

PROJECT CONCEPT NOTE

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| Project Title | Improving national capacities of Central Asian countries to harmonize and implement internationally applicable system of classification and sustainable management of energy and mineral resources |
| Project Manager | Charlotte Griffiths |
| Sub-programme | Sustainable Energy |
| Implementing Entity | UNECE |
| Start Date | 1 September 2017 |
| End Date | 31 August 2019 |
| Budget | 161,600 USD |
| Beneficiary Countries | Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan |
| Cooperating Entities within the UN System | ESCAP |
| Other Implementing Partners | - |

Background

Sustainable Development Goal #7 calls for affordable and clean energy for all. While provisioning energy is important in itself, its availability is fundamental for realization of all other SDGs, especially the ones calling for end of hunger. Sustainable energy and material flows are the mainstay of global economy and Central Asian economies are major players in this sector. Vast energy resources like oil & gas, coal, uranium and renewable energy potential are present in many countries of the region. The production and supply of energy materials and other minerals are expected to grow rapidly in the future. Recent volatility in commodity prices has brought severe stress in the emerging economies of Central Asia. Therefore, the current challenge is to have a long-term sustainable planning and management, diversification of activities, and introduction of innovative technologies in the development of energy and mineral resources.

Most of Central Asian countries have adopted a management system related to the Former Soviet Union classification system, adapted for use in each country. Even though subsequently Russian Federation has revised and improved their system and aligned it with the international standard United Nations Framework Classification (UNFC), the same has not happened for Central Asian countries. Sustainable management of energy and mineral resources in Central Asian countries are thus constrained by lack of modern national resources management systems. Renewable energy, which is foreseen to have an accelerated growth in the region however lacks even a basic management system in Central Asia. Due to these reasons, sustainable management of natural resources faces considerable challenges. The diverse nature of the systems in use with its differences needs to be harmonized to international standards. Once this is done the management of energy and mineral resources can be done with a system that is internationally acceptable, and thus will promote more sectorial investments.

The activities of ECE's in Sustainable Energy Subprogramme are aimed at ensuring access to affordable and clean energy for all and to help reduce greenhouse gas emissions and the carbon footprint of the energy sector. Establishing a complete picture of the current and future supply base of energy and

minerals is necessary for effective energy and resource management. Accurate and consistent estimates, coherent with other scientific and socio-economic information, are the foundation for such assessments.

Committee on Sustainable Energy has so far endorsed the application of UNFC to solid minerals, oil & gas, uranium, renewable energies and injection projects and made it officially available for the use of ECE as well as all other UN Member States. Kazakhstan, Kyrgyzstan, Uzbekistan participated in the Seventh Expert Group of Resource Classification Meeting, April, 2016 and expressed their interest in UNFC. Experts from other Central Asian countries have participated in earlier meetings showing their interest in having a universal standard for classification and management of all energy and raw materials. These countries have also participated in UNFC related workshops held in recent years. On many occasions experts mentioned lack of guidance and capacity in applying UNFC in their own national contexts.

United Nations Framework Classification (UNFC) is one of the flagship activities of ECE, which is now being used in many countries for effective management of national resource endowments and socio-economically efficient development of the energy resources needed for realizing the Sustainable Development Goals (SDGs). UNFC allows the classification and sustainable management of all energy and mineral resources such as oil & gas, coal, uranium, solid minerals and renewable energy. UNFC is also applicable for injection projects, especially for carbon capture and storage and recovery of secondary resources from residues/anthropogenic materials. UNFC thus allows the end-to-end holistic management of the total energy and material flows in a company, country, region or globally.

As the complete resource life-cycle can be managed by UNFC, value-addition opportunities at each point in the life-cycle can be put under sharper focus. This also enables a more proactive management of the environmental impacts due to losses and leakages in the system. For example, large quantities of natural gas are lost through leakages and flaring, which is a significant loss of precious resources as well as contributes to the global warming. UNFC allows a large level of competitiveness to be brought in to resource development projects and helps countries tide over market fluctuations in an effective manner.

UNFC meets the needs of: (1) governments when managing their natural resources with a sustainable long-term view; (2) industry for information while deploying technology, management and finance to secure energy supplies and capture value efficiently to serve host countries, shareholders and other stakeholders, (3) international organizations developing energy and mineral studies for reliable and coherent data to formulate robust and long-sighted policies; and (4) the financial community for information to allocate capital efficiently.

UNFC specifications are available for oil & gas, solid minerals, uranium, geothermal energy and injection projects. Specifications for other renewable energies such as solar and biomass under development, and others like wind, hydro are being planned. Guidelines for social and environmental considerations are under development. Guidelines are also under development for managing competency of the personnel involved in the classification and management functions. Many major sectoral international systems like PRMS and CRIRSCO have made bridging documents to UNFC. Recently, Russian Federation become the first country to bridge its oil & gas system to UNFC and work has started for a similar bridging to the solid mineral sector is in progress.

UNFC also is now developing detailed guidelines for increasing competency in different sectors including petroleum, minerals, renewable energy and injection projects. These guidelines provide the minimum requirements of education, experience and continuous training required for assuring quality in resource management functions. Adopting the guidelines in a national context will be advantageous for Central Asian countries to build a large base of Competent Persons to manage sustainable energy and mineral projects. This will also help in attracting much needed investments to the sector. As traditionally these sectors were male dominated, the refocusing of competencies with the future in mind, can be important

for increased female participation and assuring gender equality. The project will ensure sufficient woman participation and the issue of gender equality is ensured in the national policies. For sustainable development in the sub-region and set concrete targets for capacity building of women workforce will be specifically emphasized.

UNFC will aid the effective management of national resource endowments needed for realizing the Sustainable Development Goals (SDGs). UNFC can though be mapped to all the SDGs directly or indirectly. A number of the SDGs where UNFC has direct linkages, including SDG #7 on affordable and clean energy; SDG # 9 on industry, innovation and infrastructure; SDG # 11 to make cities and human settlements inclusive, safe, resilient and sustainable; SDG #12 to ensure sustainable consumption and production patterns; and SDG #13 to take urgent action to combat climate change and its impacts.

The beneficiary countries are Central Asian economies Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. All countries are well endowed with natural resources like petroleum, minerals as well as uranium and have a large growth potential for renewable energies. The economies of these countries are mostly driven by revenues from energy and mineral based activities. Due to current volatility of energy and mineral prices in the international market, these countries find dwindling revenue flows. This threatens government investments in sustainable development programme to uplift populations from poverty. The project is targeted towards government policy making organs such as the relevant ministries and institutions like the national geological surveys and Universities and is expected to enable better management of natural resources.

Experts from many of these countries are participating in Expert Group on Resources Classification, which develops and maintains UNFC. There was also participation from the beneficiary countries in the past in capacity building workshops. During these meetings, strong inputs received for a more comprehensive project for applying UNFC in the national contexts. The project activities will be implemented by the ECE in partnership with national institutions in the region, such as resource management institutes, Geological Surveys and Universities.

Relationship to the Strategic Framework and the Sustainable Development Goals

The project is directly related to the Expected Accomplishment (c) “Strengthened implementation of ECE recommendations/ guidelines, best practices and other normative instruments for sustainable energy development” of the proposed Strategic Framework for the period 2016-2017.

The subprogramme will contribute to the implementation of the 2030 Agenda for Sustainable Development and the achievement of the energy related Sustainable Development Goals, especially Goals 7, 9 11, 12 and 13. The relevant linkages to UNFC for the SDGs and relevant targets are as shown below:

- SDG# 7 - Affordable and Clean Energy – Targets 7.1 & 7.2 - UNFC can be used in many countries for effective management of national resource endowments and socio-economically efficient development of the energy resources needed for sustainable development.
- SDG# 9 - Industry, Innovation and Infrastructure – Target 9.4 - UNFC can be used to manage sustainable and efficient processes in resource extraction and adopting cleaner and environmentally sound technologies and industrial processes.
- SDG# 11 - Make cities and human settlements inclusive, safe, resilient and sustainable – Target 11.7 - UNFC can be used as an effective tool in by local governments to optimize management of their endowments of energy resources and extraction of energy and valuable materials from residues and wastes within the best practices of a green and circular economy.
- SDG# 12 - Ensure sustainable consumption and production patterns – Targets 12.2, 12.5 and 12.6 - UNFC is an international best practice for sustainable management of mineral resources, petroleum, uranium and renewable energy resources. It can be used for management of clean-

energy projects like carbon capture and storage. UNFC provides the tools for addressing the issues related to environmental impact and mitigation and can be made part of various sustainability reporting regimes. Sustainability reporting can thus be made more robust with linking it to ratios such as production to quantities remaining in ground, which will provide a long-term or project life cycle view of individual extraction projects.

- SDG# 13 - Take urgent action to combat climate change and its impacts – Target 13.1 - UNFC is applicable and the only system available today for the management of carbon capture and storage projects. UNFC is also applicable for management of mining wastes and residues, which can be used along with recycled water for increasing forest cover in barren areas and thus creating additional carbon sinks.

Objective

To improve national capacities of Central Asian countries to harmonize and implement internationally applicable system of classification of energy and mineral resources.

Expected accomplishments

EA1. Improved national capacities to develop national system for classification and sustainable management of all energy and mineral resources based on the UNFC.

EA2. Improved knowledge and skill of national stakeholders to apply UNFC for energy and mineral resource projects.

Indicators of achievement

IA1.1 At least three countries adopted UNFC in the national regulatory framework.

IA2.1 At least 10 national experts from each beneficiary country are able to apply UNFC for various sectors.

Main activities

A1.1. Develop 5 assessment reports on the status of energy and mineral classification systems;

A1.2. Organize one sub-regional workshop to validate the assessment reports and to develop policy recommendations for adoption of UNFC to countries' national regulatory framework;

A2.1. Prepare 5 case studies on application of UNFC to energy and mineral resources (one per country);

A2.2. Organize a concluding workshop to discuss the case studies and follow-up actions to implement policy recommendation on application of the national UNFC systems.

Assumptions and Risks

Assumptions: Governments' commitment and allocation of human and other resources

Risks: Governments are unwilling to follow up on recommendations.

Results-based work plan

| EA | Activity | Year | Quarter | Object class | Amount (USD) |
|---|---|------|---------|--|--------------------------|
| EA1. Improved national capacities to develop national system for classification and sustainable management of all energy and mineral resources based on the UNFC. | A 1.1 Develop 5 assessment reports on the status of energy and mineral classification systems | Y1 | Q4 | Consultants Travel of consultants | 9,000 15,000 |
| | A 1.2 Organize one sub-regional workshop to validate the assessment reports and to develop policy recommendations for adoption of UNFC to countries' national regulatory framework. | Y2 | Q1 | Consultants Travel of Staff Travel of meeting participants | 9,000 4,000 45,000 |
| EA2. Improved knowledge and skill of national stakeholders to apply UNFC for energy and mineral resource projects. | A2.1 Prepare 5 case studies on application of UNFC to energy and mineral resources (one per country) | Y2 | Q1-2 | Consultants | 6,000 |
| | A 2.2 Organize a concluding workshop to discuss the case studies and follow-up actions to implement policy recommendation on application of the national UNFC systems | Y3 | Q2-3 | Consultants Travel of Staff Travel of meeting participants | 6,000 4,000 45,000 |

Budget

Consultants: \$ 45,000 (Total)

International consultants

2 international consultants for the task(s) of development an assessment report on the status of energy and mineral classification systems in use in each targeted country to be presented at the workshop in support of activities: A1.2 (3 work-months) and A2.2 (2 work-months); (5 work-months) x (\$ 3,000 per month) = \$ 15,000.

National / Regional consultants

5 national consultants for task(s) to formulate the plan and actions required to implement competency guidelines on national levels, in support of activities A1.1 (3 work-months) and A2.1 (2 work-months), x (5 work-months) x (\$ 3,000 per month) = \$ 15,000.

Consultant travel

5 missions by consultants for the purpose of developing assessment reports in support of activity A1.1 (1 mission per country), (\$ 3,000 average mission cost) x (5 missions) = \$ 15,000.

Travel of Staff: \$ 8,000 (Total)

2 missions by UN staff for the purpose of assessment report on the status of energy and mineral classification systems in use in Central Asia, in support of activities A1.2 (1 mission) and A2.2 (1 mission), (\$ 4,000 average mission cost) x (2 missions) = \$ 8,000.

Travel of meeting participants (seminars, workshops, seminars): \$ 90,000 (Total)

Workshops & seminars

Sub-regional workshop to validate the assessment reports and to develop policy recommendations for adoption of UNFC to countries' national regulatory framework in support of A1.2; Workshop to discuss the case studies and follow-up actions to implement policy recommendation on application of the national UNFC systems in support of A2.2. Duration of workshop: 3 days; (\$ 3,000 per participant) x (15 participants) x (2 workshops) = \$90,000.

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| Total direct cost | 143,000 |
| 13% UN Programme Support Cost (rounded) | \$18,600 |
| Total budget | \$ 161,600 |