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Sub-programme: Climate change
Serbia Kigali HFC implementation plan preparation (YUG/KIP/90/PRP/58)
Cost to UNEP: USD 37,600
Budget line: SB- 202834.01, S1-32IML-000971

Annex A: Implementation plan

The purpose of the agreement is to support the preparation of UNEP's non-investment components for incorporation into Serbia's KIP. In the context of this project, UNEP acts as the cooperating agency. The following activities are included in the project: preparation of initial HFC related policies and legislation, a communication and outreach plan, and a national strategy to improve energy efficiency of cooling equipment, and the review of international performance standards.

Milestone	Description of milestone	Date
1	UN2UN inter-agency agreement signed	1st quarter 2024
2	Financial authorization sent	1st quarter 2024
3	HFC related policies and legislation	4th quarter 2024
4	Communication and outreach plan	3rd quarter 2024
5	Interim expenditure report for 2024	January 2025
6	National strategy to improve energy efficiency of cooling equipment, and review of international performance standards	1st 2025
7	Completion of all activities	2nd quarter 2025
8	Final expenditure report for 2025	June 2025

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Annex B: Terms of reference & cost estimate

In cooperation with the Ministry of Environmental Protection of Serbia, the following type of activities are envisaged under the agreement: organization of stakeholder consultations, engagement of national experts, procurement of goods and services, meeting logistics, data collection, local travel, publications / translations etc.

Activity	Quantity	Unit	Unit Cost (USD)	Total Cost (USD)
Activity 1 – HFC related policies and legislation				
Preparation of HFC policy and legislative measures recommended for early implementation	1	Lump sum	10,185	10,185
Activity 2 – Communication and outreach plan				
Preparation of communication and outreach plan to influence the investment and user behaviour	1	Lump sum	12,129	12,129
Activity 3 – Capacity building activities				
Review and assessment of innovative tools / approaches	N.a.	N.a.	N.a.	N.a.
Activity 4 – National strategy to improve energy efficiency of cooling equipment				
Review of international performance standard, safety standards and regulations (safe handling of alternative refrigerants)	1	Lump sum	12,500	12,500
Sub-total				**34,814**
UNDP service fee (8%)				**2,786**
Total Cost				**37,600**

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Annex C: Approved project description

MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
KIGALI-HFC IMPLEMENTATION PLAN (KIP) PROJECT PREPARATION (PRP)
KIGALI HFC PHASE DOWN PLAN (OVERARCHING STRATEGY)

Part I: Project information

Project title:	**Serbia Kigali HFC implementation plan (KIP)**	
Country:	**Serbia**	
Lead implementing agency:	**UNIDO**	
Cooperating agency (1):	**UNEP**	
Implementation period for stage I of the KIP:	**2024-2029**	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the KIP (please specify): 15 months		
Funding requested:		
Agency	**Sector**	**Funding requested (US $)***
UNIDO	**Overarching**	**115,000 US$**
UNEP	**Overarching**	**55,000 US$**

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

A. Information required for PRP funding request for the overarching strategy of the KIP

1. Montreal Protocol compliance target to be met in ☒ stage I of the KIP			
Phase-out commitment (%)	Freeze 10 % reduction	**Year of commitment**	2029
☐ **Servicing only**		☐ **Manufacturing only**	☒ **Servicing and manufacturing**

2. Brief background/description/information on approved relevant projects and multi-year agreements as follows:

A) *Current progress in implementation of any funded HFC-related project (enabling activities or stand-alone HFC investment projects)*

- Survey of consumption, distribution and uses of various alternatives to ODSs for the Republic of Serbia was conducted in 2016
- Currently there are no implementation activities of any funded HFC-related project in Serbia. The 80th Executive Committee Decision 80/41 has approved Enabling Activity project. This project was successfully finished at the end of June 2021.
- Serbia ratified the Kigali Amendment on eight of October 2021.
- Licencing system for import/export of HFCs is established. There are no quotas for import export of HFCs.

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B) *Current progress in ongoing HCFC phase-out management plan (HPMPs)*

- HCFC baseline consumption for Serbia is determined as 8,37 ODP tones
- The HCFC Phase-out Management Plan for Serbia was approved in December 2010 at the 62nd Meeting of Executive Committee of the Multilateral Fund for the implementation of the Montreal Protocol. The last, fourth tranche under the HPMP Stage I was approved at the 84th meeting in December 2019.
- At the 85th meeting in June 2020 was approved HPMP Stage II for the period 2020 to 2025 to meet the 67.5 per cent reduction in HCFC consumption.
- Among the policy measures, the enforcement of a certification system for technicians of the servicing sector is a key element for the effective phase-out of HCFCs and for future replacement by HFC-free alternatives.
-

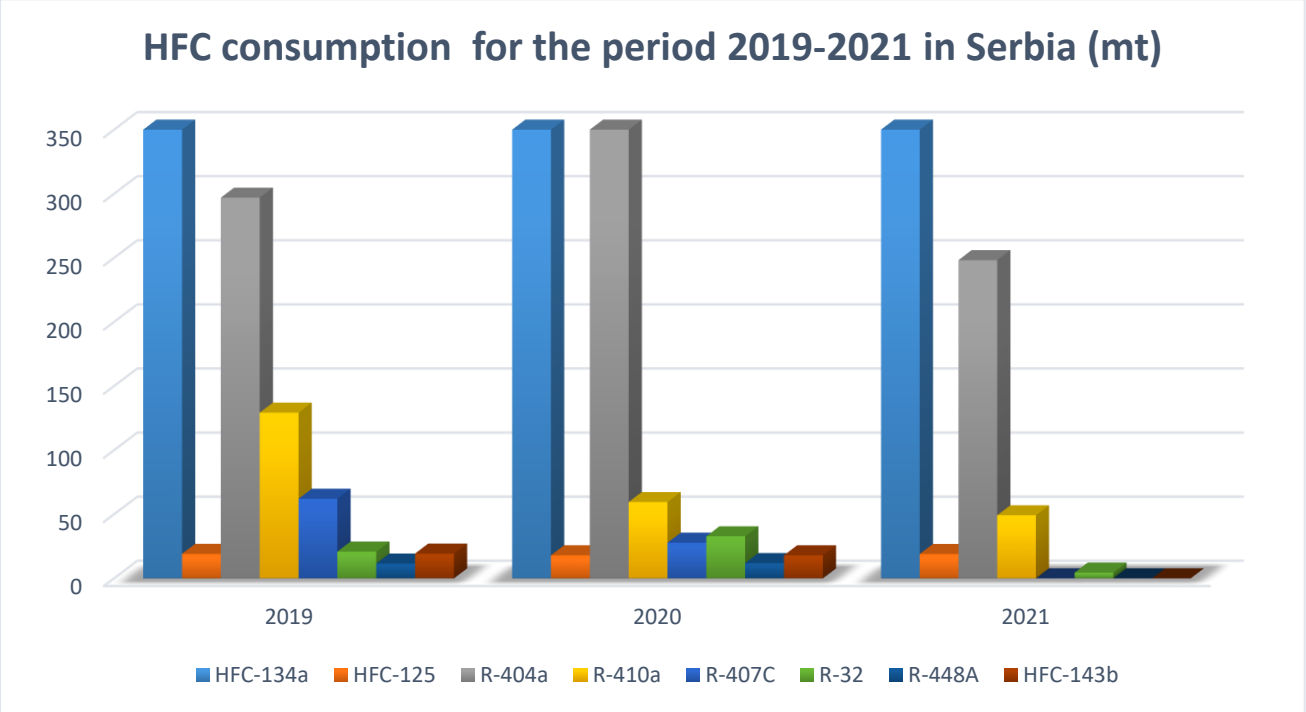
3. Overview of current HFC consumption in metric tonnes by substance (last three years

Substance/blend	Sector	2019	2020	2021
HFC-125	RAC servicing	19,12	18,00	19,00
HFC-134a	RAC manufacturing and servicing	695,05	477,77	416,97
HFC-143b	RAC servicing	18,32	18,00	0
HFC-32	RAC manufacturing and servicing	20,89	32,83	40,49
R-404A	RAC manufacturing and servicing	296,95	399,91	248,23
R-407C	RAC servicing	62,10	27,83	- 3,44
R-410A	RAC manufacturing and servicing	129,23	59,52	49,21
R-422D	RAC servicing	0,90	2,26	2,83
R-448A	RAC servicing	11,54	11,90	-0,95
R-449A	RAC servicing	3,90	6,35	11,78
R-452A	RAC servicing	0,22	0,42	0,32
R-507A	RAC servicing	0,45	4,86	0,90
SF6	High voltage circuit breakers	1,43	5,52	1,65
Others	All sectors	0	1,54	0,01

4. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing,)

The refrigeration and air-conditioning sector is the largest user of HFCs in Serbia.
HFC-134a and R-404A are widely used refrigerants in RAC manufacturing and servicing sector. HFC-134a is widely used in bigger cooling capacity commercial AC units. HFC-134a is also used in MAC servicing sector. R-404A is the first choice in commercial and industrial refrigeration.
It is noticed that consumption of R-410A and R-407C is decreasing in the last three years. R-410A is still widely used in split AC units, heat pumps with smaller capacity for domestic AC and VRV units. There is also a trend of increasing of use of R-32 in split AC units and heat pumps with smaller capacity for domestic AC.
Regarding the domestic refrigeration HC-R600a is the main refrigerant used in the last several years.
Below there is a graph on consumption in the period 2019-2021.

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5. Description of information that needs to be gathered during project preparation. Explain how this data will be gathered

Information needed	Description	Agency
Data on HFC consumption in manufacturing/servicing sector	Questionnaires, site visits, interviews with relevant stakeholders	UNIDO
Analysis of the types of equipment using HFCs	Developing of methodology for analysis of collected data	UNIDO
Others, specify.	Update on ODS alternative survey	UNIDO

6. Activities to be undertaken for project preparation and funding (decision 87/xx(b))

Activity	Indicative funding (US $)	Agency
Stakeholder consultation: Consultant to prepare and conduct questionnaires and interviews with relevant stakeholders to update available data on ODS alternatives, data collection on equipment that works on or relay on HFCs (types and capacity of the units, refrigerant type, refrigerant charge, age and expected lifespan of the equipment, energy efficiency etc.), analysing collected data, review servicing and manufacturing consumption by sectors; Conducting interviews, organizing workshops and stakeholders' consultations for the integration of national regulations and procedures for KA implementation and consolidation of technical capacities in the institutions involved in HFC control	55.000	UNIDO
Preparation of initial HFC related policies and legislation in line with the draft HFC phase-	17.000	UNEP

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down strategy and the overview table of HFC policy and legislative measures already in place, planned to be put in place and not planned to be put in place. This will consider the HFC policy and legislative measures recommended for early implementation including the mandatory reporting by HFC importers / exporters, HFC emission control measures and awareness raising of stakeholders.		
HFC phase-down plan development: Technical and legal experts to prepare all legal and technical documents, consult all key stakeholders and develop detailed plan, including assessment of needs to develop/update trainings and certification scheme in use of flammable refrigerants, developing training plan and organizing workshops with main stakeholders and training institutions, including assessments of the needs for enhancing training programs on recovery, recycling, and destruction. Review of existing RRR scheme, drafting proposal on new concept focused on improvement of existing RRR scheme focused on HFCs. Identification of feasible measures to reach Kigali Amendment scenarios in the long, medium, and large term and its associated costs.	52.500	UNIDO
Communication and outreach plan: Preparation of a communication and outreach plan in consultation with key stakeholders including manufacturers of equipment, investors, building planners, end-users, consumer associations, RAC associations, private sector, supermarkets, cold chain, media experts etc. The plan will focus on technology and policy awareness raising to influence the investment and user behaviour. It will also assess the possible implications of Serbia joining the European Union at some stage in the future.	12.500	UNEP
Capacity building activities related to RAC sector activities and enforcement. Review and assessment of innovative tools and approaches to build the capacity of relevant actors including OzonAction's tools related to HFC phase-down, update of training curricula of vocational schools, university and customs, online training and certification tools, review of energy-efficiency and minimum performance standards, safety	12.000	UNEP

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standards, case studies in Serbian language, public procurement policies, potential impact of incentives and taxes, gender considerations, equipment inventories / logbooks, potential of not-in-kind alternatives etc. Translation of the prepared documents		
Preparation national strategy to improve energy efficiency of cooling equipment and review of international performance standards for possible adoption at national level. Review of international safety standards and regulations for the safe handling of alternative refrigerants for possible adoption at national level.	13.500	UNEP
Validation: Consultations, review and validation of the consolidated overarching strategy	7.500	UNIDO
TOTAL	**170.000**	

7. How will activities related to preparing the KIP be linked to the current stages of the HPMP being implemented in the country? (OPTIONAL)

- Under HPMP Stage II, the activities will enforce an update ODS regulations and electronic reporting system for end-users
- Continue on training and certification of service technicians with theoretical and practical components in compliance with F-gas and natural refrigerants standards
- Synergies from ongoing and future HPMP activities will be assessed and integrated into the HFC phase-down plan development without additional costs. Lessons learned from HPMP implementation will be considered to the extent possible.