be engaged in a full fundraising cycle (identification, qualification, cultivation, solicitation, and stewardship) under the guidance and supervision of the SED's management. In this regard the SED is advised to include the resource mobilization post in its extrabudgetary funding proposal.

(C) To consider planning impact evaluations (ex-ante[5] and ex-post[6] evaluations) of specific interventions, e.g. an international center of excellence (ICE), established recently. It would help to measure and report on the tangible and intangible impact of this intervention and increase visibility of the UNECE itself and the concept/notion of the centers of excellence specifically.

(D) To continue introducing gender-responsive S.M.A.R.T. (Specific, Measurable, Attainable, Relevant, Time-bound) indicators to measure progress made regarding the gender mainstreaming agenda and to introduce S.M.A.R.T. indicators to measure the progress made with regard to the impact of the UNECE's activities on marginalized and vulnerable groups (including women, youth and elderly).

[5] Ex-ante impact analysis of potential collaboration to be conducted prior to the initiating internal mechanisms for legalising the potential collaboration through the MoU or other cooperation frameworks.
[6] Ex-post impact evaluations aim to measure impacts after a period of implementation and thus rely on observed data rather than forecasts.

(E) To continue raising awareness, through presentations and analytical papers[7] (linkage to relevant SDGs could also be useful in this regard), of the member States on the human rights dimension and the impact of the sustainable energy agenda on marginalized and vulnerable groups (including women, youth and elderly). In this regard, the SED is advised to introduce the appropriate indicators to measure the relevant outputs of its interventions (projects, workshops, etc.)

[7] Analytical papers developed on sustainable energy agenda or sessions of the committee might incorporate a section/paragraph on the potential impact on and benefit to the marginalized groups.

II. Background

1. The current document presents the evaluation report of the collaboration between the UNECE, the UN and other partners in delivering on energy for sustainable development. The evaluation was commissioned by the UNECE in February 2020, and implemented pursuant to the 2020-2021 evaluation workplan of the UNECE, approved during the 95th meeting of the UNECE's Executive Committee (EXECOM) on 11 December 2017.

2. The evaluation was implemented in March-July 2020 and aimed to review the relevance, effectiveness, and efficiency of ECE collaboration with UN and external partners from 2016-2020 in delivering on energy for sustainable development.

3. Overall, the evaluation explored the activities of the SED during the period 2016 to 2019 that benefit from engagement with UN and external partners. The activities include all of SED's work on sustainable energy issues:

- Sustainable resource management: extension of the United Nations Framework Classification for Resources and initiation of development of a United Nations Resource Management System;
- Reducing the environmental footprint of energy: activities in carbon capture, use, and storage, high efficiency-low emissions technology, methane management in the extractive industries;
- Deep transformation of the energy system: energy efficiency, renewable energy, cleaner electricity systems; and
- Assist countries in assessing their strategic options: pathways to ensure energy for sustainable development and tracking progress to commitments.

4. Pursuant to its Terms of Reference (ToR),[8] the UNECE is mandated to facilitate greater economic integration and cooperation among its 56 member States, and to promote sustainable development and economic prosperity. It is focused on supporting the normative work of its member States through "*the exchange of experiences and the development and implementation of international legal instruments, norms and standards, as well as the identification and dissemination of best practices in and outside the region.*"[9]

5. Subprogramme 5 (Sustainable Energy Division (SED)) of the UNECE is mandated to improve access to affordable and clean energy for all and to help reduce greenhouse gas emissions and the carbon footprint of the energy sector in the region through pursuing the following objectives:

- International policy dialogue and cooperation among Governments, energy industries and other stakeholders to foster sustainable energy development in States Members of the United Nations, improve their access to affordable and clean energy for all and reduce greenhouse gas emissions and the carbon footprint of the energy sector, in line with the energy-related Sustainable Development Goals;
- Development and extension of ECE policy recommendations, norms, standards, guidelines and tools on energy-related issues; and
- Assistance to member States, at their request, through training programmes, advisory services and technical cooperation projects to build capacity for applying the normative

[8] Section (a), Paragraph 1, page 1, Terms of Reference of the Commission, https://www.unece.org/fileadmin/DAM/oes/mandate/Commission_Rev5_English.pdf.
[9] Biennial programme plan and priorities for the period 2016-2017, A/69/6/Rev.1*, United Nations, 2015.

instruments, and the dissemination of best practices and lessons learned in the areas of its work.

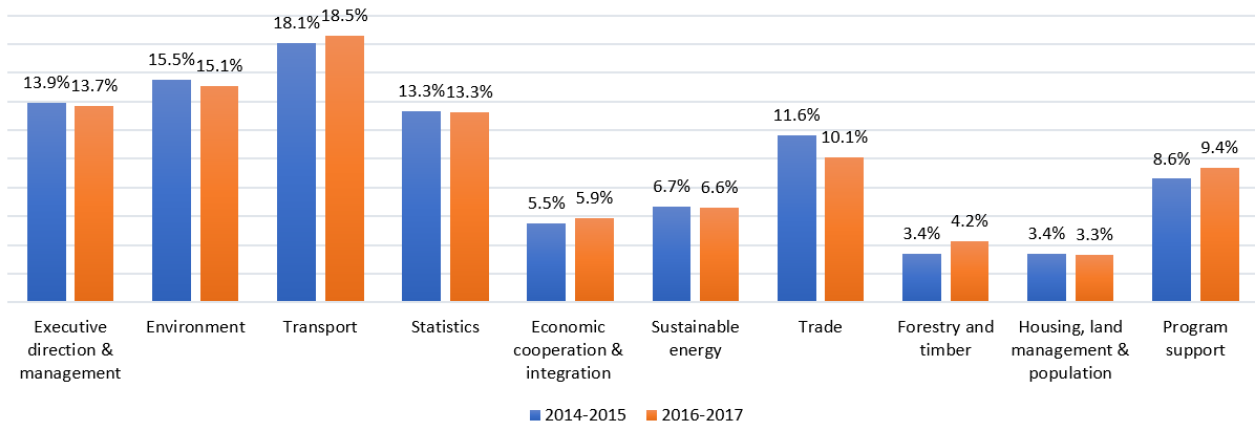
6. In order to fulfil its mandate, the subprogramme is expanding its operations across various work areas (Figure 1) and carries out a diverse set of activities to facilitate policy dialogue on the sustainable energy agenda among the public sector (governments), energy industry, and non-state actors (academia, civil society, etc.).

Figure 1: Sustainable Energy - Area of Work

Source: Strategic Review of the ECE Sustainable Energy Subprogramme, UNECE, 2020.

7. The SED evidenced a steady expenditure share (Figure 2) in the UNECE regular budget (6.7 percent in 2014-2015, and 6.6 percent in 2016-2017), which is far below the budget of other subprogrammes (subprogramme 1- Environment; subprogramme 2 – Transport; subprogramme 3 – Statistics; and subprogramme 6 – Trade).

Figure 2: Share of Expenditure of Subprogrammes in the Total Budget of Programme 17[10]

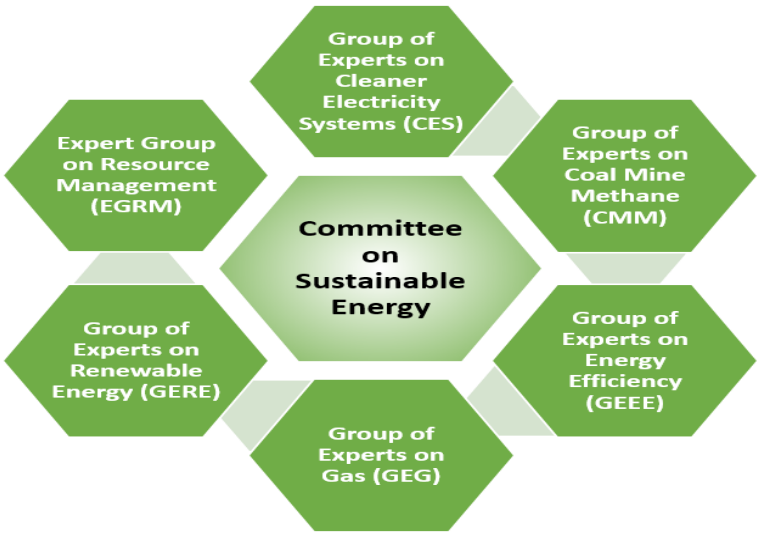


Source: Proposed Programme Budget for the Biennia of 2016-2017[11] and 2018-2019[12], UN.

[10] Programme 17 - Economic Development in Europe.
[11] https://www.unece.org/fileadmin/DAM/OPEN_UNECE/2016-2017_PPB-ECE-A-70-6_Sect.20.pdf.
[1212] https://undocs.org/A/71/6/REV.1.

8. Overall, the SED provides and facilitates support with respect to developing policy recommendations, standards and guidelines on energy-related matters, building the capacity of, and provide assistance to member States (upon their request) through technical assistance and advisory activities. It hosts and facilitates annual and semi-annual sessions of the Committee on Sustainable Energy (hereinafter "the Committee"), an intergovernmental body providing member States with a platform for cooperation in the sustainable energy agenda. The scope of work (SoW) of the Committee[13] and its six subsidiary bodies (groups of experts) is regulated by the ToR of the Committee on Sustainable Energy and Mandates and the ToRs of its subsidiary bodies[14] (Figure 3**).** The groups of experts (GoEs) of the Committee comprise subject-matter senior executives representing the UNECE's member States, the private sector, and non-state entities. The GoEs have been mandated to support regulatory and policy dialogue, to strengthen the institutional capacity of participating parties, and to share experience and best practices in their given sub-sector related to sustainable energy.

Figure 3: The Subsidiary Bodies of the Committee on Sustainable Energy



Source: http://www.unece.org/energy.html.

9. Overall, the GoEs have been established to serve as platforms that encourage the development and exchange of best practices and know-how among subject-matter experts, member States and other relevant actors in the sustainable energy sector. The GoEs approve their annual workplans of result-oriented activities to be implemented in their respective areas in collaboration with other partners.

III. Purpose, Scope and Methodology of the Evaluation

10. The evaluation was commenced by the UNECE in February 2020 with the goal of assessing the relevance, effectiveness, efficiency, coherence, impact, and sustainability of the partnership and collaboration practices of the UNECE's subprogramme 5 (Sustainable Energy) with the UN and external partners from 2016 to 2019, and the extent to which this delivered with respect to the sustainable energy agenda.

[13] Group of Experts on Cleaner Electricity Systems (CES); Group of Experts on Coal Mine Methane (CMM); Group of Experts on Energy Efficiency (GEEE); Group of Experts on Gas (GEG); Group of Experts on Renewable Energy (GERE); Expert Group on Resource Management (EGRM).

[14] Annex 1, 22 session of the Committee on Sustainable Energy, November 2013, UNECE, ECE/ENERGY/91, http://www.unece.org/fileadmin/DAM/energy/se/pdfs/comm22/ECE.ENERGY.91_e.pdf.

11. The evaluation will explore the activities of the during the period 2016 to 2019 that benefit from engagement with UN and external partners. The activities include all of SED's work on sustainable energy issues:

- Sustainable resource management: extension of the United Nations Framework Classification for Resources and initiation of development of a United Nations Resource Management System.
- Reducing the environmental footprint of energy: activities in carbon capture, use, and storage, high efficiency-low emissions technology, methane management in the extractive industries.
- Deep transformation of the energy system: energy efficiency, renewable energy, cleaner electricity systems.
- Assist countries in assessing their strategic options: pathways to ensure energy for sustainable development and tracking progress to commitments.

12. The results of this evaluation are expected to contribute to enhancing cooperation with existing and potential partners and to strengthen the impact of the activities of the UNECE's subprogramme 5 (Sustainable Energy).

13. In order to develop an effective evaluation methodology, the evaluator reconstructed the Theory of Change (ToC) for the UNECE's subprogramme 5 (Sustainable Energy) (Annex 2).

A. Methodology

14. The evaluation's methodology was developed in compliance with the UNECE's Evaluation Policy and the revised Norms and Standards for Evaluation (2016) of the United Nations Evaluation Group (UNEG).

15. The evaluation utilized a participatory approach by including all relevant stakeholders to achieve a high level of ownership with regard to the evaluation's output. It also used a range of data-collection techniques such as key stakeholder interviews, surveys, and structured documentary analyses. Quantitative and qualitative analyses of information were conducted as well, with particular attention given to the cross-validation of data. Annex 3 presents the evaluation framework along with the sources of information (e.g. the clusters of key stakeholders to be reached out to in the course of this evaluation) and the relevant data-gathering methods (i.e. interviews or online surveys).

16. The evaluation applied judgmental/purposeful sampling methods to analyze the cases (the activities of the UNECE: projects/programs, advisory services, and capacity building/development activities) illustrative of the cooperation practices applied and the associated outcomes. The evaluation also took into account the findings of the UNECE project evaluations conducted with respect to activities implemented in 2016-2019 (the time period covered by the evaluation). In particular, the aforementioned findings were related to the gender mainstreaming and human rights agenda as well as tangible and/or intangible results (both outputs and outcomes) of the interventions.

17. The evaluation methodology was also adjusted in the course of the evaluation to take into account the potential impact of COVID-19 on the sustainability of the UNECE's operations. However, this issue was not included in the list of key evaluation questions (set out in the ToR of the evaluation) as the evaluation preparation took place before the pandemic broke out.

18. Overall, the evaluation consisted of three main phases: the inception phase; the fieldwork phase; and the reporting phase. *During the inception phase*, the evaluator:

(a) Reviewed the relevant documentation (reports of the Committee on Sustainable Energy and its subsidiary bodies, quarterly performance reports (QPRs), etc.);
(b) Reconstructed the ToC;
(c) Prepared a tentative list of internal and external stakeholders;
(d) Developed the evaluation framework and data-collection tools such as interview protocols and an online survey; and
(e) Drafted an inception report for the evaluation;
(f) Reconstructed the Theory of Change (ToC);

19. During the *fieldwork phase,* the evaluator took necessary measures to ensure adequate interaction and consultation with different internal and external stakeholders. Data were collected through different methods including document review, online surveys, and key informant interviews. The evaluator used the most reliable and appropriate sources of information available and triangulated (cross-validated) primary and secondary data (relevant studies, planning and monitoring documents, reviews, etc.). The evaluator also analyzed the reports produced by subprogramme 5, as a primary source of information covering the activities implemented in 2016-2019.

B. Key Evaluation Questions

20. The evaluation applied the criteria of relevance, coherence, efficiency, effectiveness, and sustainability introduced by the Organization for Economic Co-operation and Development (OECD)[15] and was designed to provide answers to key questions listed below, thereby identifying key lessons learned with regard to partnership and cooperation between the UNECE and other internal or external stakeholders. Gender and human rights aspects were addressed throughout the evaluation with an appropriate methodology and evaluation questions prepared.

Relevance

1. Is the collaboration of the ECE Sustainable Energy subprogramme with other entities (UN, other international organizations, NGOs, civil society, academia, and private sector) relevant to attaining the 2030 Agenda and the Paris Climate Agreement?
2. How relevant is the collaboration with other entities (UN, other international organizations, NGOs, civil society, academia, and private sector) in delivering on expected accomplishment and mandated outputs?
3. How relevant is the foregoing collaboration with regards to gender Equality and empowerment of women?
4. Does the Sustainable Energy subprogramme incorporate the perspective of vulnerable groups while collaborating with UN system and other partners?

Coherence

1. How coherent is ECE's collaboration with the UN System to deliver on sustainable energy?
2. Has the collaboration among ECE, the UN system and other partners assisted ECE

[15] Organization for Economic Co-operation and Development – Development Assistance Committee (OECD – DAC).

member States in delivering on energy for sustainable development?

3. Are the outputs of ECE's Sustainable Energy subprogramme supported by partnerships with UN System and other partners?

Effectiveness

1. Does the subprogramme contribute to member States' attainment of their commitments under the 2030 Agenda and the Paris Climate Agreement?
2. What outcomes have been achieved through the collaboration with partners (expected/unexpected, positive/negative), in the activities of the subprogramme?
3. What were the challenges/obstacles to achieving the objectives and expected accomplishments set forth?

Efficiency

1. Have the available resources been used efficiently to foster fruitful collaboration with UN System and other partners to deliver results?
2. Are there sufficient resources to achieve the intended outcomes, including in a timely manner?
3. How could enhanced engagement with partners improve efficiency?

Sustainability

1. What is the likelihood that the benefits of the subprogramme's activities delivered through collaboration with UN System and other partners will persist over time?
2. To what extent do partners engage with the work in an enduring way?

Impact

1. How has the collaboration of the ECE Sustainable Energy subprogramme with UN System and other partners contributed to impact at the ECE or global levels?
2. Have the outcomes of this collaboration led to new policies or policy changes in member States?
3. To what extent is the work of the subprogramme taken up by other countries outside of the region as a result of the collaboration with UN System and other partners?
4. Did the collaboration and indicated activities contribute to enhance gender equality and empowerment of women in energy?
5. Has the collaboration between the ECE Sustainable Energy subprogramme, UN System and other partners helped to strengthen the application of gender mainstreaming principles and contribute to substantial and meaningful changes in the situation of the most vulnerable groups?

C. Evaluation Limitations

21. There were several inherent limitations in the design of this evaluation:
    (a) Key informants were selected for interview on the basis of their familiarity with the subprogramme and their availability, which did not allow for proper randomization;
    (b) The pool of survey recipients was limited to those who had already participated in the selected activities carried out by the UNECE and whose contact details were available, which caused an implicit sampling bias;
    (c) The outcome-level achievements reported in accordance with the effectiveness and impact criteria do not fully reflect the wide range of success stories and outcomes, and

are limited to a few selected cases reported by stakeholders (who were reached out) that were validated in the course of this evaluation;

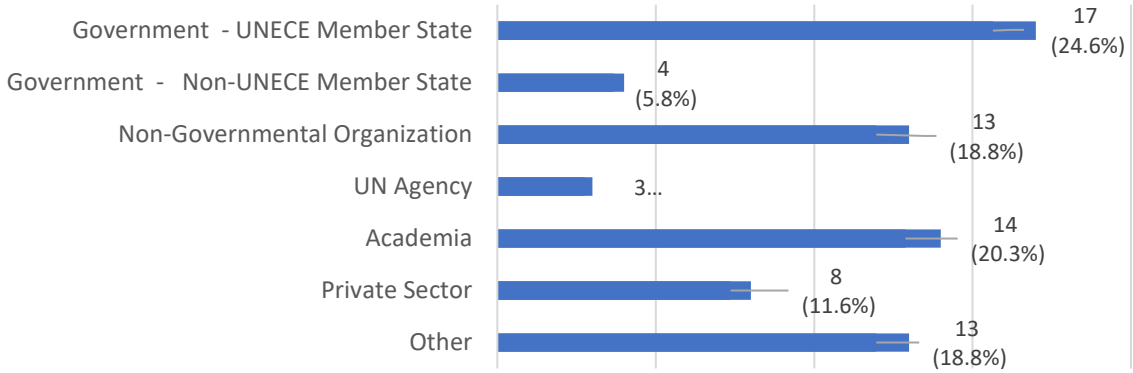
(d) The impact criterion of the evaluation was measured through the reported results - the scope of the evaluation did not allow for application of experimental and quasi-experimental approaches to assess the impact of collaboration between the SED and other organizations (the UN and non-UN entities) at either global or at national levels.

D. The Evaluation Audience and Key Stakeholders Surveyed

22. The primary audience of the evaluation is the UNECE's senior management and the staff as well as the member States of the UNECE. The secondary audience of this evaluation is expected to be the partnering organizations of the UNECE, operating in the sustainable energy domain. The evaluation will be available online for all interested parties across the 56 member States of the UNECE.

23. In total, the evaluator surveyed 69 external stakeholders[16] from 35 countries, including representatives of other UN agencies, UNECE member States, academia, non-governmental organizations, the private sector, research centers, and intergovernmental organizations, as well as independent experts. Of the survey respondents, 62 percent (43 out of 69) were male, and 36 percent (25 out of 69) were female. One of the respondents opted not to answer the gender question. The chart below (Figure 4) presents a breakdown of primary stakeholders surveyed in the course of the evaluation.

Figure 4: Primary Stakeholders Surveyed



Source: Evaluation Dataset, 2020.

24. In addition, the evaluator conducted in-person interviews with 26 subject-matter experts, the staff of the UNECE and partnering organizations from the UN, the Organization for Security and Cooperation in Europe (OSCE), academia, private sector, governments and non-government organizations. In total, the evaluator reached out to, and received feedback from, 95 stakeholders of whom about 35 percent (33 out of 95) were female and about 64 percent (61 out of 95) were male.

[16] The survey response rate was about 19 percent (69 out of 355).

IV. Evaluation Findings

25. This chapter presents the evaluation findings measured against the criteria adopted by the DAC for evaluating development assistance programs. Specifically, these criteria are relevance, coherence, effectiveness, efficiency, sustainability, and impact.

A. Relevance

Finding 1: The vast majority of stakeholders (surveyed and interviewed), as well as the document analysis, confirmed that the collaboration between the UNECE and other organizations and/or individual experts was highly relevant when it came to attaining the goals of the UN's 2030 Agenda for Sustainable Development1 and the targets of the Paris Climate Agreement.

Finding 2: The vast majority of stakeholders confirmed that the UNECE's activities and its collaboration with internal or external stakeholders (organizations and subject-matter experts) were highly relevant in delivering on the expected accomplishments and mandated outputs.

Finding 3: Most of the stakeholders (over 75 percent) confirmed that collaboration with the UNECE was relevant and incorporated gender-based approaches. The 28th session of the Committee on Sustainable Energy was conducted in 2019 and the 10th International Forum on Energy for Sustainable Development (IFESD) had a session item on gender mainstreaming in the energy sector.

Finding 4: No specific evidence was found of the perspectives of vulnerable groups being afforded particular attention during the sessions of the Committee on Sustainable Energy and its subsidiary bodies specifically. However, the majority of stakeholders confirmed that the cooperation practices of the UNECE were relevant to improving the living standards of the population including marginalized groups. Some however argued that some activities of the UNECE that were highly technical did not address marginalized groups.

26. In 2015, at its 70th session[17], the United Nations General Assembly (UNGA) adopted the resolution "Transforming our World: the 2030 Agenda for Sustainable Development, which set 17 SDGs and 169 targets to be pursued by all countries and stakeholders, acting in a collaborative partnership. While the UNECE's biannual programme plan and priorities for the period 2016-2017 did not expressly mention the 2030 Agenda for Sustainable Development, as it had been developed before the adoption of the above-mentioned resolution, it was integrated into, and specifically highlighted in, the UNECE's biannual programme plan and priorities for the period 2018-2019.

27. Thus, the Sustainable Energy subprogramme of the UNECE is specifically mandated to promote a sustainable energy development strategy for the 56 member States of the UNECE. It also addresses cross-sectoral issues related to energy and the environment (Table 1). The latter (environmental and climate change) is also addressed in the Paris Climate Agreement[18] which was

[17] A/RES/70/1, UN, 2015 ; https://undocs.org/A/res/70/1.

[18] "*The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. It also aims to strengthen countries' ability to deal with the impacts of climate change and support them in their efforts.*" sources: https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement.

the first global climate change agreement adopted at the Paris Climate Conference (21st Conference of the Parties (COP21)) in December 2015. It is important to highlight that the Paris Climate Agreement was not referred to in the UNECE's proposed strategic framework for the period 2018-2019[19].

Table 1: The SED and SDGs

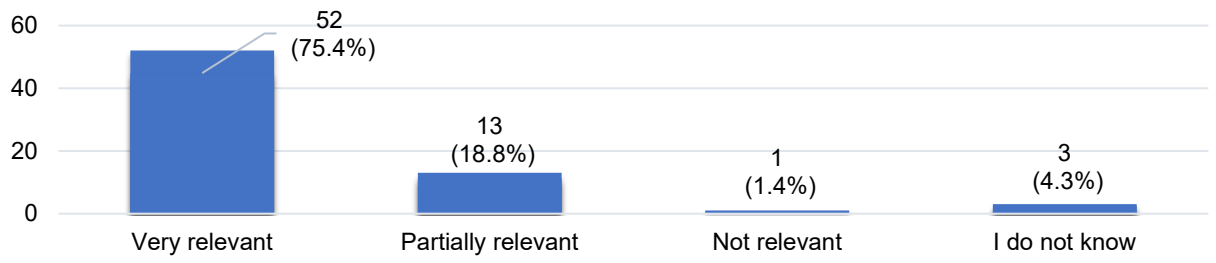
UNECE	**SDG 7:** Ensure access to affordable reliable sustainable and modern energy for all.
	SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
	SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
	SDG 12: Ensure sustainable consumption and production patterns.
	SDG 13: Take urgent action to combat climate change and its impacts.

Source: UNECE, 2020.

28. The sessions of the Committee on Sustainable Energy operate as a platform for international dialogue and cooperation in the field of sustainable energy among different groups of stakeholders. The topics discussed cover the areas addressed by the six subsidiary bodies: energy efficiency; renewable energy; cleaner electricity systems; coal mine methane; gas; and resource management.

29. The stakeholders were asked whether their collaboration with the UNECE was relevant in attaining the goals of the UN's 2030 Agenda for Sustainable Development[20] and the targets of the Paris Climate Agreement. Over 75 percent (52 out of 64) of the surveyed stakeholders and over 88 percent (15 out of 17) of external (non-UNECE staff) stakeholders interviewed in the course of the evaluation were positive about the relevance of the cooperation with the UNECE to achieve the aforementioned goals. About 19 percent (13 out of 69) of survey respondents claimed that the cooperation was partially relevant and only one respondent asserted that the corporation with the UNECE was not relevant (Figure 5).

Figure 5: Feedback of Surveyed Stakeholders about the Relevance of the Cooperation



Source: UNECE Dataset, 2020

[19] http://www.unece.org/fileadmin/DAM/OPEN_UNECE/02_Programme_Planning_and_reporting/SF_2018-2019_-_reissued.pdf.

[20] The UN's 2030 Agenda for Sustainable Development is a comprehensive plan that outlines how we can abolish poverty and transform the world into a peaceful, sustainable environment for all, https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf.

30. It is noteworthy that of the 13 respondents who claimed that the cooperation had been partially relevant, five were representatives of the UNECE's member States, three non-governmental organizations, one was from a governmental agency of a non-UNECE member State, while the remaining four comprised one representative of academia, one UN agency representative, one private company representative, and one self-employed professional. The following quotes give a flavor of the feedback gleaned on the UNECE and its work:

"*…The SDGs are a very important engine to drive changes and improvements within society. The work carried out by the UNECE is aligned with the SDG agenda; it guides the member States on how to meet these global goals…*"

"*…the UNECE is the main energy-focused UN organization working in Eastern European countries and the countries of Central Asia (together with the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP))*"

"*…the targets set in SDGs and the Paris Agreement are very relevant not only to the member States but to the industry as well. The industry became committed to the SDGs and Paris Agreement targets because investment funds and investors require the industry to report on the achievement of the various SDG targets…*"

31. The objective and expected accomplishments (EA) of the Sustainable Energy Division (SED) of the UNECE for the period under evaluation (2016-2019) were clearly defined in the Biennial Programme Plan and Priorities for the Period 2016-2017, and the Biennial Programme Plan and Priorities for the Period 2018-2019 (Table 2).

Table 2: The Objective and Expected Accomplishments of the SED (2016-2019)

Objective: To improve access to affordable and clean energy for all and to help reduce greenhouse gas emissions and the carbon footprint of the energy sector in the region.		
EA #1: Improved policy dialogue & cooperation among all stakeholders on sustainable energyissues, in particular energy efficiency, cleaner electricity production from fossil fuels, renewable energy, coal mine methane, mineral resource classification, natural gas and energysecurity.	**EA #2: Increased awareness of the role of energy efficiency and renewable energy in achieving sustainable energy development**	**EA #3: Strengthened implementation of ECE recommendations/guidelines, best practices and other normative instruments for sustainable energy development.**

Source: Biennial Programme Plan and Priorities for the Period 2016-2017 and 2018-2019, UN.

32. The UNECE staff confirmed the commitment of the organization to strengthening and diversifying cooperation channels. This attitude towards cooperation and partnerships was also highlighted during the 28th Session of the Committee on Sustainable Energy[21] as follows: "*The twenty-seventh session of the Committee on Sustainable Energy (the Committee) set in motion a consultation process to sharpen the structure of the Committee's work in response to shifting needs and to explore potential partnerships for enhanced capacity building and sharing of experiences*

[21] "*The Committee on Sustainable Energy is an intergovernmental body that provides member States with a platform for international dialogue and cooperation. It is mandated to carry out a programme of work in the field of sustainable energy with a view to providing access to affordable and clean energy to all*"; https://www.unece.org/energy/se/com.html.

in the energy space…[22] *the Committee recommended strengthened collaboration of the energy subprogrammes with other subprogrammes of the ECE…*[23]*"* Agenda Item 7 of the above-mentioned session, focusing on regional outreach and collaboration activities, also outlined a number of initiatives conducted jointly with national or international partners.[24] So far, the organization keeps engaging subject-matter experts (either independent ones or those representing other UN agencies), multilateral and intergovernmental organizations, academia, and non-governmental organizations as well.

33. The feedback received from the UNECE staff and external stakeholders, as well as the document analysis, confirmed that the organization actively engages with internal stakeholders (UNECE) and external stakeholders (governments, industries, researchers and independent consultants, non-governmental and international organizations) to deliver services tailored to the needs of the member States. Overall, in 2016-2019, the SED of the UNECE implemented and/or facilitated 104[25] information-sharing, sessions of intergovernmental body, and capacity-building events which included:

(a) Annual sessions of the Committee on Sustainable Energy;
(b) Annual sessions of the International Forum on Energy for Sustainable Development;
(c) Sessions of six subsidiary bodies (group of experts)[26] of the Committee on Sustainable Energy;
(d) Meetings of the Joint Task Force on Energy Efficiency Standards in Buildings; and
(e) Training, workshops, seminars and consultation meetings in the relevant domains of sustainable energy[27].

34. The number of participants per event varies depending on the type of the event. For example, the sessions (plenary or parallel sessions) of the International Forum on Energy for Sustainable Development usually assembled over a thousand participants and energy experts representing national governments, academia, the business community, the financial sector, international organizations, other UN agencies, and civil society. These sessions have always been organized in cooperation with external parties[28] to comprehensively address the agenda for implementing the SDGs and the targets of the Paris Agreement (Table 3).

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[22] Agenda Item 1: Opening and adoption of the agenda, page 2, ECE/ENERGY/122 http://www.unece.org/fileadmin/DAM/energy/se/pdfs/CSE/comm28.2019/ECE_ENERGY_122_Agenda_Final.pdf.
[23] http://www.unece.org/fileadmin/DAM/energy/se/pdfs/CSE/comm28.2019/ECE_ENERGY_123_Final_for_submission.pdf.
[24] http://www.unece.org/fileadmin/DAM/energy/se/pdfs/CSE/comm28.2019/ECE_ENERGY_2019_18_Final.pdf
[25] 17 events in 2016; 22 events in 2017; 36 events in 2018; and 29 events in 2019.
[26] Group of Experts on Cleaner Electricity Systems (GECES); Group of Experts on Coal Mine Methane (GECMM); Expert Group on Resource Management (EGRM); Group of Experts on Energy Efficiency (GEEE); Group of Experts on Gas (GEG); Group of Experts on Renewable Energy (GERE). The Groups of Experts comprise subject-matter senior executives representing the UNECE's member States the private sector, and non-state entities. They have been mandated to support regulatory and policy dialogue, to strengthen the institutional capacity of participating parties, and to share experience and best practices in their sub-sector relating to sustainable energy.
[27] Some of the workshops and training sessions were conducted within the framework of different projects implemented by the UNECE.
[28] e.g. the UNECE; the government of the hosting country; the United Nations Regional Commissions; the International Energy Agency (IEA); the International Renewable Energy Agency (IRENA); the United Nations Development Programme (UNDP); the United Nations Industrial Development Organization (UNIDO); the Copenhagen Centre on Energy Efficiency (C2E2); the Renewable Energy Policy Network for the 21st Century (REN21); the Global Environment Facility (GEF); the Organization for Security and Co-operation in Europe (OSCE).

Table 3: Snapshot of the Sessions of the International Forum on Energy for Sustainable Development in 2016-2019

Activity	Date	Agenda
7th International Forum on Energy for Sustainable Development	18-21 October, 2016	Share perspectives on how the SDGs and other aspirational pledges such as the Paris Agreement targets can be implemented.
8th International Forum on Energy for Sustainable Development	11-14 June, 2017	Advise the countries on how to attain the energy-related SDGs in their national contexts.
9th International Forum on Energy for Sustainable Development	12-15 November, 2018	Provide an opportunity for policymakers and experts from various elements of the energy sector to reflect on the implications of the fast-paced energy transition that has become the new normal, review activities undertaken to date and to make further progress towards meeting the SDGs.
10th International Forum on Energy for Sustainable Development	7-8 October, 2019	Discuss the major issues and actions to be taken to achieve SDG 7 and meet commitments to mitigate climate change.

Source: UNECE Data, 2020.

35. The results of the external evaluations of some of the UNECE's activities in the sustainable energy domain validated the feedback of external and internal stakeholders who were contacted in the course of this evaluation (Table 4). Thus, Finding 3 of the 1st evaluation confirmed the claim that "*The vast majority of the stakeholders confirmed that the Project was highly relevant to the needs and priorities of their country or region. The Project was in line with the Paris Agreement and the 2030 Agenda for Sustainable Development. The targeted countries submitted official support letters to the UNECE confirming their interest in the Project.*"[29] A multi-stakeholder consultation on the matter with the participation of national officials/experts, the UNECE, the UNESCAP, the UNDESA, the secretariat of the Sustainable Energy for All (SE4All) and others, were an integral part of the project. Finally, the evaluation of the project concluded that "*The Project was in line with the Paris Agreement and the 2030 Agenda for Sustainable Development and greatly benefited the targeted countries and other member States through knowledge-sharing and capacity-building initiatives.*"[30]

Table 4: External Evaluations of the Activities Conducted in 2016-2019 in the Sustainable Energy Domain

Activity/Project Title	Project Period	Project Objective	Implementing Partners	Beneficiary member States	Results
Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia	2016-2019	To strengthen the national capacities of economies in transition to develop the national sustainable energy action plan in the	UNECE, UNESCAP, UNDESA.	Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan and UNECE	Five national action plans for sustainable energy developed and submitted to the Government; trainings and workshops; identification of best practices and multi-

[29] Finding 3, Page 12, Evaluation of the project "Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia"; http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/Evaluation_Report_Se4All_Final.pdf.

[30] Page 5, Evaluation of the project "Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia"; http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/Evaluation_Report_Se4All_Final.pdf.

		context of SDG 7 of the 2030 Agenda for Sustainable Development.		member States	stakeholder consultations with the participation of national officials/experts, UNECE, UNESCAP, UNDESA, SE4ALL secretariat and others.
Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy	2016-2019	To develop strategies and actions to ensure the attainment of sustainable energy in the ECE region.	UNECE, the Institute for Applied Systems Analysis, the Pacific North West National Laboratory, the Fraunhofer-Gesellschaft.	UNECE member States	Modelling of energy scenarios with policy dialogue, technology research and the development of an early-warning system concept to monitor and forecast whether achievement of sustainable energy objectives is on track
Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region.	2016-2019	To improve energy efficiency in buildings and reduce global greenhouse gas emissions.	UNECE Sustainable Energy Division and UNECE Housing and Land Management Unit (HLMU)	UNECE member States	Mapping of energy efficiency standards in buildings, mapping of existing technologies to enhance energy efficiency in buildings, undertaking gap analysis and recommendations for their use in the region and updating the database of experts; seminars and workshops.

Source: http://www.unece.org/info/open-unece/evaluation/evaluation-reports.html.

36. Furthermore, over 79 percent of the respondents and 92 percent of the interviewees in the course of the evaluation of the project "Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy" also agreed with the statement that "*…the project was relevant or highly relevant to the priorities and needs of the UNECE member States…*"[31] It is noteworthy that the UNECE implemented the project in close cooperation with the International Institute for Applied Systems Analysis (IIASA)(Austria), the Pacific North West National Laboratory (USA) and the Fraunhofer-Gesellschaft (Fraunhofer Society)(Germany).

37. The project "Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region" was developed on the basis of intensive consultations and information-sharing among: the UNECE member states; the Committee on Sustainable Energy (CSE); the Committee on Housing and Land Management (CHLM); the Working Party on Regulatory Cooperation and Standardization Policies (WP6); and the Group of Experts on Energy Efficiency (GEEE). This was acknowledged as very relevant to the objectives of the UNECE and its member States[32].

[31] Page 7, Evaluation of the project "Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy", UNECE, 2019, http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/31102019_Evaluation_Pathways_FINAL_report.pdf.

[32] Finding 1, Page 11, Evaluation of the project "Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region", UNECE 2019; http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/Evaluation_Report_E282.pdf.

38. To align with SDG 5 (Achieve gender equality and empower all women and girls), the UNECE developed two key documents on gender mainstreaming: the Gender Parity Strategy (2017); and the UNECE Policy on Gender Equality and the Empowerment of Women (2015). These highlighted the importance of:

(a) Promoting and raising awareness of the importance of taking gender perspectives into account in different activities and events under the auspices of the Committee on Sustainable Energy and Groups of Experts, as appropriate; and
(b) Creating a supportive environment for expert participation, policies, regulations, innovative development, and knowledge-based economies in the area of sustainable energy tailored to the needs of both women and men.

39. The evaluation did not find any evidence of the gender mainstreaming aspect being addressed during the annual sessions of the Committee on Sustainable Energy in 2016-2018[33]. However, the 28th session of the Committee on Sustainable Energy incorporated Agenda Item 6 on Gender and Energy. The presentations under this agenda item were delivered by representatives of the private sector, government, and non-governmental organizations to accommodate from different perspectives.

40. The findings of the four evaluations[34] conducted from 2016-2019 also verified the gradual increase in attention paid to gender mainstreaming and women's empowerment agenda. The evaluation of the project Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia" confirmed that the project *"... demonstrated a reasonable focus on gender mainstreaming and human rights dimensions. It applied a non-discriminatory and equal rights-based approach to benefit both female and male experts, although the gender disparity among the experts and workshop participants was caused by exogenous factors beyond the UNECE's control..."*[35] The findings of the another project were more moderate: "*The Project demonstrated a moderate focus on gender mainstreaming and human rights dimensions. It applied a non-discriminatory and equal rights-based approach to benefit both female and male experts in the area of EESB, although the presentations and mapping studies did not link EESB to relevant SDGs and the human rights agenda."*[36] Meanwhile, the 3rd evaluation stated: *"Though the gender equality and human rights dimension was neither the main topic of the project nor explicitly integrated into the project proposal, activities, and reports, both women and men were able to access its results."*[37]

41. The 10th International Forum on Energy for Sustainable Development (IFESD), conducted in Thailand in 2019, incorporated a session on sustainable energy and gender empowerment which was led by experts from the Economic and Social Commission for Western Asia (ESCWA).

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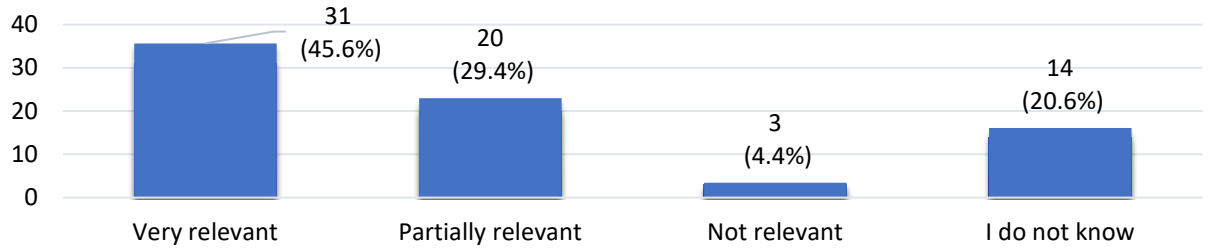
[33] As the gender-related agenda was not supported by the member States.
[34] Evaluation of UNDA Project 1617X "Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia" , UNECE (2019); Evaluation "Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy" UNECE (2019); Evaluation Report of The Extra Budgetary Project "Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region", UNECE (2019); Evaluation of the UNECE Gas Centre, UNECE (2018).
[35] Evaluation of UNDA Project 1617X "Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia", UNECE (2019).
[36] Evaluation Report of the Extrabudgetary Project "Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region", UNECE (2019).
[37] Evaluation "Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy" UNECE (2019).

42. Overall, over 73 percent (51 out of 69) of surveyed stakeholders confirmed that the foregoing collaboration with the UNECE was either very relevant or partially relevant to gender equality and the empowerment of women. Only three out of 69 surveyed stakeholders responded in the negative (Figure 6).

Figure 6: Survey Respondents' Feedback about Activities' Relevance to Gender Equality



Source: UNECE Dataset, 2020.

43. Some of the stakeholders (surveyed and interviewed) also pointed out that SDG 5 addresses gender equality facets across sectors, including energy. It was also noted that the commitment of the member States to realize and the UNECE's mandate to support realization of SDGs included gender equality and mainstreaming in the energy sector. It was highlighted that gender mainstreaming goals have to be set at an international level as the impact (of legal and policy changes) will only materialize when a globally recognized organization provides support to, and lobbies for, gender equality and empowerment in the sector.

44. Stakeholders also made an additional point with regard to the role of women in the sector and the impact of the energy resolutions on women's lives, as illustrated in the following quotes of three respondents:
"It is very important for women to take part in solving global environmental problems, since the health of the present and future generations of the population depends on this."
"*Women will suffer the most if the world does not fix the energy issue.*" and
"*Women represent half of the population and a gender-inclusive approach determines the future of our generations*."

45. A stakeholder from Belarus emphasized that the National Statistics Committee of the Republic of Belarus paid attention to the development of gender statistics to monitoring progress made with regard to SDGs. The same stakeholder also reported being engaged in the Task Force on Measuring Intra-Household Power and Decision-Making and in the Task Force on Communicating Gender Statistics. The results of the survey in Belarus on the effect of standard of living on decision-making in households were presented as best practices in the Recommendations for Measuring Intra-household Power and Decision-making.

46. Analysis of the evaluations presented in **Table 4** revealed the increasing consideration of the Sustainable Energy Division of the UNECE with regard to gender mainstreaming and women's empowerment. Thus, according to the relevant finding of the evaluation of the extra-budgetary project "Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region" the project "*demonstrated a moderate focus on gender mainstreaming and human rights dimensions. It served as an information-sharing*

platform that provided equal opportunities (participation and information-sharing) for both female and male experts in the area of energy efficiency standards in buildings."[38]

47. The evaluation of the project "Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy" arrived at the finding that: "*In spite of the fact that the gender equality and human rights dimension was neither the main topic of the project nor explicitly integrated into the project proposal, activities, and self-assessment reports, none of the surveyed participants stated that it was not considered in the project. A significant proportion of the respondents agreed that the project applied gender and rights-based approaches at different stages of its development (64% - in design of activities and results; 57% - in the implementation of activities). Forty-three percent of the survey respondents confirmed that the UNECE advocated for gender equality in the project's area of work."*[39]

48. The evaluation of the project "Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia" concluded that: "*The project demonstrated a reasonable focus on gender mainstreaming and human rights dimensions. It applied a non-discriminatory and equal rights-based approach to benefit both female and male experts, although the gender disparity among the experts and workshop participants was caused by exogenous factors beyond the UNECE's control."*[40]

49. The evaluation did not find any evidence of the perspectives of vulnerable groups being particularly emphasized during the sessions of the Committee on Sustainable Energy and its subsidiary bodies specifically. However, according to clarification received from the stakeholders interviewed and surveyed, the UNECE had an indirect impact on marginalized groups as it had been focusing on improving energy systems globally, which would serve to improve living standards.

50. Over 58 percent (40 out of 69) of survey respondents fully agreed and 25 percent partially agreed that the SED of the UNECE had successfully incorporated the perspectives of vulnerable groups while collaborating with the UN system and other partners (Figure 7). The majority of stakeholders (over 75 percent) confirmed that the policies and approaches applied to secure access to uninterruptible sources of clean energy fell under basic human rights and were reflected in the SDGs.

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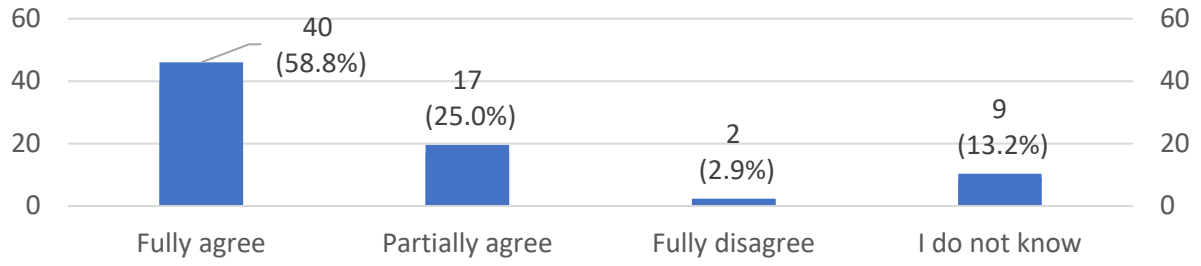
[38] Page 5, Evaluation of extra budgetary project "Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region"; http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/Evaluation_Report_E282.pdf.

[39] Page 20, Evaluation of the project "Strengthening capacity of the member States to achieve the energy-related Sustainable Development Goals - Pathways to Sustainable Energy", UNECE, 2019, http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/31102019_Evaluation_Pathways_FINAL_report.pdf.

[40] Page 5, Page 5, Evaluation of the project "Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia"; http://www.unece.org/fileadmin/DAM/OPEN_UNECE/03_Evaluation_and_Audit/Evaluation_Reports-with_SPs/05-SustainableEnergy/Evaluation_Report_Se4All_Final.pdf.

Figure 7: Feedback from Survey Recipients about Incorporating the Perspectives of Vulnerable Groups



Source: Evaluation Dataset, 2020.

51. It was also noted that vulnerable groups had not been properly considered before 2015, when the SDGs were finalized. For ease of reference, the targets of energy-sector-related SDGs that address the needs of vulnerable groups of the population are presented in the table below. (Table 5).

Table 5: Energy Sector Related SDG Targets that Cover Vulnerable Groups of Population

SDGs Directly Related to SED Scope of Work	SDG Targets
SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all.	**Target 7.1** – By 2030, ensure universal access to affordable, reliable and modern energy services. **Target 7.b** - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support).
SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	**Target 9.4** - By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities. **Target 9.a** - Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States..
SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.	**Target 11.2** - By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons. **Target 11.b** - By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels
SDG 12: Ensure sustainable consumption and production patterns.	**Target 12.c** - Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities.
SDG 13: Take urgent action to combat climate change and its impacts.	**Target 13.a** - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and

	transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible. **Target 13.b** - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.

Source: https://undocs.org/A/res/70/1

52. In addition, some of the stakeholders highlighted that energy consumption, characterized by energy inequality, has a global effect on climate change as vulnerable groups (particularly in rural areas and/or in developing countries with high population density) have no access to modern energy sources and depend entirely on solid biomass fuels. This has a negative impact on human health, particularly the health of women and children who are often exposed to harmful emissions associated with inefficient cooking methods using solid fuels. Other stakeholders noted that the activities of the UNECE are less relevant to vulnerable groups and women when such activities deal with some technical standards, while in other cases related to improving energy policy (including renewable energy) there is an obvious impact on vulnerable and marginalized groups of the population.

B. Coherence

Finding 5: All of the relevant stakeholders confirmed that UNECE's ECE's collaboration with the UN System was fully coherent with resolution 67/215 ("Decade of Sustainable Energy for All").

Finding 6: Most of the stakeholders (over 84 percent) representing the member States fully or partially agreed that collaboration with the UNECE had assisted their country in terms of delivering on energy for sustainable development.

Finding 7: All the activities of the UNECE's Sustainable Energy Division were implemented in cooperation with different organizations (the UN agencies, other international organizations, public and private sectors, non-governmental organizations, academia, etc.) and independent subject-matter experts.

53. In 2012, underscoring the importance of energy issues for sustainable development and for the elaboration of the post-2015 development agenda, the UNGA[41] declared the period of 2014-2024 as the "Decade of Sustainable Energy for All." Both the desk research and interviews carried out in the course of the evaluation confirmed that the UNECE systematically practiced joint initiatives in cooperation with other UN and non-UN organizations. For example, the 7th International Forum on Energy for Sustainable Development, which took place in Azerbaijan in 2016, was jointly organized by the Government of Azerbaijan, the United Nations Regional Commissions (including the UNECE), the United Nations Development Programme (UNDP), the United Nations Industrial Development Organization (UNIDO), the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA), the Copenhagen Centre on Energy Efficiency (C2E2), and the Renewable Energy Policy Network for the 21st Century (REN21).

[41] The United Nations General Assembly.

54. The 8th International Forum on Energy for Sustainable Development[42] (conducted in Astana, Kazakhstan, in 2017) was hosted by the Government of Kazakhstan and jointly organized by Kazakhstan and the United Nations Regional Commissions under the auspices of the EXPO 2017 "Future Energy". The forum, *inter alia*, was attended by the representatives of the UNIDO, the European Commission, the Special Representative of the UN Secretary-General for Sustainable Energy for All and CEO of Sustainable Energy for All, the Energy Charter Secretariat, the IRENA, the European Bank for Reconstruction and Development (EBRD), and other stakeholders.

55. The 9th International Forum on Energy for Sustainable Development[43] (conducted in Kyiv, Ukraine, in 2018) was co-organized by the Government of Ukraine and the five Regional Commissions of the UN, in partnership with the UNDP, the UN Institute for Training and Research (UNITAR), the UN Environment Programme (UNEP, or UN Environment), the World Bank, the IEA, the IRENA, the International Atomic Energy Agency (IAEA), the Global Environment Facility (GEF), the Organization for Security and Co-operation in Europe (OSCE) and other stakeholders. The 10th International Forum on Energy for Sustainable Development[44] was co-organized by five UN Regional Commissions and the Ministry of Energy of the Kingdom of Thailand.

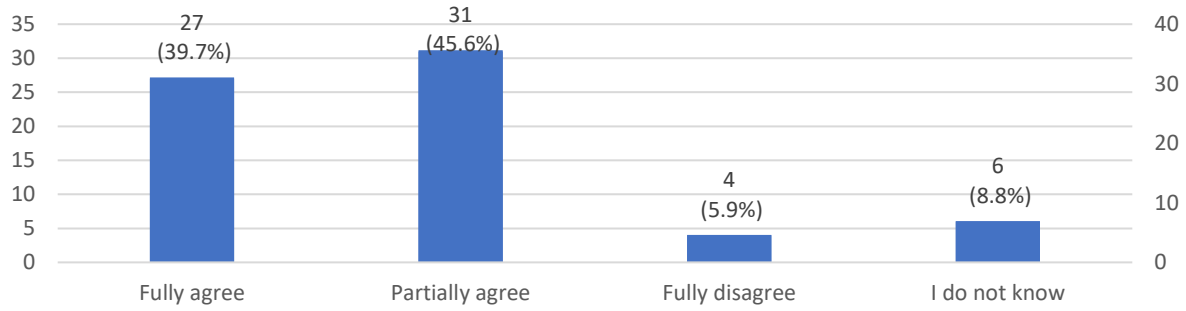
56. In 2019, marking a mid-point in the ten-year period, the UN organized a High-Level Dialogue on the Implementation of the UN Decade of Sustainable Energy for All 2014-2019. The Dialogue took place on 23-24 May 2019 in New York, USA, and was organized by the UN's Department of Economic and Social Affairs (DESA) in collaboration with the Office of the UN General Assembly (UNGA), the co-facilitators of the Group of Friends of Sustainable Energy, and members of UN-Energy and the Technical Advisory Group (TAG) on SDG 7. One of the major discussion topics concerned advancing SDG 7 to achieve the Paris Agreement on Climate Change and the 2030 Agenda for Sustainable Development. The Dialogue was attended by representatives of member States and other UN agencies (e.g. the UN-ESCWA, the UNESCAP, the UNECE, the UNDP, and the WHO)[45]. The UNECE was represented by the Director of the SED.

57. According to the feedback gleaned from the stakeholders, the UNECE is well-regarded for leading the sustainable energy agenda in its geographic area of coverage, especially in Eastern Europe and Central Asia. The stakeholders pointed out that the work of the UNECE had been built around its robust political goals to benefit the interests of its member States. The representatives of the UN agencies interviewed in the course of this evaluation noted that the UNECE is a "sistership organization" operating under the same umbrella of the secretariat of the UN. In the event projects being planned in the same thematic and geographic area, the teams leverage joint resources to achieve results in the most cost-efficient way.

58. About 39 per cent (27 out of 69) of survey respondents fully agreed, and over 45 percent (31 out of 69) partially agreed that their collaboration with the UNECE had assisted their country in delivering on energy for sustainable development (Figure 8).

[42] http://www.unece.org/astana2017.
[43] https://www.unece.org/index.php?id=49144.
[44] https://www.unescap.org/events/10th-international-forum-energy-sustainable-development.
[45] https://enb.iisd.org/download/pdf/sd/enbplus181num24e.pdf.

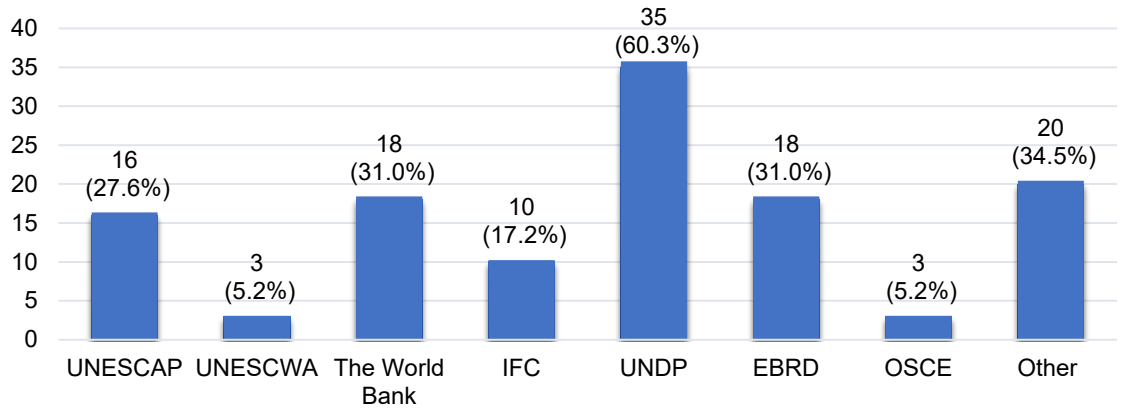
Figure 8: Survey Respondents' Feedback on Cooperation with the UNECE



Source: Evaluation Dataset, 2020.

59. The stakeholders were asked whether they cooperated with other international organizations or agencies of the UN in the pursuit of the goals of the 2030 Agenda and reaching the targets of the Paris Climate Agreement. In total, 10 out of 69 respondents to the online survey stated that the UNECE was the only international organization they cooperated with on these matters. Over 60 percent of respondents (35 out of 58) confirmed cooperating with the United Nations Development Programme (UNDP), in addition to the UNECE, and 31 percent (18 out of 58) reported cooperating with the EBRD and the World Bank. About 27 percent of respondents confirmed their cooperation with both the UNESCAP and the UNECE (Figure 9).

Figure 9: Feedback of Stakeholders Surveyed on Cooperation with Other Organizations



Source: UNECE Dataset, 2020.

60. About 34 percent of respondents (20 out of 58) listed other intergovernmental entities, associations and UN agencies they cooperated with to achieve the targets of the Paris Climate Agreement and the SDGs. These included: the UNIDO, the Asian Development Bank (ADB), the United Nations Entity for Gender Equality and the Empowerment of Women (UNWOMEN), the United Nations Human Settlements Programme (UN HABITAT), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the United Nations Population Fund (UNFPA), the World Health Organization (WHO), the European Union and the European Commission, the United States Agency of International Development (USAID), the European Energy Research Alliance (EERA), the UNEP, the Global Alliance for Buildings and Construction (GABC), and the Energy Community.

61. While comparing the UNECE with other UN agencies, some claimed that their cooperation with the UNECE was not notably different from that with other UN agencies as they all have

common goals in terms of promoting energy efficiency. In addition, the stakeholders shared the following opinions about their cooperation with the UNECE:

- The UNECE is an organization that finalizes and implements its workplans on the basis of a consensus reached among its member States;
- Other organizations maintain more dynamic communications channels and offer/share a variety of webinars, articles, reports on findings, etc.;
- The UNECE is oriented toward supporting policy reforms;
- Working with the UNECE is time-consuming and involves a high level of bureaucracy. At the same time, the organization employs highly efficient and professional mid-level managers;
- The UNECE provides tremendous technical support and it is capable of mobilizing a pool of professional experts across countries and regions;
- Cooperation with the UNECE in the field of statistics is more extensive than with any other UN agency and creates a platform for the high-level discussion of global issues for the statistical community, as well as the approval of documents (including those related to SDG statistics), which are of important methodological significance and which are subsequently used in national statistical practice;
- The UNECE competently organizes knowledge transfer to its member States;
- The UNECE puts too much emphasis on research and theory. and there is not much in the form of practical projects or support to ensure tangible changes are made in the country;
- The UNECE holds a very balanced view of how to reach all SDGs, creating realistic expectations and positions from which the UN can shape the instruments needed in this regard;
- The UNECE has a broader approach and is the only organization covering the environment, the economy, and quality of life;
- The UNECE has done a lot to promote climate change awareness and sustainable development but its visibility is still low as the conversations between experts are not reaching a broad audience; and
- The UNECE provides targeted support in the area of sustainable energy.

62. The desk research and interviews with key stakeholders validated the outputs of the UNECE in 2016-2019 achieved in cooperation with different entities, including academia, the UN agencies and international organizations:

- In 2016, the UNECE, UNDP and the GEF, issued a brochure entitled "Experience in the Europe & CIS Region with Clean Energy-UNDP, GEF and UNECE." The brochure was developed to demonstrate that the measures taken to improve energy efficiency help countries to meet their commitments under the Paris Agreement;
- In 2016, the UNECE's Group of Experts on Coal Mine Methane (GECMM) presented a publication entitled "The Challenges of the U.S. Coal Industry and Lessons for Europe."[46] It was a joint publication of the UNECE and Columbia University's School of International and Public Affairs aimed to educate decision-makers in Europe about the economic and social impacts of declining national coal markets;
- In 2016, the UNECE and the School of International and Public Affairs (SIPA) of Columbia University jointly developed the report "The Challenges of the US Coal Industry and Lessons for Europe"[47];
- In 2017, the UNECE (as one of 29 members of the specially-constituted Steering Committee led jointly by the World Bank, Energy Sector Management Assistance Program,

[46] http://www.unece.org/fileadmin/DAM/energy/se/pdfs/cmm/pub/Challengs_US.Coal.Ind_LessonsEurope.pdf.
[47] https://www.unece.org/fileadmin/DAM/energy/se/pdfs/cmm/pub/Challengs_US.Coal.Ind_LessonsEurope.pdf.

and the International Energy Agency) contributed to developing the document "Sustainable Energy for All: Global Tracking Framework–Progress Towards Sustainable Energy";

- In 2017, the UNECE and the Renewable Energy Policy Network for the 21st Century (REN21 jointly issued the report "The REN21 UNECE Renewable Energy Status Report 2017[48];
- In 2017, the UNECE jointly with the UNEP DTU Partnership[49] issued a report "Overcoming Barriers to Investing in Energy Efficiency"[50];
- In 2017, the UNECE and the Global Methane Initiative (GMI) sponsored development of the report "Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines"[51];
- In 2018, the UNECE and the and German Energy Agency (DENA) jointly issued the report "Status and Perspectives for Renewable Energy Development in the UNECE Region 2017"[52];
- In 2019, the UNECE's Group of Experts on Coal Mine Methane (GECMM) presented a publication "Best Practice Guidance for Effective Methane Recovery and Use from Abandoned Coal Mines"[53].

C. Effectiveness

Finding 8: The activities of the sustainable energy subprogramme, as well as the sessions of the Committee on Sustainable Energy and its subsidiary bodies are conducted with the active engagement of the member States to deepen the conversation about energy for sustainable development, the SDGs, and the Paris Climate Agreement.

Finding 9: Document analyses and stakeholders' interviews confirmed that informal cooperation was morphing into formalized partnership arrangements with either financial support or no legally-binding obligations with respect to resource and administrative liability, it indicated an intended common line of action, although, the majority of them never resulted in practical implications.

Finding 10: The stakeholders did not report any specific obstacles hindering the achievement of the objectives except for the scarcity of human and financial resources available from the sustainable energy division of the UNECE.

Finding 11: Change in the political and country development agenda was reported to be the only casual modality affecting the cooperation with, and follow-up implementation of, the UNECE's technical assistance / interventions.

63. Desk analysis was conducted of the relevant documents of the Committee on Sustainable Energy and substantiated that UNECE operations were in line with its mandate and that the sessions of the Committee were consistently addressing the issues supporting the 2030 Agenda for

[48] https://www.ren21.net/2017-unece-renewable-energy-status-report/.
[49] The Danish Ministry of Foreign Affairs, UN Environment and the Technical University of Denmark (DTU) established UNEP DTU Partnership in 1990.
[50] https://www.unece.org/fileadmin/DAM/energy/se/pdfs/geee/pub/Overcoming_barriers-energy_efficiency-FINAL.pdf.
[51] https://www.unece.org/fileadmin/DAM/energy/cmm/docs/BPG_2017.pdf.
[52] https://www.dena.de/fileadmin/dena/Dokumente/Pdf/9251_Status_and_perspectives_for_renewable_energy_development_in_the_UNECE_region.pdf.
[53] http://www.unece.org/fileadmin/DAM/energy/images/CMM/CMM_CE/AMM_BPG_FINAL.pdf.

Sustainable Development. At the 25th Session of the Committee, emphasized its commitment to continue the dialogue on "Energy for Sustainable Development" and the role of energy in realizing the SDGs. This commitment has remained unaffected during subsequent annual sessions with a particular focus on the sustainable development agenda (Table 6).

Table 6: Relevant Agenda Items of the Sessions of the Committee on Sustainable Energy

Session of the Committee on Sustainable Energy	Date	Relevant Agenda Item
25th Session of the Committee on Sustainable Energy.	2016	Agenda Item 6: International Fora on Energy for Sustainable Development and Energy Ministerial.
26th Session of the Committee on Sustainable Energy.	2017	Agenda Items 1, 2, and 3(a and b): Regional cooperation on energy for sustainable development; International Fora on Energy for Sustainable Development and Energy Ministerial.
27th Session of the Committee on Sustainable Energy.	2018	Agenda Item 4: The role of the Committee on Sustainable Energy and its subsidiary bodies in supporting the 2030 Agenda on Sustainable Development.
28th Session of the Committee on Sustainable Energy.	2019	Agenda Item 7 (c): Regional outreach and collaboration activities - International Forum on Energy for Sustainable Development.

Source: UNECE Data, 2020.

64. Furthermore, during its sessions, the Committee on Sustainable Energy of the UNECE highlighted its focus on supporting its member States to pursue and realize the 2030 Agenda:

- "*To deepen the conversation about attaining the 2030 Agenda, special attention will be given to overcoming barriers and accelerating the move to a sustainable energy future. Sustainable Development Goal 7 is most relevant for the work of the sustainable energy as it is directly related to energy access, renewable energy and energy efficiency, but the Committee's work contributes directly or indirectly to all of the energy-related Sustainable Development Goals.*"[54] ;
- "*The twenty-eighth session will allow the Committee to exchange views about some of the consequences of the ongoing energy transition and the role that the Committee and its six subsidiary bodies can play to accelerate further and deepen the transition to sustainable energy systems based on these earlier deliberations.*"[55]

65. The collaboration between the UNECE and external parties resulted in a number of different outcomes and results. First and foremost, some of the informal collaborations transformed into public-private-partnerships (PPPs) and formalized agreements, enabling the creation of a general framework for cooperation in pursuit of the 2030 Agenda for Sustainable Development[56] (Table 7). According to the UNECE staff and selected external stakeholders, on average, the formalization process (including definition of the scope of work and due diligence) lasted about 18 months.

[54] 26th session of the Committee on Sustainable Energy, 26-28 September 2017; https://www.unece.org/fileadmin/DAM/energy/se/pdfs/comm26/ECE_ENERGY_112e_Agenda.pdf.
[55] 28th session of the Committee on Sustainable Energy, 25-27 September 2019: http://www.unece.org/fileadmin/DAM/energy/se/pdfs/CSE/comm28.2019/ECE_ENERGY_122_Agenda_Final.pdf
[56] In 2016, the UNECE signed six agreements and or MoU in different thematic areas; in 2017, there were 11 agreements/MoUs signed; in 2018, there were 10 agreements/MoUs signed; and six MoUs in 2019.

Table 7: Selected Cooperation Agreements Signed in 2016-2019

#	MoU Signed in Sustainable Energy Domain	Budgetary Support	Type	Year
1.	Addendum[57] to the Memorandum of Understanding[58] between the UNECE and the Central Mining Institute of Katowice (GIG), Poland, Polish Oil and Gas Company (PGNiG), Polish Geological Institute – National Research Institute (PIG-PIB).	No financial or budgetary implications; in-kind contributions of participating parties.	MoU	2016
2.	Memorandum of Understanding between the UNECE and the World Coal Association (WCA).[59]	No financial or budgetary implications.	MoU	2017
3.	Memorandum of Understanding between the UNECE and the Shanxi Coking Coal Group Co Ltd of Taiyuan, China.[60]	No financial or budgetary implications.	MoU	2017
4.	Memorandum of Understanding between the UNECE and the University of Geneva.[61]	No financial or budgetary implications.	MoU	2018
5.	Cooperation Agreement between the UNECE and the Interparliamentary Assembly of Member Nations of the Commonwealth of Independent States.[62]	No financial or budgetary implications.	Cooperation Agreement	2018
6.	Memorandum of Understanding between the UNECE and Sustainable Energy for ALL (SE4All). [63]	No financial or budgetary implications.	MoU	2018
7.	Memorandum of Understanding between the UNECE and Pennsylvania State University.[64]	No financial or budgetary implications.	MoU	2018
8.	Memorandum of Understanding between the UNECE and the Building Energy Exchange.[65]	No financial or budgetary implications.	MoU	2018
9.	Memorandum of Understanding between the UNECE and Trustees of Boston University.[66]	No financial or budgetary implications.	MoU	2018
10.	Memorandum of Understanding between the UNECE and Green Building Alliance.[67]	No financial or budgetary implications.	MoU	2019
11.	Framework Memorandum of Understanding between the OSCE, the UNDP, the UNEP and the UNECE on the Environment and Security Initiative.[68]	No financial or budgetary implications.	MoU	2019

Source: UNECE Dataset, 2020.

66. None of the above-mentioned agreements contain any legally-binding obligations with respect to the allocation of financial or any resource and administrative liability between the parties, which as a matter of UNECE policy are covered by separate donor agreements. The staff of the UNECE also confirmed that some formal collaboration setups were arranged through framework contracts/agreements. While some of these agreements do not entail practical implications or follow-up requirements, they still demonstrate a convergence of will between the parties, indicating an intended common course of action.

[57] http://www.unece.org/fileadmin/DAM/69A_MoU_between_ICE-CMM_Poland_Addendum_14-12-2016__signed_.pdf.
[58] The MoU was signed in 2015, http://www.unece.org/fileadmin/DAM/MoU_UNECE_GIG_30_10_2015.pdf.
[59] http://www.unece.org/fileadmin/DAM/MoU_between_UNECE_and_WCA_2017-01-19_unsigned.pdf.
[60] http://www.unece.org/fileadmin/DAM/MoU_between_UNECE_and_ICE_Shanxi_China_2017-05-18.pdf.
[61] http://www.unece.org/fileadmin/DAM/MoU_between_UNECE_and_University_of_Geneva_25_01_2018__E_.pdf.
[62] http://www.unece.org/fileadmin/DAM/MOU/12_Feb__2018_ENG_MoU_between_UNECE_and_the_Interparliamentary_Assembly_of_Member_Nations_of_the_CIS.pdf.
[63] http://www.unece.org/fileadmin/DAM/MOU/2018_March_2_UNECE_SEFORALL_MOU.pdf
[64] http://www.unece.org/fileadmin/DAM/96_MoU_between_UNECE_and_Penn_State_University.pdf.
[65] http://www.unece.org/fileadmin/DAM/10_July_2018_MoU_UNECE-ICE-HPB_BEEx_final__002_.pdf.
[66] http://www.unece.org/fileadmin/DAM/97_MoU_between_UNECE_and_Trustees_of_Boston_University_signed2.pdf.
[67] http://www.unece.org/fileadmin/DAM/MOU/12_Sept_2019___MOU_GBA_and_UNECE_v4.pdf.
[68] http://www.unece.org/fileadmin/DAM/ENVSEC_MOU_signed_by_all_4_partner_organizations.pdf.

67. Several key stakeholders specifically emphasized the agreements related to the establishment of ICEs. The role of the UNECE was enhanced by the provision of guidance and technical expertise from its experts.

68. Thus, the International Centre of Excellence on Coal Mine Methane (ICE-CMM) in Poland was formed on the basis of the MoU founded on previous collaboration between the parties in the field of CMM and was signed by the UNECE and the Central Mining Institute (CMI) of Katowice, Poland, the Polish Oil Mining and Gas Extraction S.A. (PGNiG), Polish Geological Institute – National Research Institute (PIG-PIB). The ICE-CMM is focused on supporting and sharing the best practices regarding environmentally-responsible methane management (including utilization and recovery). It is hosted by the Central Mining Institute of Katowice (GIG) and operates under the auspices of the UNECE Group of Experts of CMM.

69. In 2018, the UNECE signed an MoU with the Building Energy Exchange (BE-Ex) of New York City according to which the latter would become a founding hub of this critical knowledge-sharing network to scale-up high-performance building best practices

70. An International Center of Excellence on High Performance Buildings (ICE-HPB) was created through an MoU between the UNECE and the Green Building Alliance (with the involvement of the Pittsburgh Innovation District, PJ Dick, and NK Architects). The primary goal of the ICE-HPB is to build capacity and distill best practices in design, construction, training, and policy into scalable solutions that will serve as catalysts for economies becoming based on human health and equitable opportunity.

71. Overall, the ICEs have been established to facilitate global deployment of the UNECE's framework guidelines which are designed to improve building performance. At the time of this evaluation there had been no formal assessment or internal evaluation of the success of the business model of ICEs[69]. In 2019, there was an annual report produced on the UNECE High-Performance Buildings Initiative[70]. According to the feedback of the relevant stakeholders, the ICEs play a prominent role in increasing awareness of, and building capacity for, sustainable energy issues as well as the visibility and role of the UNECE in this area. The agreements with the ICEs also do not contain any legally-binding obligations with respect to the allocation of financial (or any) resources and administrative liability between the parties.

72. Some internal and external stakeholders averred that the sustainable energy subprogramme has suffered from a shortage of financial and human resources. They also confirmed that the SED team has been successful in delivering expected results in a timely manner. The SED's budgetary and staffing structure was fully assessed under the efficiency section of the report. A desk review of the SED's quarterly reports for 2016-2019 showed that the identification and securing of extrabudgetary resources, needed to carry out the workplans of the groups of experts and related capacity-building activities, was recognized by the SED as a major challenge. In addition, staffing and recruitment being put on hold because of the liquidity situation of the UN was identified as an additional challenge (e.g. the recruitment process for the P4 regular budget post (a secretary of GEEE) was put on hold).

73. Furthermore, in 2016-2019, the UNECE, mobilized extrabudgetary sources to implement a number of several joint initiatives aimed at supporting member States to deliver on sustainable

[69] In 2020, the UNECE anticipates signing two MoU with regard to establishing the CE in Vancouver, Canada, and Wexford, Ireland.
[70] http://www.unece.org/fileadmin/DAM/energy/se/pdfs/geee/geee6_Oct2019/2019_Report_on_ICE-HPB_update.pdf.

energy as. A list of pertinent projects implemented by the UNECE is presented in the table below (Table 8)[71].

Table 8: Sample of Extrabudgetary Projects Implemented by the UNECE in 2016-2019

Activity/Project Title	Project Period	Project Objective	Partnership	Beneficiaries	Result
Methane Management in Extractive Industries (Upstream Oil and Gas/Downstream Gas)	2017-2020	To increase the capacity of UNECE member States in MRV and to reduce methane emissions in upstream oil and gas, and in downstream gas industries.	The UNECE and the Global Methane Initiative (GMI).	The UNECE"s 56 member States.	Capacity building workshops and best practice guidance for effective methane management: upstream oil and gas sectors and downstream gas sector.
Dissemination of best practices in the abatement, recovery, and use of methane.	2016-2017	To disseminate best practices in the abatement, recovery, and use of methane through targeted, demand-driven capacity-building activities.	The UNECE and the United States of America (Environmental Protection Agency) as a donor agency.	China, India, Kazakhstan, and Turkey	Capacity building and information dissemination.
Improving national capacities of Central Asian countries to harmonize and implement an internationally applicable system of classification and sustainable management of energy and mineral resources.	2017-2019	To improve the national capacities of Central Asian countries in harmonizing and implementing an internationally applicable system of classification and management of energy and mineral resources.	The UNECE, the Russian Federation State Commission on Mineral Resources (GKZ), the Ministry of Natural Resources and Ecology of the Russian Federation, the Moscow State Institute of International Relations, the Ministry of Foreign Affairs of the Russian Federation, and the Ministry of Energy of the Russian Federation.	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.	Assessment, report, workshops and case studies.
Enhancing National Capacities for Development and Implementation of the Energy Efficiency Standards in Buildings in the UNECE Region.	2017-2019	To improve energy efficiency in buildings and reduce global greenhouse gas emissions.	The SED and the Forests, Housing and Land Management Division of the UNECE.	The UNECE's 56 member States.	Framework guidelines, workshops and studies.
Strengthening the capacity of member States to achieve the energy related Sustainable Development Goals –	2016-2019	To strengthen the knowledge and capacities of countries to develop, implement and track national sustainable energy policies in line with their commitments on climate change and sustainable	The UNECE, the Institute for Applied Systems Analysis (Austria), the Pacific North West National Laboratory (USA),	The UNECE's 56 member States.	Modelling of energy scenarios with policy dialogue, technology research and the development of an

[71] In addition to extrabudgetary project, the UNECE also carries out a number of projects budged through the United Nations Development Account (regular budget). These projects are also implemented in close cooperation with the UN agencies, and external stakeholders.

Pathways to Sustainable Energy.		development, and to understand the objectives and actions of other countries.	and the Fraunhofer-Gesellschaft (Germany).		early-warning system concept to monitor and forecast whether the achievement of sustainable energy objectives is on track.

Source: UNECE Dataset, 2020.

74. While the output and outcome of the above-mentioned projects is beyond the remit of this evaluation, it should be pointed that the UNECE conducted external ex-post evaluations of three projects (out of six)[72]. Taking into account the timeline for these evaluations (e.g. being conducted immediately after the project's completion) and the implementing periods of the projects, it is not feasible for such assessments to detect or validate concrete outcomes, and they can only outline the outputs of the given interventions.

75. Overall, the majority (over 75 percent) of stakeholders representing the UNECE and its partnering organizations (involved in implementing joint activities) as well as the member States and academia stated their cooperation was advantageous for the member States with respect to delivering on energy for sustainable development in the following ways:

(a) The UNECE is very helpful in facilitating policy dialogue on the measures needed to make the energy transition happen, given the increased need for raw materials and their sources of production;
(b) There has been some focus on energy efficiency in buildings, which could help to fulfill the relevant SDGs;
(c) Exchange of good practices and providing consultancy to advance national policies are very helpful attributes. However, their implementation is challenging and greatly depends on the country specifics (strategic priorities, political milieu, capacity and flexibility of the national institutions, etc.);
(d) Networking and knowledge-sharing through the UNECE's channels contribute to delivering on sustainable development and have achieved some tangible outcomes.

D. Efficiency

Finding 12: In 2016-2019, the number of full-time staff did not change significantly, dropping from 13 in 2016 to 12 in 2019 (including one P5 level regional advisor funded through the Regional Programme for Technical Cooperation). The number of consultants with different level of effort (LoE) varied from 9 in 2017 to 21 in 2019.

Finding 13: The main portion of the SED's expenditure, funded by the regular budget, fell under the category of full-time posts (over 98 percent) and only a minor proportion (less than one percent) was allocated to staff's business travel.

Finding 14: All of the SED's staff and several external stakeholders highlighted a shortage of financial and human resources in 2016-2019 which was perceived to be crucial with respect to the activities listed in the workplans of the different groups of experts facilitated by the SED. By the

[72] The reason for conducting ex-post evaluation of three projects out of six driven by the UNECE policy on evaluation and the threshold of $250,000 for evaluation.

time of the evaluation, the UNECE was facing a protracted liquidity crisis which was exacerbated by the outbreak of COVID-19.

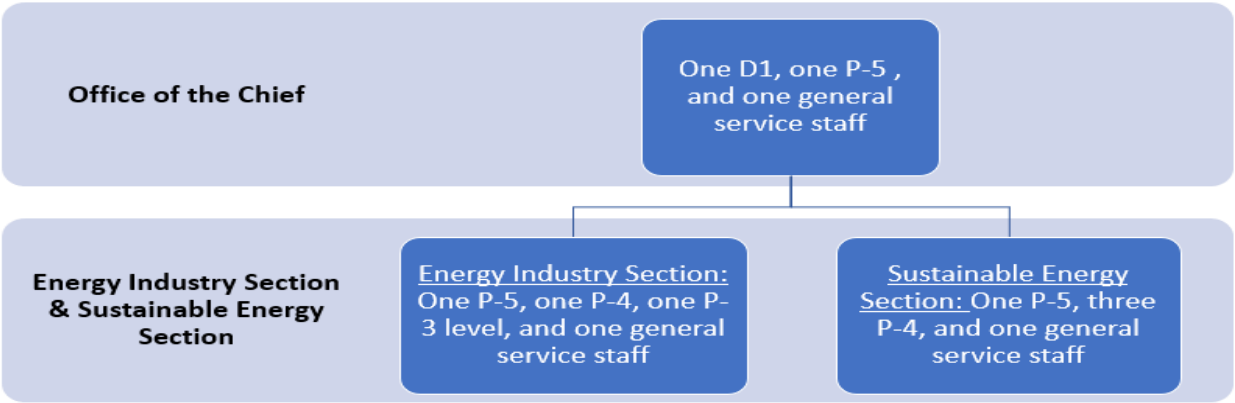
Finding 15: In 2016-2019, the member States remained a major source of funding, contributing to the regular budget and providing about 60.5 percent of total extrabudgetary resources. Prior to 2020, the SED's revenues from extrabudgetary sources constituted about one percent of the UNECE's income. About 69 percent of the SED's revenues were raised through the approval of one project in 2020.

Finding 16: Overall, the vast majority (over 85 percent) of external stakeholders positively rated the performance and delivery of the SED/UNECE team despite its human resources constraints. In general, there were no negative comments received with respect to the punctuality of the delivery of expected results.

Finding 17: The UNECE has applied, and continues to follow, a decentralized resource mobilization approach to reduce its dependency on a regular budget and to attract extrabudgetary sources of funding. It was reported that that the SED staff of the UNECE combined resource mobilization functions with their core activities to secure extrabudgetary sources.

76. By the time of the evaluation (in 2020), the SED comprised the Office of the Chief[73] (one D-1, one P5 level and one general service staff), the Energy Industry Section[74] (one P-5, one P-4, one P-3 level staff, and one general service staff), and the Sustainable Energy Section[75] (one P-5, three P-4 and one general service staff) (Figure 10).

Figure 10: The SED's Human Resources Structure in 2020 (Funded from the Regular Budget)



Source: UNECE Data, 2020.

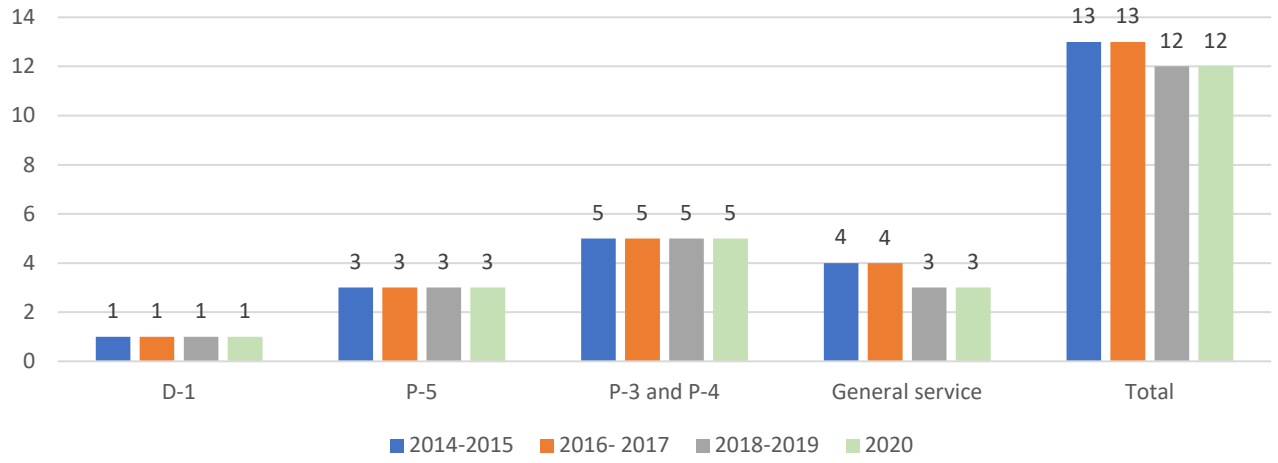
[73] The Office of the Chief is responsible for leading the work of the subprogramme, including programme planning, monitoring and evaluation; effectively managing the resources allocated to the subprogramme; leading the subprogramme activities to implement the Sustainable Energy programme of work mandated by member States; coordinating energy matters in ECE in areas such as climate change mitigation and other related global processes; and ensuring coordination of energy work within the ECE region and at global level with major partners (*source: UNECE, 2020*).

[74] The Energy Industry Section focuses on further extension and implementation of ECE recommendations on classification systems and guidelines and on the development of norms and standards for production, transformation, transit and transport, and uses of fossil energy that contribute to secure, affordable, and sustainable economic development (*source: UNECE, 2020*).

[75] The Sustainable Energy Section addresses the development of norms and standards for renewable energy and energy efficiency across the ECE region as well as energy security and diversification of energy sources that contributes to the sustainable energy system of the future (*source: UNECE, 2020*).

77. The SED's posts financed from the regular budget did change in 2014-2020[76]; the number of professional and above-category staff remained unchanged, although the number of general service staff was reduced from four in 2016-2017 to three in 2018-2019 (Figure 11). At the time of the evaluation (in 2020), the SED employed 12 full-time staff (funded from the regular budget) composed of eight managerial and professional staff, and three support-level staff. Meanwhile, both desk research and interviews confirmed that the SED had no employees who worked exclusively on either partnerships or communication.

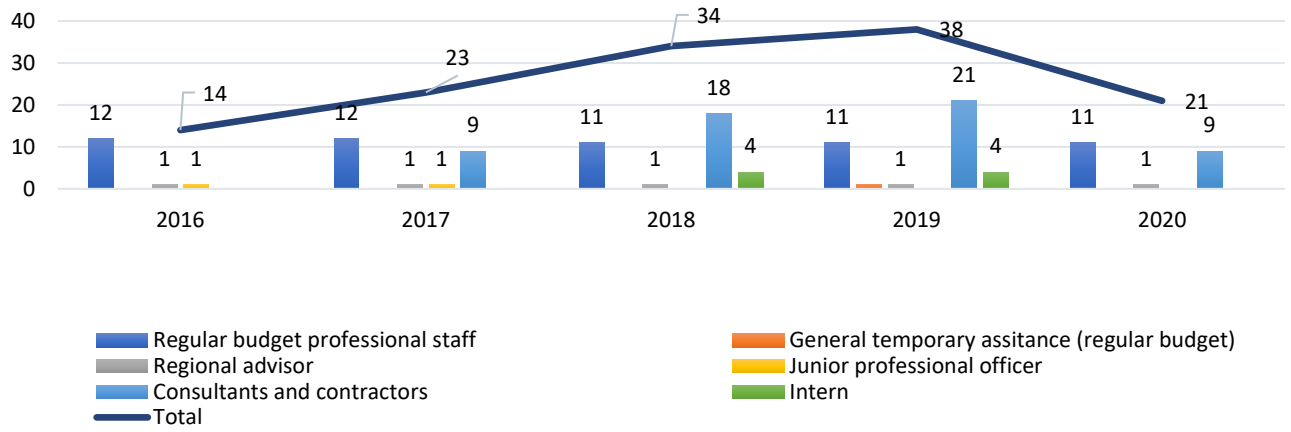
Figure 11: The SED's Posts Financed from the Regular Budget (2014-2020)



Source: UNECE Data, 2020.

78. In 2016-2019, the SED also employed one P5-level regional advisor, funded through the Regional Programme for Technical Cooperation. Thus, by the time of the evaluation, the SED accounted for 12 full time staff, irrespective of funding. Furthermore, the SED's staffing structure in 2016-2020 demonstrates that the SED employed one junior professional officer in 2016-2017 and four interns in 2018-2019. The number of consultants and contractors varied from nine (in 2017) to 38 in 2019 (Figure 12).

Figure 12: The SED's Human Resources (Posts, Interns, Consultants[77], etc.) in 2016-2020

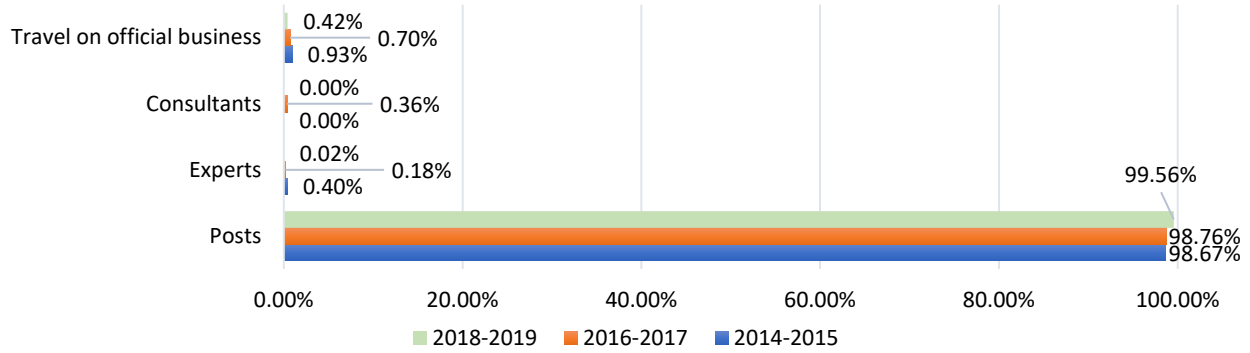


Source: UNECE Data, 2020.

[76] A comprehensive analysis of efficiency required the staffing structure and budget allocation to be assessed beyond the period stipulated in the evaluation's ToR. Therefore, the analysis also included 2014-2015 and 2020.
[77] The Consultants have different LoE and not all of them work full-time.

79. The main share of the SED's expenditures, funded by the regular budget, fell under the category of full-time posts (over 98 percent) and only a minor proportion was allocated for staff travel for business purposes (Figure 13). The pattern of 2014-2019 demonstrated that there was a slight increase in the share of budget allocated to the full-time posts and an apparent decrease in the business travel category.

Figure 13: Expenditure Share Allocated to the SED's Human Resources and Business Travel



Source: Source: Proposed Programme Budget for the Biennia of 2016-2017[78] and 2018-2019[79], UN.

80. While the budget for the full-time posts appears quite steady for the period under evaluation, the internal stakeholders (the UNECE staff) and a number of external stakeholders claimed that the sustainable energy subprogramme has been facing a significant shortage of full-time staff and a decline in budgetary funding. The document analysis did not validate the significant budget decline but did confirm the fact of a reduction in the number of posts funded by the regular budget (from 13 in 2014-2017, to 12 in 2018-2020).

81. The analysis of the funds allocated to travel on official duties confirmed the claim made about budgetary constraints affecting the capacity of the SED to actively participate in high-level political discussions where it would have been possible to present its results and increase the outreach and visibility of its operations. The other subrogrammes of the UNECE face similar challenges with negligible funds allocated for travel on business purposes.

82. The SED's quarterly reports for 2016-2019[80] indicate that the budgetary constraints remain a pertinent issue with regard to the activities enlisted in the workplans of the different groups of experts facilitated by the SED and many activities of the workplans of the groups of experts are on hold, pending the availability of extrabudgetary resources. This was confirmed by the relevant stakeholders (the SED team and the members of the groups of experts) as well.

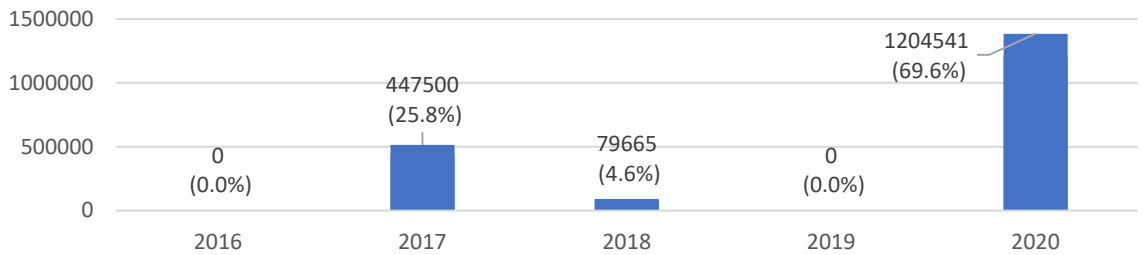
83. Over 85 percent of external stakeholders interviewed in the course of the evaluation perceived that, despite a shortage of resources, the SED team was efficient in delivering results and none of them noted any delay caused by the SED team.

[78] https://www.unece.org/fileadmin/DAM/OPEN_UNECE/2016-2017_PPB-ECE-A-70-6_Sect.20.pdf.
[79] https://undocs.org/A/71/6/REV.1.
[80] http://www.unece.org/energywelcome/committee-on-sustainable-energy/committee-on-sustainable-energy/sustainable-energy-subprogramme-quarterly-reports.html.

84. The budgetary dynamics of the UNECE[81] demonstrated that the member States remained a major source of funding in 2016-2019, contributing to the regular budget and providing about 60.5 percent of total extrabudgetary resources. Intergovernmental and non-governmental organizations contributed 28.6 percent of all extrabudgetary resources, and the European Commission provided 10.9 percent. With regard to the regular budget contribution, for 2016-2017 it reached US$ 64.8 million, and in 2018-2019 this decreased by about 0.8 percent and totaled about US$64.3 million.

85. According to the UNECE's executive office, in 2016-2020, the SED's revenues from extrabudgetary projects amounted to US$1,731,706. There was a slight increase (US$48,100) in extrabudgetary resources as some of the activities planned for 2014-2015 were carried forward to 2016-2017. Over 69 percent of it was allocated for 2020 (Figure 14) and was caused by funds raised from one large project approved in 2020. The extra budgetary resources were usually linked to specific projects and spent on implementing[82] the projects funded from the specific extrabudgetary source. Prior to 2020, SED's revenues from extrabudgetary sources constituted about one percent of UNECE's income.

Figure 14: The SED's Extrabudgetary Revenues in 2016-2020[83]



Source: UNECE Executive Office, 2020.

86. The desk research also validated the claim of a hiring freeze as vacant posts in 2018-2019[84] were not filled. Budgetary and staff constraints were still present by the time of the evaluation as budgetary restrictions of the UN and a consequent staff hiring freeze declared by the Secretary-General in 2019 affected both the planning and implementation of the UNECE's interventions. More specifically, in 2019, at the 74th session of the UNGA, the members of the 5th Committee (Administrative and Budgetary) of the UN were informed by the UN's senior management about the organization confronting its worst liquidity crisis in recent years, as laid out in the organization's key financial indicators for 2019. According to Catherine Pollard, Under-Secretary-General for Management Strategy, Policy and Compliance, unpaid assessed contributions as of 4 October 2019 totaled nearly $1.4 billion, which was $299 million higher than in 2018. In 2020, by the time of the evaluation, the liquidity crisis was exacerbated by the outbreak of the COVID-19 pandemic.

87. The Resource Mobilization Strategy of the UNECE, adopted by its member States in 2016, recognized the importance of strengthening partnerships to reduce transaction costs, to avoid the overlapping of activities, and to leverage additional resources to secure the implementation of the 2030 Sustainable Development Agenda. It also outlines the UNECE's commitment to reach out to the private sector, the European Commission and financial institutions (regional, inter-regional and international development banks, foundations, etc.) to diversify the donor portfolio and funding

[81] https://www.unece.org/oes/mou/mou_toc.html.
[82] Including support for the participation of experts and participants from countries with economies in transition in the activities set within the project framework.
[83] The figure reflects the pledge of funds for 2020.
[84] One post in 2018, and two in 2019.

sources. In November 2016, the Multiyear Action Plan for Resource Mobilization was adopted by the UNECE's senior management, which outlined concrete actions for each of the priority areas of the Strategy. According to the Resource Mobilization Strategy, the UNECE had to employ, on a temporary basis, a resource mobilization officer, described as follows: "*A temporary capacity to support resource mobilization at the corporate level will be established in the Programme Management Unit, financed within existing resources.*"[85]

88. The SED staff interviewed in the course of the evaluation confirmed that an officer was employed by the UNECE in 2016 on a temporary basis 11-month contract to attract additional (extrabudgetary) resources. At a corporate level, the resource mobilization officer developed proposals for the Resource Mobilization Action Plan and organized the Donor Conference in April 2017, created an intranet platform for internal communications to support resource mobilization with information on existing and potential donors(including their policies and priorities), along with information on training opportunities and other material relevant to resource mobilization. However, taking into account the LoE of the resource mobilization officer and the enormous scope of work (covering the whole organization), the resource mobilization results for the SED and the UNECE as a whole were more moderate than anticipated[86]. The temporary position of the Resource Mobilization Officer was "*discontinued at the end of 2017 in the absence of effective results to mobilize additional resources for UNECE flagship projects and to broaden the donor base.*"[87]

89. Overall, the SED team mentioned that, in addition to its core responsibilities, it combined resource mobilization functions whenever required while the role of the Regional Adviser focus in the SED turned to mobilizing extra budgetary resources for regional advisory services such as advisory missions, capacity building and field projects in UNECE member States. Regional Adviser was also involved in the resource mobilization task force mentioned above.

90. It is noteworthy that the Resource Mobilization Strategy dated 2020 outlined that "*...regular budget funded staff should not be used to subsidize the management of extrabudgetary projects or it should be proportionate to the size of the project and kept to a minimum…*" At the same time, it stated that "*... a decentralized approach is recommended to mobilize resources. The subprogrammes are best positioned to leverage in-house expertise and normative instruments to seek extrabudgetary funding to develop demand-driven projects to support member States in the implementation of the 2030 Agenda.*" Overall, regular budget staff are encouraged to seek extrabudgetary resources and are invited to allocate resources for staff to manage projects when they prepare extrabudgetary proposals. However, a share of the regular budget (allocated to payment of staff) is still used to cover the activities associated with seeking extrabudgetary funding.

91. Desk analysis revealed that these additional functions related to resource mobilization had been assigned to staff in accordance with the following relevant paragraph of the Resource Mobilization Strategy: "*Integrating resource mobilization in e-Performance - Developing proposals for extra-budgetary funding - Preparing and negotiating donor agreements - Ensuring*

[85] Section 4, Page 2, Resource Mobilization Strategy, https://www.unece.org/fileadmin/DAM/OPEN_UNECE/05_Partnerships/Resource_Mobilization/ECE_Resource_Mobilization_Strategy.pdf

[86] As reported by the UNECE staff.

[87] Resource Mobilization Strategy, Informal Document No. 2020/27/Rev.1, file:///C:/Personal%20ND/Sony%20files/Projects%202020/UNECE%20EVALUATION/Item_9_ECE_EX_2020_27_Rev.1_Resource_mobilization_as_adopted.pdf.

effective management (planning, monitoring, reporting and evaluation) of extrabudgetary funding."[88]

92. According to the feedback gleaned from the SED staff, resource mobilization is an extremely time-consuming exercise as it takes significant time to accurately allocate resources (monetary and time) to conducting research on potential funding sources and/or developing relations and building credibility and trust with donors, becoming familiar with the procurement and tendering peculiarities of a given donor agency, and developing proposals for submission, all with no guarantee of desired results in the end. A report on the implementation of the UNECE's Strategy for Resource Mobilization issued in 2018 also recognized trust building with donors to be a challenge.

E. Sustainability

Finding 18: The majority (over 58 percent) of external stakeholders were certain about the sustainability of the outcome of the collaboration with the UNECE and some (about 32 percent) declared that the collaboration outcome would be moderately sustainable. Likewise, the vast majority (nearly all) of the responding stakeholders reported being consistently engaged in the UNECE's activities.

Finding 19: Several (about 20 percent) of the external stakeholders/key informants expressed concerns about the relatively low visibility of the UNECE's operations and the benefits thereof to Western European countries and the lack of tangible results.

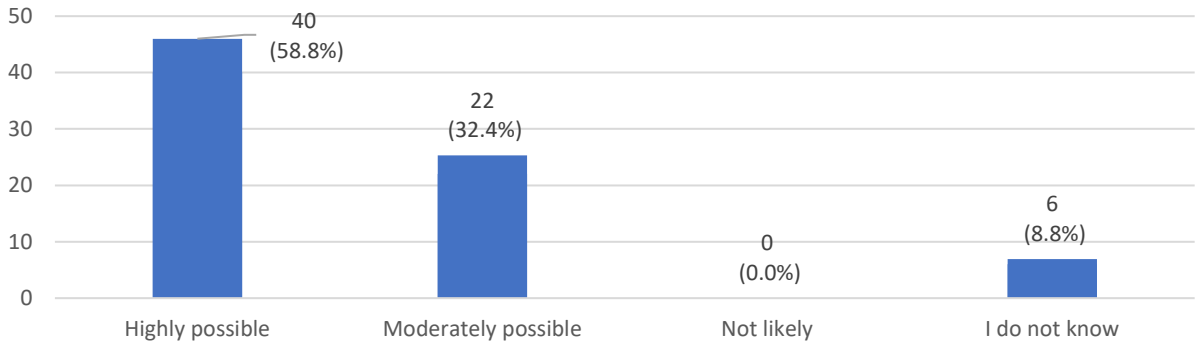
93. Over 58 percent (40 out of 68) of survey respondents claimed that the sustainability of the benefits arising from the UNECE's sustainable energy activities delivered through collaboration with the UN and other partners is highly possible. About 32 percent (22 out of 58) agreed the results could be moderately sustainable and only six out of 58 had no opinion on the matter (Figure 15). All the stakeholders surveyed in the course of the evaluation confirmed having partaken in one or several activities implemented and/or facilitated by the SED of the UNECE. The majority of respondents (58 percent (40 out of 69)), were in the Group of Experts on Energy Efficiency (GEEE)[89] and the Group of Experts on Renewable Energy (GERE)[90].

[88] "Staff", page 4, Resource Mobilization Strategy, https://www.unece.org/fileadmin/DAM/OPEN_UNECE/05_Partnerships/Resource_Mobilization/ECE_Resource_Mobilization_Strategy.pdf.

[89] "*The GEEE focuses on regulatory and policy dialogue addressing financial, technical and policy barriers, and on sharing best practices, including strengthening institutional capacity in the field of energy efficiency*" (source: http://www.unece.org/energyefficiency.html).

[90] *"The Group of Experts on Renewable Energy focuses on activities that help significantly increase the uptake of renewable energy in the region and that help achieve the objective of access to energy for all in the UNECE region"* (source: http://www.unece.org/energy/re.html).

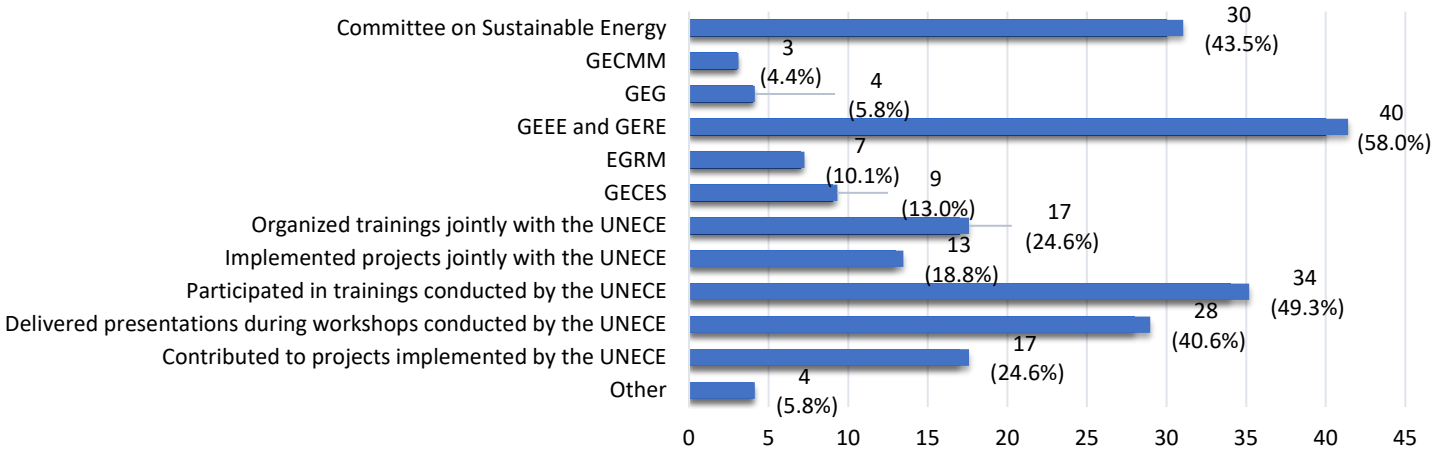
Figure 15: Feedback of Survey Respondents on Sustainability of Cooperation Results



Source: Evaluation Dataset, 2020.

94. Over 49 percent (34 out of 69) of survey respondents confirmed having participated in training sessions and workshops conducted by the UNECE's SED and about 44 percent (30 out of 69) reported having attended the sessions of the Committee on Sustainable Energy organized annually by the UNECE in Geneva (Figure 16).

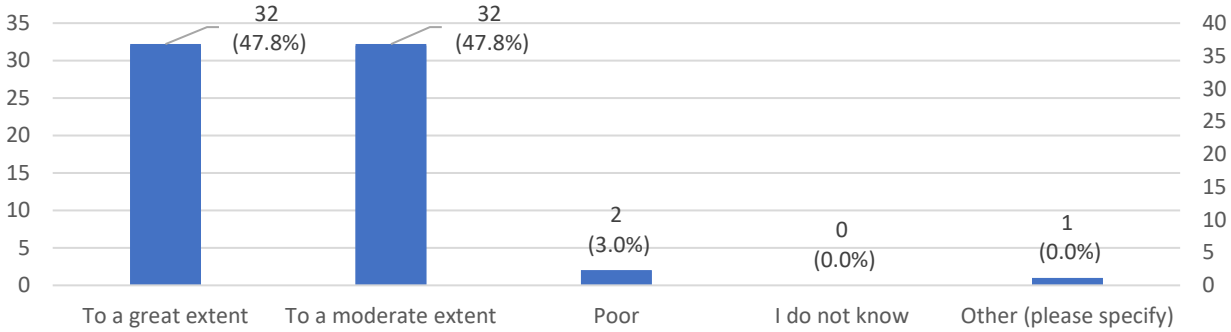
Figure 16: Survey Respondents' Breakdown by Cooperation Type



Source: Evaluation Dataset, 2020.

95. The vast majority (64 out of 67) of the respondents considered being engaged with the work of the UNECE in an enduring way (Figure 17).

Figure 17: Survey Recipients' Engagement with the Work of the UNECE



Source: Evaluation Dataset, 2020.

96. In total, 32 of them confirmed regularly participating in and contributing to the UNECE's events/activities relating to sustainable energy ("*engaged to a great extent*") and another 32 respondents claimed they regularly received materials and event invitations from the UNECE, and sometimes contribute to the events/activities ("*engaged to a moderate extent*"). Only two out of 67 said they rarely received any updates or event invitations from the UNECE ("*poor*" engagement).

97. Several (about 20 percent of interviewed) stakeholders claimed that the implementation of the results developed within the framework of the UNECE project greatly depended on country specifics (strategic priorities, political milieu, capacity and readiness of the national institutions to change, etc.). In addition, some stakeholders (less than 20 percent) perceived that Western European countries would benefit minimally from the UNECE's activities in sustainable energy and energy efficiency as the projects of the organization are targeted toward improving the systems and policies of Eastern European and/or post-Soviet countries (countries in transition). It is noteworthy that the European Union (EU) is also committed to implementing the 2030 Agenda for Sustainable Development[91] within the EU and to engaging in development cooperation with partner countries. In addition, several stakeholders reported the moderate responsiveness of the relevant ministries to calls and proposals for cooperation.

F. Impact

Finding 20: The vast majority of stakeholders, as well as the desk research, confirmed the global impact of the UNECE's interventions, and that the consequent framework documents, guidelines and study reports produced had a potentially significant global impact or had already made such an impact.

Finding 21: Half of the respondents claimed that the UNECE's interventions led to policy changes, in which other international organizations and donor agencies also played a part. There are also confirmed cases of the UNECE's activities being replicated in other countries.

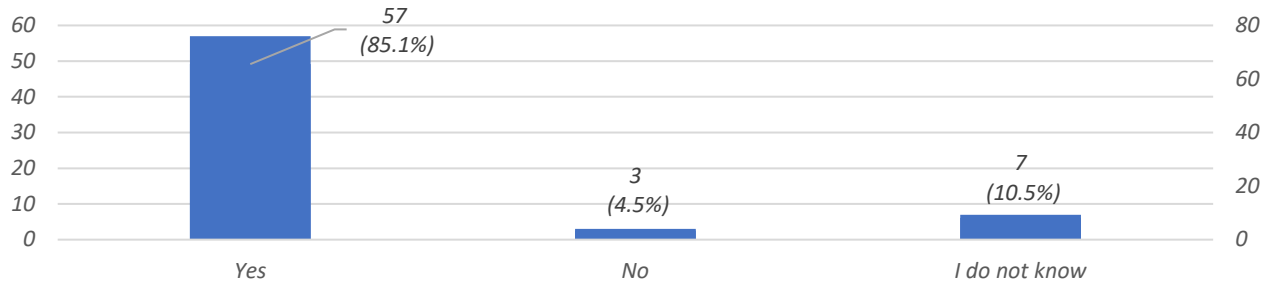
Finding 22: Over 47 percent (33 out of 69) of surveyed stakeholders fully agreed and 28 percent (19 out of 69) partially agreed that the UNECE advocated for, or contributed to, enhancing gender equality and the empowerment of women in the energy sector.

Finding 23: Some stakeholders (just over 35 percent) were fully convinced that the collaboration with the UNECE resulted in substantial and meaningful changes to the situations of the most vulnerable groups because of the organization's track record of supporting system improvements to have a significant positive impact on such groups.

98. Over 85 percent (57 out of 67) of survey respondents verified that the cooperation with the UNECE in sustainable energy has an impact at a global level (Figure 18). While some respondents gave generic statements about the global impact being visible though a number of treaties and normative instruments (facilitated and/or developed by the UNECE) of worldwide importance, others were more specific about the potential impact of the UNECE's activities and publications, in addition to the meetings and events on sustainable energy agenda organized for the member States and relevant external stakeholders.

[91] Sustainable development has been mainstreamed into the EU policies and legislation, via the EU's Sustainable Development Strategy, the EU 2020 Strategy, and through the EU's Better Regulation Agenda.

Figure 18: Survey Respondents' Feedback about the Impact at Global Level



Source: Evaluation Dataset, 2020.

99. Thus, in 2016-2019, the UNECE published and/or contributed to the development of a number of research papers and documents with a potential global impact. Some of them are presented in the table below (Table 9). It is noteworthy that both the United Nations Framework Classification for Resources (UNFC) and the United Nations Resource Management System (UNRMS) were well regarded by the European Commission (EC) during the EU Raw Materials Week 2019. In this regard, at its 3rd EU Raw Materials Knowledge Base Event, the EC offered a separate session and training on the UNFC and the UNRMS. Overall, the UNFC was considered an appropriate venue through which investment to sustainable outcomes could be redirected.

Table 9: Snapshot of the UNECE's Research/Publications with a Potential Global Impact

Research/publication	Potential global impact	Release date
Specifications prepared to classify and report solar and wind energy resources in an internationally-harmonized manner. Specifications are part of the United Nations Framework Classification for Resources (UNFC).[92]	Potential for climate action through accelerating the shift to renewable energy and increasing renewable energy investments, with significant potential for climate action.	2019
Best Practice Guidance for Effective Methane Recovery and Use from Abandoned Coal Mines.[93]	Support climate actions through provision of guidance on reduction of emissions of methane from abandoned coal mines.	2019
Early Warning and Planning System: Development of an Early Warning and Planning System for Pathways to Sustainable Energy.[94]	Focus on the sustainable development of energy supply for the benefit of society in the UNECE region.	2019
United Nations Resource Management System.[95]	Focus on efficient financial capital allocation and reduction of environmental burden, carbon footprint.	2018
Study on Mapping Energy Efficiency Standards and Technologies in Buildings in the UNECE Region.[96]	Support climate actions through fostering cooperation among countries with building energy standards and those contemplating standards or other policies to increase energy efficiency in buildings.	2018

[92] A global system used by private and public sectors to classify and report non-renewable and renewable resources.
[93] Prepared by the UNECE's Group of Experts on Coal Mine Methane prepared; http://www.unece.org/fileadmin/DAM/energy/images/CMM/CMM_CE/AMM_BPG_FINAL.pdf.
[94] http://www.unece.org/fileadmin/DAM/energy/se/pdfs/Pathways_to_SE/Early_Warning_System_Concept.pdf.
[95] https://www.igfmining.org/wp-content/uploads/2018/11/Session-18-_-UN-tools-_-2.pdf.
[96] https://www.unece.org/fileadmin/DAM/energy/se/pdfs/geee/ws_EE_buildings_Yerevan_May2016_May_2018/EE_Standards_in_Buildings_Draft_04-13-2018.pdf.

Framework Guidelines for Energy Efficiency Standards in Buildings.[97]	Global transformation of buildings in the built environment: framing the design, delivery and operation of buildings as integrated, thermodynamic and environmentally-friendly systems.	2017
UNECE's Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines (2nd edition)[98].	Reduce greenhouse gas emissions through safer and more effective methane management practices.	2016

Source: UNECE Dataset, 2020.

100. Furthermore, it was reported that a new tool for sustainable management of the mineral and energy value-chain in Africa had been introduced, namely the UNFC African Mineral and Energy Resources Classification and Management System (AMREC). In addition, open data sources also reported the case of Mexico assessing its petroleum resources using the integrated social, environmental and economic criteria set forth in the UNFC. Ukraine represents another example of replication in this regard, as the country aligned its national classification in 2018 with the latest version of UNFC to bring it up-to-date with international standards.

101. Several stakeholders also claimed that the UNECE sets priorities at global level and shares information about best practices in the form of case studies to follow. In addition, some of the internal stakeholders (the UNECE staff) and external stakeholders mentioned that instead of a country-focus approach, the UNECE rolls out cross-country and cross-region interventions. It is noteworthy that a number of external stakeholders stated that there was low visibility about the practical and tangible results of the UNECE's interventions and that it was important start measuring practical benefits/impact of the UNECE's interventions.

102. In 2017, the UNECE adopted the Framework Guidelines for Energy Efficiency Standards in Buildings[99] which outlines the principles of designing, delivering and operating energy-efficient buildings as an integrated part of the thermodynamic and environmental systems at global level. In the same year, to deploy the Framework Guidelines in the UNECE region and globally, the UNECE launched its High Performance Buildings Initiative, comprising a Global Building Network and International Centers of Excellence on High Performance Buildings.

103. A half of respondents (33 out of 66) confirmed that their cooperation with the UNECE has led to new policies or policy changes in the member States (Figure 19). While the stakeholders did not share details of specific policy changes, there were some clarifications gleaned in this respect. One of the respondents stated that his/her employer systematically contributed to public policies and provided advice to the relevant government, which was kept fully informed about all the messages of and frameworks developed by the UNECE. Another stakeholder highly appraised the practical modality of the National Sustainable Energy Action Plan (NSEAP) developed for their country within the framework of the UNECE project.

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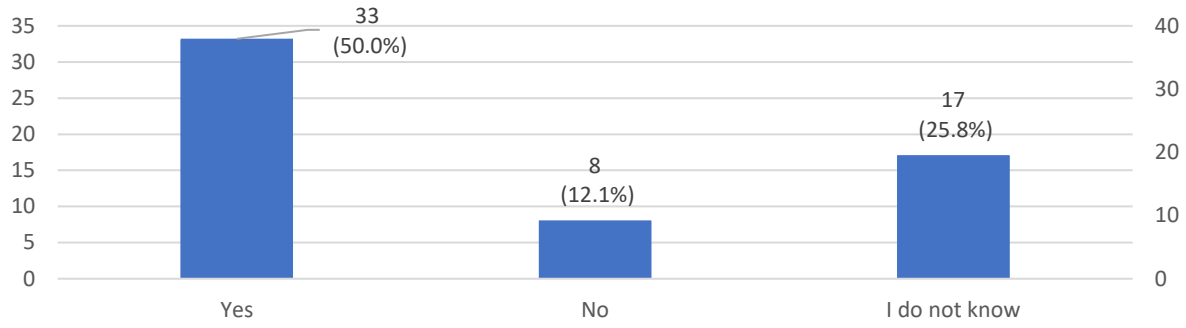
[97] https://www.unece.org/fileadmin/DAM/energy/se/pdfs/geee/geee4_Oct2017/ECE_ENERGY_GE.6_2017_4_EEBuildingGuidelines_final.pdf

[9898] https://www.unece.org/fileadmin/DAM/energy/cmm/docs/BPG_2017.pdf.

[99] http://www.unece.org/fileadmin/Dhttps://www.unece.org/info/media/news/sustainable-energy/2019/mexico-tests-use-of-unfc-for-the-assessment-of-petroleum-projects/doc.htmlAM/energy/EnrgForum/Docs/Framework_Guidelines.pdf.

Figure 19: Feedback of the Stakeholders on Resulted Policy Changes



Source: Evaluation Dataset, 2020.

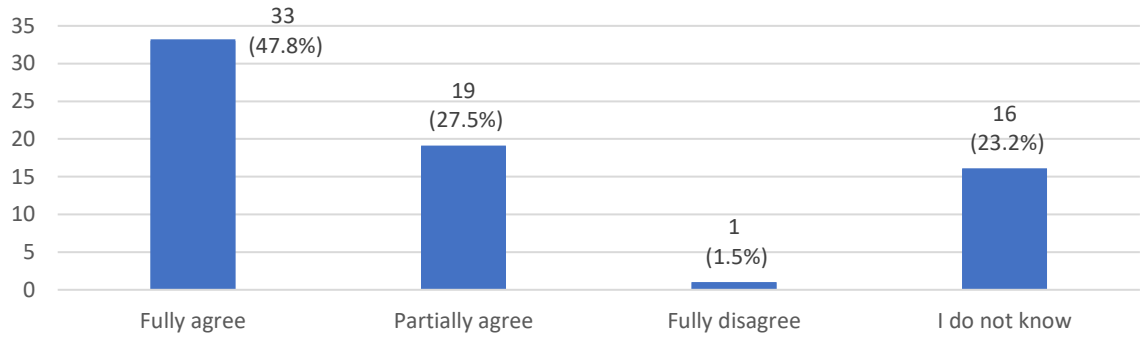
104. Furthermore, several respondents claimed that policy changes taking place in the country were the result of the collective efforts of different multilateral funds, intergovernmental organizations and donor agencies. Another comment was recorded with respect to the implementation challenges in a country with a reasonably well-developed legal framework and that the collaboration with the UNECE allowed for improvements within, and in the coordination between, different state authorities.

105. And a final feedback received in this regard claimed that "*Cooperation with the UNECE in the field of energy statistics has apparently made it possible to develop a methodology to calculate indicators related to energy independence (a ratio of primary energy production to gross consumption of fuel and energy resources; and a ratio of primary energy production to renewable energy sources to gross consumption of fuel and energy resources). These indicators were reflected in several country-level documents including the Concept of Energy Security of the Republic of Belarus till 2035*"[100]*;*

106. Over 47 percent (33 out of 69) of surveyed stakeholders believed that the UNECE advocated for, or contributed to, enhancing gender equality and the empowerment of women in the energy sector. About 28 percent of them (19 out of 69) considered the contribution being partial and 23 percent (16 out of 69) had no opinion on the matter (Figure 20). Some stakeholders mentioned that the UNECE had started to pay more attention to gender equality since 2016. Indeed, in the process of aligning its work with the 2030 Agenda for Sustainable Development, in 2015 the UNECE updated and issued its Policy for Gender Equality and the Empowerment of Women (2016-2020)[101].

[100] Issued in December 2015.
[101] http://www.unece.org/fileadmin/DAM/Gender/publications_and_papers/UNECE_Policy_on_GEEW_Final.pdf.

Figure 20: Survey Respondents' Feedback on the Contribution to Gender Equality



Source: Evaluation Dataset, 2020

107. The majority of surveyed and interviewed stakeholders, (over 75 percent) confirmed that the UNECE raises awareness on gender empowerment in the energy sector, which is very relevant to SDG 5. The stakeholders mentioned having attended sessions on gender equality and empowerment during the annual meetings organized by the UNECE. However, it was also highlighted that the sector is male-dominated, and that the majority of presenters were men. Some respondents also highlighted the importance of continuing to advocate for increased representation of female professionals through easing their access to higher education and better career opportunities related to the energy sector.

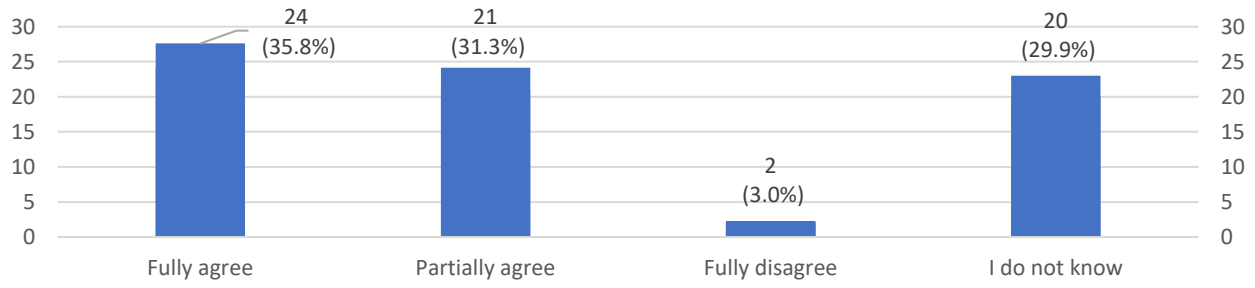
108. In addition, two stakeholders noted that the UNECE produced "*a very good document on Gender in coal mining and this can be applied in other energy sub-sectors.*" Cross-validation verified that the document developed by the Advocates for Human Rights at the request of the UNECE Group of Experts on Coal Mine Methane (GECMM), was available on the UNECE's website and was easily accessible to a broad audience[102]. It is also noteworthy that the GECMM had a meeting in Geneva on 7-8 November 2019 to discuss gender diversity and inclusion, and to promote inclusiveness in the industry. At the 10th International Forum on Energy for Sustainable Development jointly organized by five Regional Commissions and the Ministry of Energy of the Kingdom of Thailand on 7-8 October 2019 in Bangkok, Thailand, "Sustainable Energy and Women's Empowerment" was one of the discussion topics. During the 28th Session of the Committee on Sustainable Energy (conducted on 25-27 September 2019 in Geneva, Switzerland), the UNECE also facilitated a discussion on gender and energy[103]. Presentations on the matter were delivered by representatives of the member States, non-governmental organization, and the private sector from Kazakhstan, Georgia, Kyrgyzstan, and the United States.

109. Furthermore, during the 15th session of the Group of Experts on Cleaner Electricity Systems (conducted on 5-6 November 2019, in Geneva, Switzerland), attention was given to promoting gender perspectives in the work of the Committee on Sustainable Energy and its Groups of Experts: "*The Group of Experts will discuss development of gender-responsive policy recommendations to ensure gender equality in access to sustainable energy, in participation in decision-making and management of the energy and related sectors, and in opportunities for jobs and career development.*"[104]

[102] Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive Industries - A Women's Human Rights Report, January 2019 http://www.unece.org/fileadmin/DAM/energy/images/CMM/CMM_CE/AHR_gender_diversity_report_FINAL.pdf.
[103] https://www.unece.org/index.php?id=51057.
[104] Agenda item 7, ECE/ENERGY/GE.5/2019/1. , https://www.unece.org/fileadmin/DAM/energy/se/pdfs/CES/ge15_2019/ECE_ENERGY_GE.5_2019_1e.pdf.

110. Of the stakeholders surveyed in the course of the evaluation, 24 out of 67 (slightly over 35 percent) fully agreed and 21 out of 67 partially agreed that the collaboration with the UNECE's sustainable energy team contributed to substantial and meaningful changes in the situations of the most vulnerable groups of the population. It is noteworthy also that 29 out of 67 respondents (about 39 percent) had no opinion on the matter (Figure 21).

Figure 21: Feedback from Survey Respondents about the Impact on Vulnerable Groups



Source: Evaluation Dataset, 2020.

111. Stakeholders seeking to support their claims about the contribution made by the UNECE referred to: the inclusion of vulnerable countries in the activities of the UNECE; the overall agenda of the organization which entails improving systems which will have a significant positive impact on vulnerable groups; the involvement of international experts to develop a model of calculating the structure of energy consumption of the population by type of fuel and energy (as well as by type of heating and housing), which allows for the identification of socially vulnerable groups of the population and making informed decisions about the subsidies. It was recommended by one of the stakeholders, the vulnerable groups be directly reached through the inclusion of vulnerable countries from Africa into the relevant programs of the UNECE.

112. There were additional comments (from surveyed and interviewed stakeholders) about the cooperation apparently lacking tangible results. In addition, some stakeholders claimed that meaningful changes in the situations of the most vulnerable groups had been achieved by local authorities though the UN initiatives, while in some cases/countries no substantial changes for vulnerable groups had been observed during the last decade.

113. The evaluation found no specific report or assessment that gauged the real progress made with regard to the impact of the UNECE's interventions on gender mainstreaming and their impact on improving the quality of life for vulnerable groups.

V. Conclusions and Recommendations

114. The evaluation reached the following conclusions:

(I) The cooperation and partnership practices of the SED of the UNECE with internal or external entities (UN agencies, international organizations, civil society and non-governmental entities, academia, and the private sector) are highly relevant to the attainment of the 2030 Agenda for Sustainable Development and the Paris Agreement as well as for delivering on the expected accomplishments and outputs as mandated by the ToR.

(J) The introduction of 2030 Agenda for Sustainable Development with a specific focus on gender equality (SDG 5) and the adoption of the UNECE's key documents on gender parity and mainstreaming in 2015[105] and 2017[106] shifted the organization's attention towards women's empowerment in the energy sector and spurred several relevant publications, the gradual incorporation of gender-focused agenda items into high-level sessions of the regional commissions and the project outputs.

(K) The collaboration practices of the UNECE do not specifically reflect the perspectives of marginalized and vulnerable groups, although the UNECE's interventions are indirectly contributing to changes in the lives of people in such groups. The degree of such change (i.e. whether it be substantial and meaningful) to vulnerable groups in all member States cannot be answered conclusively without conducting a full-scale impact evaluation that would focus on assessing the impact of specific interventions on very specific targeted communities.

(L) The UNECE's collaboration with the UN System and external parties was fully in line with resolution 67/215 ("Decade of Sustainable Energy for All") adopted by the United Nations General Assembly (UNGA) in 2012, the UN's Agenda for Sustainable Development, and the Paris Agreement.

(M) The human and financial resources allocated for the SED were effectively used to fulfil the mandates of the division in delivering on energy for sustainable development. However, more aggressive efforts are required to increase the share of the SED's revenues in the UNECE income gained through extrabudgetary funding.

(N) The sustainability of the UNECE's partnership with its member States and external parties depends on the value added by the UNECE and its recognition among stakeholders as a leader in the sustainable energy domain.

(O) The UNECE's interventions and all of its joint initiatives implemented with international and national partners contributed to building the capacity of the member and non-member States to deliver on sustainable energy and to achieve the relevant SDGs and the targets set out in the Paris Agreement. However, few changes at the national level could be solely attributed to the UNECE's interventions, as most result from collective efforts at national and international level.

[105] UNECE Policy for Gender Equality and the Empowerment of Women: Supporting the SDGs implementation in the UNECE region (2016-2020), UNECE 2016.
[106] UNECE Gender Parity Strategy, UNECE 2017.

115. Based on the findings and conclusions, the evaluation issues the following recommendations on the UNECE's continuing operational practices:

(A) To continue its focus on diversifying its sources of funding. Particular attention should be given to attracting extrabudgetary sources for mid-to-long-term (3-5 years) technical assistance (which will be larger in scope and monetary terms) and advisory interventions that would focus on the continuity of multilevel assistance (development of policy and legal framework, institutional strengthening, and individual capacity-building of targeted beneficiaries). Synergies, cooperation, and in-kind contributions from all participating parties will strengthen the buy-in and sense of ownership at national and international levels.

(B) To adjust the existing business model for resource mobilization and to engage in pilot hiring of a P2-P3 level partnership officer/consultant (funded through extrabudgetary sources) within the SED. The officer/consultant should primarily serve the needs of the division and engage in a full fundraising cycle (identification[107], qualification[108], cultivation[109], solicitation[110], and stewardship[111]) under the guidance and supervision of the SED's management. In this regard the SED is advised to include the resource mobilization post in its extrabudgetary funding proposal.

(C) To consider planning impact evaluations (ex-ante[112] and ex-post[113]) of specific interventions. An ICE, established recently, might be a case in point here. While any impact evaluation is a time- and resource-consuming exercise, it does serve multiple purposes. First and foremost, it would help to measure the potential impact of the planned intervention and report on the tangible and intangible impact/result of this intervention to a broad audience and donor community, resulting in the increased outreach and visibility of the UNECE itself and the concept/notion of the centers of excellence specifically. This might also have a multiplier effect by spurring interest in expanding the network of the centers of excellence under the guidance and leadership of the UNECE with certain financial contributions from external parties.

(D) To continue introducing gender-responsive S.M.A.R.T. (Specific, Measurable, Attainable, Relevant, Time-bound) indicators to measure progress made regarding the gender mainstreaming agenda and to continue to encourage active participation of female subject-matter experts in relevant activities.

(E) To continue raising awareness through presentations and analytical papers (linkage to relevant SDGs could also be useful in this regard), of the member States on the human

[F]Finding and identifying prospective donors (this can be individuals, countries, companies, or foundations).
'[108] Assessing whether the interests of the donors match the UNECE's mandate.
[109] Getting to know your donor(s), find out where their passions lie; and let them get to know you and your organization/division. Building a relationship with the donor is an essential part of cultivation.
[110] Assessing the needs of your organization (what is most valuable, is it current or in the future) and the capacity of the donor as well as developing a verbal or written proposal.
[111] Stewarding is key to holding long-lasting relationships with the donor and participating parties and requires constant communication (including visits) to keep a donor for life and give the donor a sense of belonging.
[112] Ex-ante impact analysis of potential collaboration to be conducted prior to the initiating internal mechanisms for legalising the potential collaboration through the MoU or other cooperation frameworks.
[113] Ex-post impact evaluations aim to measure impacts after a period of implementation and thus rely on observed data rather than forecasts.

rights dimension and the impact of the sustainable energy agenda on marginalized and vulnerable groups (including women, youth and elderly).

(F) To introduce S.M.A.R.T. (Specific, Measurable, Attainable, Relevant, Time-bound) indicators to measure the progress made with regard to the impact of the UNECE's activities on marginalized and vulnerable groups (including women, youth and elderly).

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VII. Annexes

Annex 1	ToR of the Evaluation
Annex 2	Reconstructed Theory of Change
Annex 3	Evaluation Framework
Annex 4	The List of Stakeholders Interviewed
Annex 5	Data Gathering Tools

Annex 1: ToR of the Evaluation

Review of ECE collaboration with UN and other partners in delivering on energy for sustainable development.

I. Purpose

The purpose of this evaluation is to review the relevance, effectiveness and efficiency of ECE collaboration with UN and external partners from 2016-2020 in delivering on energy for sustainable development. The results of the evaluation are expected to contribute to a long-term vision for collaboration to strengthen the breadth and depth of impact of the energy (ECE 5) activities. The outcomes of the evaluation can be used to enhance the outreach to existing and potential partners.

II. Scope of activities for evaluation

The evaluation will explore the activities of the during the period 2016 to 2019 that benefit from engagement with UN and external partners. The activities include all of SED's work on sustainable energy issues:

- Sustainable resource management: extension of the United Nations Framework Classification for Resources and initiation of development of a United Nations Resource Management System.
- Reducing the environmental footprint of energy: activities in carbon capture, use, and storage, high efficiency-low emissions technology, methane management in the extractive industries.
- Deep transformation of the energy system: energy efficiency, renewable energy, cleaner electricity systems.
- Assist countries in assessing their strategic options: pathways to ensure energy for sustainable development and tracking progress to commitments.

The universally-recognized values and principles of human rights and gender equality need to be integrated at all stages of an evaluation, in compliance with the United Nations Evaluation Group's revised gender-related norms and standards. Therefore, the evaluation will assess how gender considerations were included in the process and it will make recommendations on how gender can be included better in the process.

III. Background

The objective of the is to improve access to affordable and clean energy for all and to reduce greenhouse gas emissions and the carbon footprint of the energy sector in the region. Prior to the endorsement of the 2030 Agenda for Sustainable Development (2030 Agenda) in 2015, the was oriented toward the Sustainable Energy for All initiative launched by the then Secretary-General of the United Nations, Ban Ki-moon, to help mobilize achievement of universal energy access, improve energy efficiency, and increase the use of renewable energy. As part of the 2030 Agenda, sustainable development goal #7 broadly reflects the same objectives, but the ECE energy is oriented toward a broader set of objectives to help secure the energy needed for sustainable

development (including but not limited to SDG7). ECE cooperates with other agencies and organisations through the UN energy coordination mechanism and the SDG7 technical advisory group of the high-level political forum. The Committee on Sustainable Energy is an intergovernmental body that provides member States with a platform for international dialogue and cooperation. Other regional commissions with dedicated energy committees include ESCAP and ESCWA.

The engages with other UN entities and other international organizations as well as with NGOs, civil society, academia, and private companies across the range of its activities. The implements core interlinked functions, namely:

1. International policy dialogue and cooperation among Governments, energy industries and other stakeholders to foster sustainable energy development;
2. Development and deployment of ECE policy recommendations, norms, standards, guidelines and tools on energy-related issues; and
3. Capacity-building and assistance to member States, at their request, through training programmes, advisory services and technical cooperation projects.

The assists countries to secure the energy they require to deliver on their commitments to the 2030 Agenda for Sustainable Development and the Paris Climate Agreement by:

1. reducing the environmental footprint of energy,
2. accelerating deep transformation of the energy sector to meet future needs,
3. ensuring sustainable management of resources, and
4. assisting member States in assessing their options to ensure energy for sustainable development, including tracking progress.

The promotes policy dialogue and cooperation among member States, regional entities and other partners on sustainable energy issues, in particular energy efficiency, cleaner electricity systems, renewable energy, coal mine methane, resource management, natural gas and energy security through regional and country-specific initiatives aimed at improving cooperation among countries. The initiatives include establishment of centres of excellence on methane management, high performance buildings, and sustainable resource management, conduct of dialogues on pathways at meetings of the Committee on Sustainable Energy and its subsidiary bodies and at in-country and in-region workshops and fora.

The also provides technical assistance, disseminates best practices, improves information sharing, and provides guidance on energy-related topics in ECE member States. These activities are expected to result in more effective integration of sustainable energy into the broader 2030 Agenda, national policies and normative frameworks.

The actively promotes participation of and collaboration among public and private sectors that is key to implementing national and regional policies. The promotion includes engagement of stakeholders in the development of normative instruments and activation of private and public actors in the deployment and dissemination of the instruments. The result is enhanced dialogue and cooperation among all energy actors that will boost transformational investment in the energy sector and, consequently, accelerate modernization of the energy system to meet countries' development and climate commitments.

Activities over the evaluation period include the extension of the United Nations Framework Classification for Resources (UNFC) to embrace solar, wind, and anthropogenic resources, and to develop a United Nations Resource Management System to help decision-makers manage resources in line with the 2030 Agenda. As a result of this work and related training activities: (a) the European Union has determined to use UNFC to manage critical raw materials for batteries and the shift to a circular economy; (b) African countries have launched a UNFC-based resource

management system Africa-wide; and (c) Central Asian and the BRIC countries have decided to use UNFC to enhance investment prospects in their resource sectors.

During the evaluation period, ECE developed, deployed and disseminated products in methane management in the extractive industries (Best Practice Guidance for Effective Methane Recovery and Use from Abandoned Coal Mines, with addition of guidance on Abandoned Mine Methane, and Best Practice Guidance for Monitoring, Reporting, Verifying, and Remediating Methane.

IV. Issues

The evaluation will answer the following questions:

Relevance

1. Is the collaboration of the ECE Sustainable Energy with other entities (UN, other international organizations, NGOs, civil society, academia, and private sector) relevant to attaining the 2030 Agenda and the Paris Climate Agreement?
2. How relevant is the collaboration with other entities (UN, other international organizations, NGOs, civil society, academia, and private sector) in delivering on expected accomplishment and mandated outputs?
3. How relevant is the foregoing collaboration with regards to gender equality and empowerment of women?
4. Does the Sustainable Energy incorporate the perspective of vulnerable groups while collaborating with UN system and other partners?

Coherence

5. How coherent is ECE's collaboration with the UN System to deliver on sustainable energy?
6. Has the collaboration among ECE, the UN system and other partners assisted ECE member States in delivering on energy for sustainable development?
7. Are the outputs of ECE's Sustainable Energy supported by partnerships with UN System and other partners?

Effectiveness

5. Does the contribute to member States' attainment of their commitments under the 2030 Agenda and the Paris Climate Agreement?
6. What outcomes have been achieved through the collaboration with partners (expected/unexpected, positive/negative), in the activities of the subprogramme?
7. What were the challenges/obstacles to achieving the objectives and expected accomplishments set forth?

Efficiency

5. Have the available resources been used efficiently to foster fruitful collaboration with UN System and other partners to deliver results?
6. Are there sufficient resources to achieve the intended outcomes, including in a timely manner?
7. How could enhanced engagement with partners improve efficiency?

Sustainability

8. What is the likelihood that the benefits of the activities delivered through collaboration with UN System and other partners will persist over time?
9. To what extent do partners engage with the work in an enduring way?

Impact

5. How has the collaboration of the ECE Sustainable Energy with UN System and other partners contributed to impact at the ECE or global levels?
6. Have the outcomes of this collaboration led to new policies or policy changes in member States?
7. To what extent is the work of the taken up by other countries outside of the region as a result of the collaboration with UN System and other partners?
8. Did the collaboration and indicated activities contribute to enhance Gender Equality and Empowerment of Women in energy?
9. Has the collaboration between the ECE Sustainable Energy, UN System and other partners helped to strengthen the application of gender mainstreaming principles and contribute to substantial and meaningful changes in the situation of the most vulnerable groups?

V. Methodology

The evaluation will be conducted based on:

1. A desk review of all relevant documents over the period including:
   - All relevant documents including materials developed in support of the activities (agendas, plans participants, documents, final reports)
   - Reports of the Committee on Sustainable Energy and subsidiary bodies; Quarterly Performance Reports
   - Proposed programme budgets covering the period
   - Relevant UN and ECE resolutions on the matter
2. An electronic questionnaire will be developed by the consultant to assess the views of stakeholders: experts, members of the Committee on Sustainable Energy and its relevant subsidiary bodies and staff from ECE, other regional commissions, other relevant counterparts in UN System, and other international organizations. Other stakeholders will be invited to answer the questionnaire as appropriate to assess the perception of the energy subprogramme from outsiders and experts. Potential names to be added to the list of interviewees would be provided by the ECE project manager. The results of the survey will be disaggregated by gender.
3. The questionnaire will be followed by selected interviews (methodology to be determined by the evaluator in consultation with ECE). The interviews will take place via phone and Skype, or face-to-face when possible.

   The report will summarize the findings, conclusions and recommendations of the evaluation. An executive summary (max. 2 pages) will summarize the methodology of the evaluation, key findings, conclusions and recommendations.

   All material needed for the evaluation, will be provided to the consultant: EPR activities documents and reports, meeting reports and publications, list of involved experts that can be interviewed by telephone. ECE will provide support and further explanation to the evaluator as needed.

   The evaluation will be conducted in accordance with the ECE Evaluation Policy. A gender-responsive methodology, methods and tools, and data techniques are selected. The evaluation findings, conclusions and recommendations reflect a gender analysis.

VI. Evaluation Schedule[114]

[114] Final timetable to be agreed following engagement of the evaluator.

15 Feb 2020	ToR finalized, and evaluator selected
16 Mar 2020	Desk review of all documents provided by ECE to the evaluator
30 Mar 2020	Delivery of inception report including design of survey
10 Apr 2020	Feedback on inception report by the project manager
16 Apr 2020	Launch of data gathering
5 May 2020	Conducting telephone interviews
19 May 2020	Analysis of collected information
1 June 2020	Draft report sent to Programme Manager
15 Jun 2020	Comments to evaluator after review by PM and PMU
29 Jun 2020	Final report

VII. Resources

Mr. Scott FOSTER, the Project Manager, will manage the evaluation with the support of the SED section chiefs and Regional Advisor. The Programme Management Unit (PMU) will provide guidance to the Project Manager and evaluator as needed on the evaluation design, methodology and quality assurance of the final draft report.

VIII. Intended Use/Next Steps

The results of the evaluation will be used in the planning and implementation of future evolutions of Sustainable Energy in support of Agenda 2030, the Paris Climate Agreement, and Gender Equality.

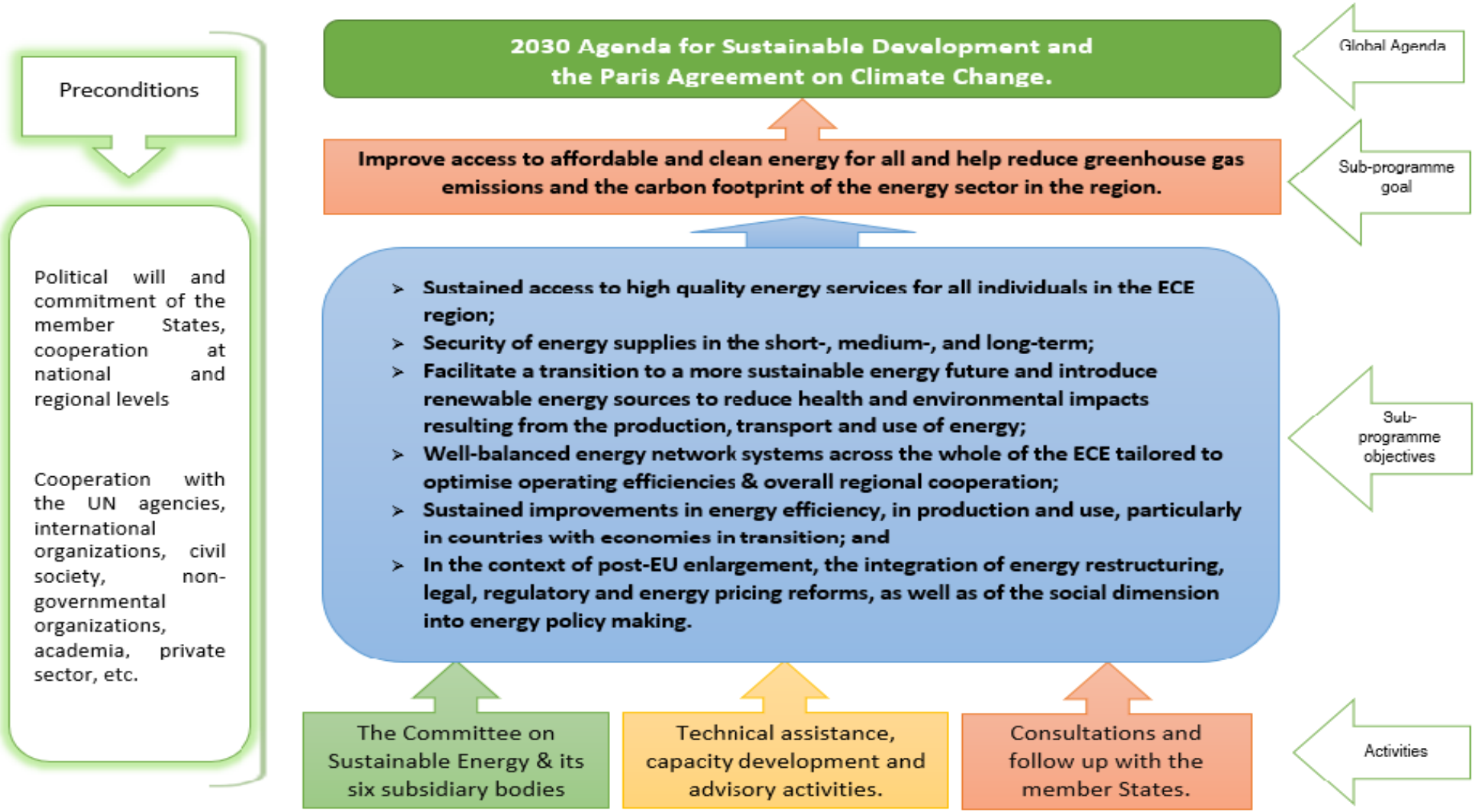
A management response to the evaluation will be prepared by ECE, and relevant recommendations implemented as scheduled in the management response. Progress on implementation of recommendations will be available on the ECE public website.

IX. Criteria for Evaluators

Evaluators should have:

- An advanced university degree or equivalent background in relevant disciplines
- Specialized training in areas such as evaluation, project management, social statistics, advanced statistical research and analysis.
- Demonstrated relevant professional experience in design, management and conduct of evaluation processes with multiple stakeholders, survey design and implementation, and project planning, monitoring and management.
- Demonstrated methodological knowledge of evaluations, including quantitative and qualitative data collection and analysis for end-of-cycle project evaluations.
- Fluent in written and spoken English. Knowledge of another language (for example Russian) may be desirable depending on the countries included in the project (for the purpose of being able to seek inputs from national authorities in their native tongue).
- Evaluators should declare any conflict of interest to ECE before embarking on an evaluation project, and at any point where such conflict occurs.

Annex 2: Reconstructed Theory of Change



Annex 3: Evaluation Framework

Evaluation Question	Data collection methods	Data source
Relevance		
Is the collaboration of the ECE Sustainable Energy subprogramme with other entities (UN, other international organizations, NGOs, civil society, academia, and private sector) relevant to attaining the 2030 Agenda and the Paris Climate Agreement?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Please select other international organizations or UN agencies with whom you cooperate in attaining the 2030 Agenda and the Paris Climate Agreement.	Desk research and Online survey.	UNECE reports; UNECE internal and external stakeholders.
How relevant is the collaboration with other entities (UN, other international organizations, NGOs, civil society, academia, and private sector) in delivering on expected accomplishment and mandated outputs?	Desk research and Interviews.	UNECE reports; Key experts of UNECE and other UN agencies.
How relevant is the foregoing collaboration with regards to gender Equality and empowerment of women?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Does the Sustainable Energy subprogramme incorporate the perspective of vulnerable groups while collaborating with UN system and other partners?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Coherence		
How coherent is ECE's collaboration with the UN System to deliver on sustainable energy?	Desk research and Interviews.	UNECE reports; Key experts of UNECE and other UN agencies.
Has the collaboration among ECE, the UN system and other partners assisted ECE member States in delivering on energy for sustainable development?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Are the outputs of ECE's Sustainable Energy subprogramme supported by partnerships with UN System and other partners?	Desk research and Interviews.	UNECE reports; UNECE internal stakeholders.
Effectiveness		
Does the subprogramme contribute to member States' attainment of their commitments under the 2030 Agenda and the Paris Climate Agreement?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal stakeholders.
What outcomes have been achieved through the collaboration with partners	Desk research and	UNECE reports;

(expected/unexpected, positive/negative), in the activities of the subprogramme?	Interviews.	UNECE internal stakeholders.
What were the challenges/obstacles to achieving the objectives and expected accomplishments set forth?	Desk research and Interviews.	UNECE reports; UNECE internal and external stakeholders.
Efficiency		
Have the available resources been used efficiently to foster fruitful collaboration with UN System and other partners to deliver results?	Desk research and Interviews.	UNECE reports; UNECE internal stakeholders.
Are there sufficient resources to achieve the intended outcomes, including in a timely manner?	Desk research and Interviews.	UNECE reports; UNECE internal stakeholders.
How could enhanced engagement with partners improve efficiency?	Desk research and Interviews.	UNECE reports; UNECE internal stakeholders.
Sustainability		
What is the likelihood that the benefits of the subprogramme's activities delivered through collaboration with UN System and other partners will persist over time?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders..
To what extent do partners engage with the work in an enduring way?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Impact		
How has the collaboration of the ECE Sustainable Energy subprogramme with UN System and other partners contributed to impact at the ECE or global levels?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Have the outcomes of this collaboration led to new policies or policy changes in member States?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
To what extent is the work of the subprogramme taken up by other countries outside of the region as a result of the collaboration with UN System and other partners?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Did the collaboration and indicated activities contribute to enhance Gender Equality and Empowerment of Women in energy?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.
Has the collaboration between the ECE Sustainable Energy subprogramme, UN System and other partners helped to strengthen the application of gender mainstreaming principles and contribute to substantial and meaningful changes in the situation of the most vulnerable groups?	Desk research, Interviews, and Online survey.	UNECE reports; UNECE internal and external stakeholders.

Annex 4: The List of Stakeholders Interviewed

#	Name	Title	Organization
1.	Mr. Scott Foster	Director, Sustainable Energy Division	United Nations Economic Commission for Europe (UNECE)
2.	Mr Michael Sylver	Executive Officer, Executive Office	United Nations Economic Commission for Europe (UNECE)
3.	Mr. Oleg Dzioubinski	Regional Advisor	United Nations Economic Commission for Europe (UNECE)
4.	Mrs. Charlotte Griffiths	Senior Economic Affairs Officer, UNFC and Resource Management	United Nations Economic Commission for Europe (UNECE)
5.	Mr. Michal Drabik	Economic Affairs Officer, Group of Experts on Coal Mine Methane, Task Force on Methane Management in Extractive Industries	United Nations Economic Commission for Europe (UNECE)
6.	Mr. Viktor Badaker	Economic Affairs Officer, Group of Experts on Cleaner Electricity Systems	United Nations Economic Commission for Europe (UNECE)
7.	Mr. Branko Milicevic	Economic Affairs Officer Group of Experts on Gas	United Nations Economic Commission for Europe (UNECE)
8.	Mr. Harikrishnan Tulsidas	Economic Affairs Officer UNFC and Resource Management	United Nations Economic Commission for Europe (UNECE)
9.	Mr. Igor Litvinyuk	Economic Affairs Officer Group of Experts on Energy Efficiency	United Nations Economic Commission for Europe (UNECE)
10.	Ms. Iva Brkic	Associate Expert on Sustainable Energy	United Nations Economic Commission for Europe (UNECE)
11.	Mr. Sergey Tulinov	Economic Affairs Officer	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
12.	Mr. Daniel Kroos	Senior Programme Officer	Organization for Cooperation and Security in Europe (OSCE)
13.	Dr. Ulrich Kral	UNECE Anthropogenic Resource Working Group	Research Center of Waste and Resource Management at Technische Universität Wien
14.	Mr. Aleksander Dukovski	Chair of GEEE	

15.	Dr. Zhanghua Zheng	Head of International Cooperation	Global Energy Interconnection Development and Cooperation Organization (GEIDCO)
16.	Mr. Sigurd Heiberg	Chairperson	Petronavit A.S.
17.	Dr. Soraya Heuss-Aßbichler	Department for Earth and Environmental Sciences	Ludwig-Maximilians-Universität München
18.	Mrs. Alessandra Hool	Manager and Coordinator	ESM Foundation
19.	Mr. Milan Grohol	Policy Officer	European Commission
20.	Mr. Alistar Jones	Vice Chair of EGRM	Imperial College London
21.	Mrs. Margalita Arabidze	Deputy Head of Department, Energy Policy Department Vice-chair of GERE	The Ministry of Economy and Sustainable Development of Georgia
22.	Mrs. Teresa Ponce de Leão	Chair of Executive Board	The National Laboratory of Energy and Geology (LNEG)
23.	Mr. Mark Radka	Chief, Energy and Climate Branch, Economy Division	United Nations Environment Programme (UNEP)
24.	Mr. Richard C. Yancey	Executive Director	Building Energy Exchange
25.	Mr. Francisco P. de la Flor	Director	The European Network of Transmission System Operators for Gas (ENTSOG)
26.	Mrs. Jenna Cramer	Executive Director	Green Building Alliance
27.	Mrs. Erika Ingvald	Head of Division, Mineral Information & Mining Industry Vice Chair, UNECE EGRM Bureau	Geological Survey of Sweden

Annex 5: Data Gathering Tools

	Interview Protocol[115]	
1.	Name of Interviewee(s)	
2.	Organization	
3.	Position	
4.	Location	
5.	Date of Interview	
Relevance questions		
Q1	Do you think that the collaboration of the UNECE's sustainable energy subprogramme with other entities (the UN, other international organizations, NGOs, and representatives of civil society, academia, and the private sector) was relevant with respect to fulfilling the 2030 Agenda and meeting the targets of the Paris Climate Agreement? Did anything make this collaboration unique and add value?	
A1		
Q2	How relevant was the collaboration of the UNECE's sustainable energy subprogramme with other entities in terms of delivering the expected accomplishments and mandated outputs of the subprogramme?	
A2		
Q3	How relevant was the collaboration with internal and external stakeholders with regard to gender equality and empowerment of women? Were any challenges encountered in this regard?	
A3		
Q4	Did the sustainable energy subprogramme incorporate the perspectives of vulnerable groups while collaborating with the UN system and other partners? What could be improved in this regard?	
A4		
Coherence questions		
Q5	Do you think that the UNECE's collaboration with the UN system was/is coherent in terms of delivering on the sustainable energy agenda? If so, why?	
A5		
Q6	Has the collaboration among the UNECE, the UN system and other partners assisted UNECE member states in delivering on energy for sustainable development?	
A6		

[115] Some of the valuation questions were addressed to UNECE staff only (as outlined in the evaluation framework).

Q7	Are the outputs of the UNECE's sustainable energy subprogramme supported by partnerships with the UN system and other partners?
A7	
Effectiveness	
Q8	Does the subprogramme contribute to member States' attainment of their commitments under the 2030 Agenda and the Paris Climate Agreement? If yes, what was the factor / activity of the subprogramme that contributed most?
A8	
Q9	What outcomes have been achieved through the collaboration with partners (expected/unexpected; positive/negative) during the activities of the subprogramme?
A9	
Q10	What were the challenges/obstacles in the way of achieving the objectives and expected accomplishments? What can be improved in this regard?
A10	
Efficiency	
Q11	Have the available resources been used efficiently to foster fruitful collaboration with the UN system and other partners to deliver results?
A12	
Q12	Are there sufficient resources to achieve the intended outcomes in a timely manner? What should be improved in this regard?
A12	
Q13	How could enhanced engagement with partners improve efficiency?
A13	
Sustainability	
Q14	What is the likelihood that the benefits of the subprogramme's activities delivered through collaboration with the UN system and other partners will persist over time? Are there any risks/issues to consider here? What could be improved in this regard?
A14	
Q15	Do partners engage with the work in an enduring way? If so, to what extent and why?
A15	
Impact	
Q16	To what extent has the collaboration of the UNECE's sustainable energy subprogramme with the UN system and other partners made an impact at the UNECE or global levels? Can you share any specific examples/cases?
A16	

Q17	Have the outcomes of this collaboration led to new policies or policy changes in member states? Can you share any specific examples/cases?
A17	
Q18	Are there any examples of other countries (outside of the UNECE region) replicating the results of the UNECE's interventions? If so, to what extent does the work of the subprogramme being taken up by other countries outside of the region come as a result of the collaboration with the UN system and other partners?
A18	
Q19	Did the collaboration and indicated activities contribute to enhancing gender equality and empowerment of women in energy? If so, in which aspect(s)?
A19	
Q20	Has the collaboration between the UNECE's sustainable energy subprogramme and other partners helped to strengthen the application of gender mainstreaming principles and contribute to substantial and meaningful changes in the situations of the most vulnerable groups? What factors/activities have contributed the most?
A20	

Online Survey

Consent and Confidentiality Statement

The UNECE cordially invites you to participate in the independent evaluation of the UNECE's Collaboration with UN and other Partners in Delivering on Energy for Sustainable Development for the period of 2016-2019.

With this in mind, we are sending you an online questionnaire to fill in.

The information received through this questionnaire will be treated confidentially with no reference made at any stage to the names of the respondents.

Completing the survey will only take 10 minutes of your time. This survey will be available from April 27 2020, until June 15 2020.

The UNECE would like to thank you in advance for your valuable support and input.

1. **Where do you work?**
   - ☐ Government (UNECE Body) - UNECE Member State
   - ☐ Government (UNECE Body) – Non-UNECE Member State
   - ☐ UN Agency
   - ☐ Non-Governmental Organization
   - ☐ Independent Expert
   - ☐ Academia
   - ☐ Private Sector
   - ☐ Other (please specify): **…….**

2. **In which country are you based?**

3. **Gender:**
   - ☐ Female
   - ☐ Male
   - ☐ Other
   - ☐ I do not want to answer

4. **Please select the UNECE activities in which you have taken part? (please select all relevant sections)**

Checkbox	Activity
☐	The Sessions of the Committee on Sustainable Energy
☐	Group of Experts on Cleaner Electricity Systems
☐	Expert Group on Resource Management
☐	Group of Experts on Energy Efficiency
☐	Group of Experts on Gas
☐	Group of Experts on Renewable Energy
☐	Group of Experts on Coal Mine Methane
☐	Trainings and workshops

☐	Advisory services provided and consultation meetings carried out by the UNECE team
☐ (other, please specify)	

5. **Is the collaboration of the UNECE's Sustainable Energy Division or the Housing and Land Management Unit relevant to the needs and priorities of your country in attaining the goals of the 2030 Agenda and the targets of the Paris Climate Agreement?**

☐ Very relevant
☐ Partially relevant
☐ Not relevant
☐ I do not know

6. **Please select other international organizations or UN agencies with whom you cooperate in the pursuit of attaining the goals of 2030 Agenda and the targets of the Paris Climate Agreement.**

Checkbox	Activity
☐	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
☐	The United Nations Economic and Social Commission for Western Asia (UNESCWA)
☐	The United Nations Environment Programme (UNEP)
☐	The World Bank
☐	The International Finance Corporation (IFC)
☐	The United Nations Development Programme (UNDP)
☐	The European Bank for Reconstruction and Development (EBRD)
☐	The Organization for Security and Cooperation in Europe (OSCE)
☐	The United Nations Industrial Development Organization (UNIDO)
Other organizations (please list)	

7. **How does the cooperation with the UNECE differ from cooperation with other international or UN agencies (if at all)?**

8. **How relevant is the foregoing collaboration with the UNECE to gender equality and empowerment of women?**

☐ Very relevant
☐ Partially relevant
☐ Not relevant
☐ I do not know

9. **Do you think that the UNECE advocates for, or contributes to, enhancing gender equality and empowerment of women in the energy sector?**

- ☐ Yes
- ☐ No
- ☐ Partially agree
- ☐ I do not know

Please provide some examples

10. **Do you agree with the following statement: "the sustainable energy subprogramme successfully incorporates the perspectives of vulnerable groups while collaborating with the UN system and other partners"?**

- ☐ Yes
- ☐ No
- ☐ Partially agree
- ☐ I do not know

Please provide some examples

11. **Has the collaboration between the UNECE's sustainable energy team contributed to substantial and meaningful changes in the situations of the most vulnerable groups?**

- ☐ Yes
- ☐ No
- ☐ Partially agree
- ☐ I do not know

Please provide some examples

12. **Has the collaboration with the UNECE assisted your country in delivering on energy for sustainable development?**

- ☐ Yes
- ☐ No
- ☐ Partially agree
- ☐ I do not know

13. **What is the likelihood that the benefits arising from the UNECE's sustainable energy activities delivered through collaboration with the UN and other partners will be sustained over time?**

- ☐ Highly possible
- ☐ Moderately possible
- ☐ Not likely
- ☐ I do not know

14. To what extent do you engage with the work of UNECE in a sustainable way?

- ☐ To a great extent (we regularly participate and contribute to the UNECE's events/activities relating to sustainable energy)
- ☐ To a moderate extent (we regularly receive materials and event invitations, and sometimes contribute to events/activities)
- ☐ Poor (we never get any updates or event invitations from the UNECE)
- ☐ I do not know
- ☐ Other (please specify)

15. Do you think that collaboration with the UNECE in sustainable energy makes an impact at a global level?

- ☐ Yes
- ☐ No
- ☐ I do not know

If yes, please share some examples

16. Have the outcomes of this collaboration led to new policies or policy changes in your country?

- ☐ Yes
- ☐ No
- ☐ I do not know

If yes, please share some examples

17. What would you recommend for improving cooperation with UNECE with regard to sustainable energy?