GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED PROJECT
TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT INFORMATION

Project Title:	HCFC Phase-out in Kazakhstan through Promotion of zero ODS low GWP Energy Efficient Technologies		
Country(ies):	Kazakhstan	GEF Project ID:[1]	
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	6090
Other Executing Partner(s):	Ministry of Energy (Department on climate change) of the Government of Kazakhstan	Submission Date:	03/03/2017
GEF Focal Area(s):	Chemicals and Wastes	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of parent program:	[if applicable]	Agency Fee ($)	435,689

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES[2]

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	**Trust Fund**	**(in $)**	
		GEF Project Financing	**Co-financing**
(select) CW-2 Program 5 (select)	GEFTF	4,586,200	8,632,400
Total Project Cost		**4,586,200**	**8,632,400**

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To accelerate HCFC phase-out to achieve the 2020 compliance objectives and sustainably reduce the servicing tail. Facilitation of implementation of upgraded national legislation on control of import/export and use of HCFCs, other ODS and ODS alternatives; improvement of Customs training capacity; demonstration of zero-ODS and low-GWP energy efficient technologies in the refrigeration, air conditioning and foam sectors; and completing the upgrading and strengthening of the servicing sector capacity, and PU foam sector support.

Project Components	**Financing Type[3]**	**Project Outcomes**	**Project Outputs**	**Trust Fund**	**(in $)**	
					GEF Project Financing	**Co-financing**
1. Improvement of regulatory and control measures for the HCFCs handling and consumption, the development of licensing systems.	TA	1.1 ODS Alternative survey to determine their consumption	1.1.1 ODS Alternatives survey completed 1.1.2 Relevant stakeholder consultations held on the data collected to discuss future policy directions	GEF TF	800,000	1,300,000
		1.2 National legislation on HCFC phase out and import/export control upgraded, through adaptation of advanced legislation experience from EU and other countries.	1.2.1 Draft of upgraded legislation prepared and submitted to the government for approval and subsequent implementation.			

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.
[2] When completing Table A, refer to the excerpts on GEF 6 Results Frameworks for GETF, LDCF and SCCF and CBIT guidelines.
[3] Financing type can be either investment or technical assistance.

			1.2.2 Experience exchanges carried out through national study workshops and/or regional conferences with attendance from countries with advanced experience in this field and regional networking			
		1.3. Strengthening the capacity of specialists of the State Customs Department and technical capabilities of central laboratory to control import/export of ODS/ODS alternatives and equipment containing the same	1.3.1 State Customs Department participates in existing networks on aspects of ODS import/export control and other required bilateral visits. 1.3.2 Close cooperation with Training Center of the Customs Department by upgrading the training equipment and material to facilitiate continuous training of regular and new customs officials - 100 trained. 1.3.3 Upgrade the standarts and testing facilities at Customs Central Laboratory with a GC-MS. 1.3.4 Training of approximately 20 importers/clearing agents in use of newly introduced national system of electronic declaration of imports/exports.			
		1.4. Standards for ODS and natural refrigerants	1.4.1 Facilitate development of standards for safe handling, storage and use of natural refrigerants; and incorporate them in law.			
		1.5 Strengthening the capacity and capability of senior technicians in maintaining and repair	1.5.1 Batch of senior technicians selected by the coordinator of project and study			

		of equipment with new technologies 1.6 Implement activities on raising public awareness and support, consultation of the government .	centers receive hands on training on maintenance and repair of equipment with new technologies locally or abroad 1.6.1 Continue activities to increase public awareness; 1.6.2 Updated information platform (website) and develop and publish information materials.			
2. Strengthening the HCFC re-use system; implementation of demonstration projects on HCFC replacement in refregaration and foam sectors; upgrading training institutions; establish mobile training and monitoring capacity; and improving facility for strage of waste ODS	Inv	2.1. Strengthening the HCFC re-use system. 2.2. Demonstration of zero-ODS and low-GWP energy efficient refrigerant technologies including natural refrigerants 2.3 Pilot performance monitoring project for reduction of HCFC leakage at large facilities	2.1.1 Strengthen reclaim centres with advanced refrigerant analysers and a small portable chromatograph to support HCFC re-use system from refrigerant quality point of view. 2.1.2 Supply tools to the servicing sector to ensure comprehensive support to the national refrigerant management program (large and medium service companies). 2.2.1 Mobilisation of national resources and ownership to demonstrate innovative conversion projects to introduce zero-ODS and low-GWP energy efficient technologies for R&AC in: a) public facilities; b) different commercial applications such as cold storage, agricultural products (meat, vegetable etc), supermarkets etc 2.3.1 Provide basic performance monitoring equipment and software to enhance capacity of	GEF TF	3,471,200	7,000,400

			RAC technicians and engineers to monitor, diagnose and improve RAC system performance (including preventive maintenance) to reduce HCFC leakages.			
		2.4 Participation of technical personnel at networking meetings and conferences	2.4.1 Facilitate technical personnel participation in networking meetings and technology related conferences for experience exchange.			
		2.5 Enhance training capacity of Study centers and Technical Institutions	2.5.1 Training stands for natural refrigerants assembled/purchased and installed for training purposes. 2.5.2 Mobile training and monitoring facility created to train technicians in remote areas and to monitor recovery and recycling practices.			
		2.6 Operationaization of ODS waste storage	2.6.1 Storage facility created/upgraded for storage of waste ODS/ODS alternatives 2.6.2 Stakeholder/ public consultations on current situation with ODS waste disposal options/strategies.			
		2.7 Conversion of Market Trade system house away from HCFCs, and technical forum on HCFC-alternative technologies for ineligible foam companies	2.7.1 Technology review and conversion at the system house, along with trainings, low and high density equipment packages for downstream users. 2.7.2. Safety standards and technology information for downstream users. 2.7.3. Technical support forums to the foam sector (ineligible companies) on existing HCFC-free			

			technologies provided to enable smoother shift from HCFCs sector-wide.			
3. Project monitoring and evaluation	TA	3.1 Project monitoring and evaluation implemented	3.1.1 M&E is applied to provide feedback to the project coordination process to capitalize on project needs 3.1.2 Lessons learned and best practices are accumulated, summarized and replicated at the country level	GEF TF	100,000	-
Subtotal					**4,371,200**	**8,300,400**
Project Management Cost (PMC)[4] (includes Direct Procurement Costs of $20,000)				GEF TF	**215,000**	**332,000**
Total Project Cost					**4,586,200**	**8,632,400**

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
Recipient Government	Ministry of Energy (Climate Change Department and Committee of ecological regulation and control) of Kazakhstan	In-kind	**1,881,340**
	State Committee of Revenue of the Ministry of Finance (Customs regulation)	In-kind	
	Ministry of Education	In-kind	
Private Sector	Private companies	Cash/In-kind (investments, infrastructure)	**6,651,060**
	Refrigeration and Industrial Associations	Cash/In-kind	
	Various benificiaries	In-kind	
GEF Agency	UNDP	In-kind	**100,000**
Total Co-financing			**8,632,400**

[4] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS a)

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b)b)	Total (c)=a+b
UNDP	GEFTF	Kazakhstan	Chemicals and Wastes	ODS	4,586,200	435,689	5,021,889
Total GEF Resources					**4,586,200**	**435,689**	**5,021,889**

a) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT PREPARATION GRANT (PPG)[5]

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: $120,000					PPG Agency Fee: $ 11,400		
GEF Agency	**Trust Fund**	**Country/ Regional/Global**	**Focal Area**	**Programming of Funds**	**(in $)**		
					PPG (a)	**Agency Fee**[6] (b)	**Total** c = a + b
UNDP	GEF TF	Kazakhstan	Chemicals and Wastes	ODS	120,000	11,400	131,400
Total PPG Amount					**120,000**	**11,400**	**131,400**

[5] PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to $50k for PF up to$2m (for MSP); up to $100k for PF up to $3m; $150k for PF up to $6m; $200k for PF up to $10m; and $300k for PF above $10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

[6] PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[7]
Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	*Hectares*
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	*Hectares*
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	*Number of freshwater basins*
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	*Percent of fisheries, by volume*
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO_{2e} mitigated (include both direct and indirect)	*metric tons*
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	*metric tons*
	Reduction of 1000 tons of Mercury	*metric tons*
	Phase-out of 303.44 tons of ODP (HCFC)	*12.78 ODP tons**
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	*Number of Countries:*
	Functional environmental information systems are established to support decision-making in at least 10 countries	*Number of Countries:*

* 2015 Art.7 data of 12.78 ODP tons plus sustainability for the serivicing tail beyond 2020.

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area[8] strategies, with a brief description of expected outcomes and components of the project, 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, CBIT and co-financing; 5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

Kazakhstan ratified the Montreal Protocol on Substances that Deplete the Ozone Layer on 26 August 1998, the London Amendment to the Protocol on 26 July 2001, the Copenhagen and Montreal amendments on 28 June 2011 and the Beijing Amendment on 19 September 2014, and is classified as a party not operating under paragraph 1 of Article 5 of the Protocol.

Annual consumption of the controlled substances in Annex C, group I (hydrochlorofluorocarbons), of 90.75 ODP-tonnes for 2011, 21.36 ODP-tonnes for 2012 and 83.32 ODP-tonnes for 2013 exceeds the party's maximum allowable consumption of 9.9 ODP-tonnes for those controlled substances for those years and that the party was

[7] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF, SCCF or CBIT.

[8] For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving.

therefore in non-compliance with the consumption control measures under the Protocol for hydrochlorofluorocarbons.

Kazakhstan's annual consumption of the controlled substance in Annex E (methyl bromide) of 6.0 ODP-tonnes in 2011 and 19.0 ODP-tonnes in 2013 exceeds the party's maximum allowable consumption of zero ODP-tonnes for that controlled substance for those years and that the party was therefore in non-compliance with the consumption control measures under the Protocol for methyl bromide.

Kazakhstan submitted a plan of action to ensure its return to compliance with the Protocol's hydrochlorofluorocarbon and methyl bromide control measures under which, without prejudice to the operation of the financial mechanism of the Protocol, Kazakhstan specifically commits itself to:

- reducing its consumption of hydrochlorofluorocarbons from 83.32 ODP-tonnes in 2013 to no greater than:

  (i) 40 ODP-tonnes in 2014;
  (ii) 9.9 ODP-tonnes in 2015[9];
  (iii) 3.95 ODP-tonnes in 2016, 2017, 2018 and 2019;
  (iv) Zero ODP-tonnes by 1 January 2020, save for consumption restricted to the servicing of refrigeration and air-conditioning equipment between the period 2020 and 2030 as prescribed in the Protocol;

- reducing its consumption of methyl bromide from 19.0 ODP-tonnes in 2013 to no greater than:

  (i) 6.0 ODP-tonnes in 2014;
  (ii) Zero ODP-tonnes by 1 January 2015, save for critical uses that may be authorized by the parties;

- monitoring its system for licensing imports and exports of ozone-depleting substances.

To this date, no any initial HCFC phase-out investments have been designed and approved for Kazkahstan to be funded by the GEF, and the current propsoed project aims to fill in that gap, and help the country to return into compliance regime with the Montreal Protocol, and specific related decisions of the Meeting of Parties (MOP). The government's position towards its its international obligations is very serious, and the implementation of the programme will asisst in reaching the current targets.

Annual recent consumption of the controlled substances in Annex C, group I (hydrochlorofluorocarbons), has been 24.8 ODP-tonnes for 2014 and 12.78 ODP-tonnes for 2015. Any current efforts, in a view of lacking technical assistance from the GEF, or, in a more accurate fashion, with not yet requested assistance, are being achieved by implementation of legislative and regulatory measures and Customs control. These the minimal scope activities which require more substantive and targeted HCFC phase-out support in various economic and public sectors.

Proposed Project will help Kazakhstan to accomplish the process of step-by-step departure from dependence on HCFCs by continuation of institutional potential's strengthening and technical/investment support in the servicing sector, and PU system house and PU sandwich panel business (where eligible in line with current MLF rules), development of regional collaboration/experience exchange with other countries and full refusal from consumption of ODS and implementation of energy effectient technologies with law GPW and approaches of equipment services for HFCF leak reducing.

Current baseline situation requires the actions in creation of institutional basis and adoption of legal and regulative documents, implementation of HCFC Management Plan, strengthening of institutional and and technical capacity and target investments into the sector of domestic and commercial service and insulating foams.

[9] Officially reported data for 2015 year is 12.78 ODP tons for HCFCs

The following describes the current sectors where HCFCs are consumed, followed by the prject's structure presentation.

1. *Sector of domestic, commercial and industrial refregeration facilities*

The whole volume of ODS import to Kazakhstan in 2015 stands at 158 metric tons (MT), or 12.78 ODP tonnes, as reported to the Ozone Secretariat, while the baseline was set at the leevl of 39.5 ODP. Currently the country experiences difficulties in implementation of the HCFC phase-out schedule and obligations committed in the framework of the Montreal Protocol.

The HCFC consumption in the domestic, commercial and industrial refrigeration sectors is more than 80 MT of HCFC-22. The sectors include the commercial cooling which is the wide retail chain on consumer goods (112,863 units) with trade space more than 10 million of square meters, and 746 active trade markets with sale points (186,572 units). The number of household refrigerators and freezers in the hands of the population exceeds 10 million pieces, as 100 households account for 177 refrigerators and freezers according to existing statistics, in addition, further, a third of households already have climate comfort appliances (more than 2 million units), which are mostly used in the summer time.

Industrial cooling equipment includes refrigerated installations and larger plants that are installed in the oil sector, vegetable storehouses, office buildings, airport terminal buildings and airports, and buildings intended for cultural activities (theaters, cinemas, concert halls, etc.). With regard to mobile ACs, transport includes rail transport, which has refrigerated wagons, passenger cars and motor transport - specialized reefers.

A number of companies registered in the field of equipment servicing is around 1,160 with more than 7 thousands technicians and personnel employed; with current importers of HCFCs and their alternatives standing as LLP Trade market, SP Avdeev, LTD Titan, Elda and SP Module Chem.

The main active players in the servicing sector, working in domestic, commercial and industrial refrigeration and AC sectors are:

- "Industrial cold", capital Astana (installation, assembly, repair service refrigerators and freezers, split systems, monoblocks),
- "Mega climate" (installation and maintenance of air conditioners),
- "RD Service", capital Astana (repair, refueling, maintenance of refrigeration equipment,
- "Deronstroy", capital Astana (sale, installation, modernization, maintenance, commissioning and maintenance of ventilation and air conditioning systems),
- "IE Tenants", capital Astana (repair, household and installation and repair of industrial cameras, installation and repair of air conditioners),
- "IP Rembytteh", capital Astana (repair and maintenance of industrial and commercial refrigeration equipment),
- "Titan", former capital Almaty, which has regional centers (supply, design, installation of refrigeration/ freezer trade equipment, both for large warehouses and supermarkets and small grocery or industrial stores, training of personnel and subsequent service),
- "North-M", former capital Almaty (service center for maintenance and repair of household, commercial and industrial refrigeration and climate control systems),
- "Atelier NORTH", former capital Almaty (services for repair, service and maintenance of household and office equipment),
- "IE Yakupov", former capital Almaty (development of working drafts of cooling warehouses, freezing, food storage, medicines, fruits, vegetables, advice on equipment selection and installation of refrigerated chambers of sandwich panels with polyurethane foam filling, installed on refrigeration cars, construction of refrigerated containers, freezers).
- "Oasis climate" (repairs of refrigerators, air conditioners),

- "IE Service-Climate", former capital Almaty (AC's installation, assembly, disassembly, diagnostics, repair),
- "Housemaster" Ltd. (sales and maintenance of all types of ACs),
- "IE Levelin", city of Pavlodar (repairs of ACs),
- "Climate World" (service and installation of ACs),
- "Kustanaytorgtehnika", city of Kostanay (general service of all type sof equipment, assembly),
- "Sapsan"(installation and maintenance of industrial refrigeration equipment),
- "Asia Incorporation" (maintenance service and installation of ACs),
- "Arts Ltd." (maintenance service and installation of ACs),
- "LogyGround" (industrial refrigeration equipment), etc.

"Tehol" is the sole agency in Kazakhstan producing industrial refrigerators with small and medium capacities from 2 to 50 tons each of freestanding and installed in existing production, including reorganization of out-of-date and very much aged refrigerator complexes. It has a small-scale (semi-automatic) sandwich panel production with polyols supplied from a local system house, or imported.

Kazakhstan has an extensive network of service companies specializng in assembly of refrigerated chambers for industrial, agricultural, and commercial sectors for long-term food products storage. Currently, it is known that 226 vegetable cold stores with a total area of 201,704 square meters and the storage capacity of 197,418 tons of foodstuff were built in Kazakhstan. These cold rooms are produced as a storage room for food processing, flowers business and refrigerated displayed cases etc. The following companies are involved in this business: "Kalugin and K" (Astana), "Kazholodmash" (Almaty), LTD "Logika", LTD "Kvazar-Service", LTD "TOROS" (Kostanay) etc. And, as far as the household RAC equipment is concerned, apart from a large number of servicing companies, individual technicians are involved in smaller scale servicing business.

The transportation sector is a major consumer of HCFCs. For instance, Kazakhstan's railways is the largest operator, which takes a lead position in freight of goods and passenger transport in the economy. Passenger transportation's companies have 2,590 passenger cars, 48.5% of them have been in operation for over 25 years and are aging, in addition there are about 38 iso-thermal (refrigerated) wagons with operating life for more than 20 years.

Motor (vehicle) freight transportation market occupies a significant place. The haulage is conducted in all directions of Kazakhstan, regions of the Russian Federation, Belarus, China, Turkey, and EU. The types of transported agricultural products include fruits and vegetables, grain, beverages, dairy products, meat and meat products, etc. Transportation is carried out by trucks of MAN, Volvo, Daf, Scania, Mercedes, KAMAZ, etc. manufacture with different cargo capacity (from 1.5 to 60 tons), equipped with appropriate cooling systems.

Accordingly, this MAC sector accutely depends on timely and quality level servicing, and there is a network of specilzied service companies in Kazkahstan which work with such MAC systems. For instance, LLP Thermo King (former capital Almaty) is one of dealers for such transporation equipment. Other companies such as LLP "AziyaKlimstroy" provide design, installation of cooling cameras and automobile refrigeration systems and service, with LLP "Auto Climate", "1-A-AVTOKLIMAT", LLP Cond focusing on installation and servicing of MAC cooling equipment.

2) Private sector of insulating foams.

The volume of HCFC-141b consumption in this sector is more than 70 MT. The polyurethane (PU) foam as insulation by spraying and production of polyurethane insulation boards are very popular application types in the domestic market in Kazakhstan.

"Trade market" company actively works for more than 10 years using polyurethane technologies, and it has its own system house and possibility to produce different types of polyols, including for spray foam uses, and contruction fillings. This company is the principal importer of HCFC – 141b into Kazakhstan consuming around or slightly above 50 MT. This system house has donwstream users of its polyols such as "KAZ Frost Service" working with

refrigeration business, “Trubokomplekt” specializing in contractual deliveries of pipe production and waterproofing, “AsiaEnergoProjectMontazh” producing steaming tanks with extensive branches in many regional townssuch as Ust-Kamenogorsk, Astana, Shuchinsk, Almaty, etc. Besides listed companies a number of smaller firms (“Warm House KZ”, “Alamak Stroy”, LTD “NFM” etc) produce sandwich panels, soft furniture, and other products based on polyols imported from the Russian Federation and other countries.

One of the major manufacturers of thermal insulation boards in Kazakhstan is "PenoPlex RK". The company has eight production sites, one of which is located in the city of Kapchagay, Almaty region. The plant in Kapchagai was launched in 2008, currently there are 2 lines for the production of insulation boards, the capacity is 200,000 cubic meters of insulation per year.

Ovearll, for this sector, one eligible system house requires technical assistance with low GWP technology trabnsfer with support to its downstream users, while the rest of companies seem ineligible due to establishment date, and only technical technology forums may be proposed for GEF financing to ensure future business decision on technology choice are driven by informed opinions.

Based on this situational analysis as a baseline, the proposed project will build on the experience and knowledge gained from past experience on CFC phase-out and HCFC data collection process, as well as help link Kazkashtan to a larger network of CEIT countires which has completed or continue to plan the complete HCFC phase-out. It will assist Kazakhstan achieve the 2020 compliance requirement of phasing out 99.5% of their HCFC baseline, sustain that success beyond that milestone, carry out initial ODS alternative refrigerant survey in preparing to define Governmental policies on ODS alternatives to HCFCs and flourinated gases, support stakeholder consulations, and introduce zero ODS, low GWP energy efficient technologies into the mainstream.

It will consist of mainly two (2) technical assistance and investment components.

Component 1 will facilitate implementation of national legislation and strengthening capacity of Ministries (Energy, Customs) and enforcement officers on control of HCFC/ODS alternatve import/export, while Component 2 will strengthen the HCFC re-use system and implement demonstration projects on HCFC replacement with zero-ODS/low-GWP alternatives. More details are provided in the following sections.

Component 1 is designed with six (6) project outcomes.

The first outcome will be a survey of ODS alternatives in the country. This is important to understand technology shift trends, and measure country’s preparedness to move away from HCFC solutions, at the same time looking at the full range of alternatives with avoidance of high GWP options, and reducing costs to donor funds on any future project initatives addressing new sets of HCFC substitute chemicals such as adopted by the Kigali amendment to the Montreal Protocol.

The second outcome will be to include the HCFC control requirements while upgrading the national legislation on HCFC/HCFC alternatives phase-out and import/export control, through adaptation of advanced legislation experience from EU and other countries.

The third outcome will be strengthening the capacity of specialists of State Customs Department to control import/export of ODS/ODS alternatives and associated equipment. This will be achieved through bilateral visits to countries with good policies being implemented; by strengthening the capacity of specialists of the State Customs Department to control import/export of ODS/ODS alternative and equipment; upgrading the training equipment and teaching materials at the Training Center of the Customs Department (State Committee on National Revenues) to facilitiate continuous training of regular and new Customs officials (100 trained); upgrading the testing facilities at Customs Central Laboratory with a gas chromatography-mass spectrometer (which was not part of the on-going project); and training importers/clearing agents in use of to be introduced national system of electronic declaration of imports/exports.

The fourth outcome will be about the development of standards for safe handling, storage and use of natural refrigerants; and incorporating them into law. This is a very important technical support outcome to the spread and safe use of HCFC alternatives, with a focus on avoidance of large scale penetration of high GWP technological solutions to HCFCs.

The fifth outcome will be to strengthen the capacity and capability of senior technicians in maintaining and repair of equipment with new technologies. This will facilitate a batch of senior technicians, selected by the coordinator of project and sudy centers, to receive an in-depth technically substantive hands-on training on maintenance and repair of equipment with new technologies at a Russian speaking facility abroad.

The sixth outcome will help support awareness raising acitivites on the Montreal protocol problematique and general HCFC phase-out processes planned in Kazakhstan. Usually, these activities are incorporated into HCFC phase-out programmes, and this was especially the case with the currently completing initial HCFC phase-out programme in some of CEITs countries in the region. The outcome will also help secure better cooperation from direct and indirect project's stakeholders.

Component 2 will be of a technical nature and is designed with seven (7) project outcomes.

The first outcome proposes strengthening the reclaim centres and study centers through procurement of required portable equipment for the recovery and recycling/reclaiming of refrigerants, refrigerant analysers and a chromatograph/mass-spectrometer (suited for chlorinated refrigerant gases) with a computer and other additional instruments and tools to enable its full functioning. This will increase the capacity of these centres and supply tools to the remaining technicians to initiate and complete support to the national refrigerant management program and complement the existing tools at the R&R centres and large and medium service companies.

The second outcome proposes demonstration of zero-ODS and low-GWP energy efficient refrigerant technologies including natural refrigerants through mobilisation of national resources and ownership to demonstrate innovative conversion projects to introduce zero-ODS and low-GWP energy efficient technologies for R&AC in a) public facilities and; b) different commercial applications such as persihable product storage, agricultural products, supermarkets etc. This will assist in improving the national uptake processes for such technologies via associated awareness raising campaigns, and financial support which may take a form of incentives from GEF grants to expand on a number of pilot programmes, and there will be a link to national large scale resources to support a wider market transformation.

Linked in part to the above outcome, the third outcome proposes to implement a pilot performance monitoring project for reduction of HCFC leakage at large facilities by providing basic performance monitoring equipment and software to enhance capacity of RAC technicians and engineers to monitor, diagnose and improve RAC system performance (including preventive maintenance) to reduce HCFC/ODS alternative leakages. Both the second and third outcomes will be linked to the technicians' level capacity building on new technology's specifics, safety parameters and standards, and service requirements, discussed in outcomes 4 and 5, to ensure that national capacity is sustained in the country over a number of years into the future, after the project's closure.

Both, the fourth and fifth outcomes represent the skill building (with an empahsis on green job features on this business), experience exchange within a larger group of GEF and MLF-funded countries on modern technical skills required for best practices in assembling, installing and servicing of new low GWP natural refrigerant based technologies appearing on the global markets. Regular participation in UNEP OzonAction networking meetings and refrigeration/AC (RAC) technology's exhibitions/conference will be encouraged. The components are cross-cutting through the previously described outcomes above, and will cooperate jointly with tools re-equipping nitiatives and new technology demonstrations. While the first outcome focuses on stationary service centers, this part of the project will aim at supporting a mobile training station (including a suitable vehicle) where the National Refrigeration Industry Association (located in Almaty) will be in charge of these activities, including a re-current budget throughout the full project's duration.

The sixth outcome will look into supporting sound and safe ODS waste storage facility through upgrading of existing/selected warehouses in joint cooperation with the Customs department for confiscated materials, and with the National Refrigeration Industry Association on not usable, or mislabbeled gases. Based on crrently ongoing reasearch in the region under another GEF/UNDP programme for Belarus, Ukraine, Tajikistan and Uzbekistan[10]. There are currently transboundary waste transit issues prevalent, especially for landlocked countries in the Central Asia region, and chrloinated waste is not easy to export for disposal abroad. This waste is of continued accumulation nature, quantity by quantity, due to at times unauthorized imports, bad labelling, mixed gases at the original supply sources, or not any more usable gases due to equipment failures during RAC equipment operation. Intial efforts to improve waste consolidation in safer conditions, and preliminary stakeholder consultations on current waste disposal options will be applied in this outcome.

The seventh outcome proposes a conversion of one eligible system house to HCFC free technologies, along with equipment and technical support to downstream users on newly adopted technological solutions. Cooperation with other programmes such being implemented in a system hosue in Ukraine (previously referred GEF/UNDP programme) and MLF-funded demonstration programmes for very-small users in Egypt on reducing spray foam equipment costs will be established. According to existing data from recent contacts with known foam companies, this (Market Trade) is the only eligible firm so far indetified, while other PUf foam enterprises were seemingly established after the cut-off dates. For such companies, the project proposes to have detailed technical elvel discussions via a number of forums to be organized in the country to ensure there is modern knowledge on the market developments for approiate business decisions on future technology self-funded conversions.

Outcomes 3 is regarding the project monitoring and evaluation, which are to help introduce adaptive management to the project when independent evaluations recommend for more efficient achiement of project's targets, and to enable exchange on lessons learned with the network of such programmes as well the GEF through regular annual and other type fo reporting.

The principle global environmental benefit from the project will be to reduce consumption of HCFCs by 99.5% of their baseline of 39.5 ODP Tonnes to 0.2 ODP Tonnes on January 1, 2020, and ensure the national capacity is in place to manage the remaining servicing tail until 2030.

The activities proposed in this project are incremental and will not be duplicating what is already being done through co-financing efforts in the country implemented in the absence of any previous HCFC phase-out investment support. They will meet the requirements of GEF-6 and the Montreal Protocol. It will further build on the current regional knowledge UNDP has accumulated in other countries, on the infrastructure that has been developed for policies and controls on HCFCs and HCFC using equipment, as well as ensuring a smooth transition to non-ODS/low-GWP substances through recovery/recycling/reclaim of HCFCs and demonstration projects using non–ODS/low-GWP substances. Successful demonstration of alternative technologies using non-ODS/low-GWP substances will allow for scale up and reproduction of these technologies across the country.

It is recognized that co-financing is essential for meeting the GEF project objectives, and will directly contribute to the outcomes of the proposed project. To this end, this PIF indicates the level of co-financing which will be sought, both in kind and as grants, and commitments will be obtained at the project preparation stage.

2. Stakeholders. **Will project design include the participation of relevant stakeholders from civil society organizations (yes ☒ /no☐) and indigenous peoples (yes ☐ /no☒)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.**

The project will be implemented and have impacts primarily in urban areas with little or no impact on indigenous people.

The key stakeholders and their functions are described in the sub-section below.

[10] https://www.thegef.org/project/initial-implementation-accelerated-hcfc-phase-out-ceit-region

- Ministry of Energy under the Government of Kazakhstan develops and implements national policy for environmental protection; organizes governmental control over environmental protection and natural resources's use; implements Multilateral Environmental Agreements (MEAs); and licenses uses, releases, transport, storage and disposal of toxic materials and waste, including radioactive. Within its structure, a Department on Climate Change develops regulative acts on implementation of governmental policy on climate change impacts and adaptation, prevention of the Ozone Layer's depletion and ODs phase-out; and is involved in the development and implementation of strategic programme documents, formulation of norms in the field of climate change mitigation and ozone layer's protection. A separate Committee on environmental regulation and enforcement issues permits for ODS import/export and handling, as well as for repair, assembly, servicing of ODS containing equipment business activities.

- State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan and its Teaching Center provides trainings for Customs officers; regulates exports and imports of chemical substances and toxic wastes. The Customs department has been a traditional public sector partner in the previous CFC phase-out programmes and will continue to be such in the currently proposed HCFC phase-out programme. All reporting on import/exports is done through this agency i.e. CoEP, Customs etc. with importing/exporting business entities submiting required activity reports to the agency with regards to imported/exported goods.

- Ministry of Justice carries out governmental registration of all normative-legal documents related to chemical management, including the Montreal Protocol.

- Committee for Technical Regulation and Metrology of the Ministry of Investment and Development of the Republic of Kazakhstan issues and monitors the implementation of technical and safety standards. The importance of the Committee is in the development and introduction of standards for the use of HCFCs, and their alternatives/substitues as currently only outdated former Soviet Union's standards for CFCs, HCFC-22 and ammonia area available.

- Ministry of Education supervises formulation and adoption of programmes of professional level education and other programmes; ensures methodical and methodological support of quality educational services of current list of educational institutions, as vocational so higher degree entities which will be participating in the project on technical skill building for engineers and technicians;

- Committee on Statistics under the Ministry on National Economy of the Republic of Kazakhstan colsoidates and publishes nationally aggregated data on imports/ export ODSs into/out of Kazakhstan.

- Non-governmental sector (Climate Change Coordination Centers, Study Centers (Climate and ozone, Refrigeration Schools), Kazakhstan Cooling Industry Association) unites major actors in the RAC equipment servicing sector and serves to disseminate experiences and best practices, and represents organizational and client interest's protection functions, as well as ensures related public awareness mechanisms are in place on its mandate and developments. Members are involved in educational activities, drafting of normative acts, assembly, design, maintenance of refrigeration and air conditioning equipment.

- Private sector (servicing, equipment assembly, etc) consumes HCFCs in daily buisness activities, and is primarily impacted by the national HCFC phase-out process. Their cooperation is essential for the project progress and success.

3. Gender Equality and Women's Empowerment. **Are issues on gender equality and women's empowerment taken into account? (yes ☒ /no☐). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.**

The project will collaborate with the project-contracted businesses and international experts to continually develop and implement mechanisms which may further strengthen the capacities of women of Kazakhstan across the project planning domain.

Although the project is not a gender-focused initiative, it remains a cross-cutting issue throughout all project activities and attempts will be made to incorporate gender issues into the project design.

Following UNDP's Gender Mainstreaming Strategy, the HCFC phase-out project will strive to improve the capacities of institutions, governments and companies to integrate gender mainstreaming principles in their day-to-day operations, and by building and strengthening the capacities of women themselves. It should be mentioned that training institutes and regulatory bodies such as environment, customs, standards have professional women working in their respective fields. There is participation in the project board meetings and in decision making at very senior level by women. Some of the initiatives that will be considered are:

- 30% of women participation in all training activities, consultation processes.
- As a follow up to training women in these areas, the following outputs can be specifically targeting women:
- Complete national expansion of HCFC recycling and reclaim centers with four new recycling centres and two new reclaim centres which employ trained women

4 Risks. **Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).**

There is a low risk associated with this project, since Kazakhstan has included HCFC phase out strategy in its national laws, and the Government has a solid experience with the earlier CFC phase-out programme and HCFC consumption survey. As such, national ownership of the phase-out is well demonstrated.

UNDP will continue to utilize its established cooperation with UNEP OzonAction programme on regional networking and experience exchange with other countries, which has been proven successful during the GEF and MLF programs on CFCs phase-out in the past, and in the current regional GEF-UNDP HCFC project with other partner countries in the region.

The National Ozone Unit (NOU) institutional arrangement is present, and it reports annually to the Ozone Secretariat on HCFC consumption phase-out, though it requires more support as designed in the project concept, given the fact of no HCFC phase-out activites sponsored by the GEF in the recent few years. NOU also facilitated incorporation of the Montreal Protocol's mandates into national legislative and regulatory frameworks. As such, due to the legal international commitments of the country, the long-term sustainability of the project results is better guaranteed.

5. Coordination. **Outline the coordination with other relevant GEF-financed and other initiatives.**

The country's expertise and established consultative networks, involved in the successful GEF financed CFC phase out programs completed in the participating CEITs and the ongoing FSP project to assist Kazakhstan meet current compliance objectives , would be utilized in the implementation of the proposed project which will help reach further HCFC reduction targets to 2020 and beyond. This will include institutional, industrial and public stakeholders.

It is envisioned that the National Ozone Unit will provide a robust interface for continued implementation of HCFC phase-out strategies and action plans for the effective update of Country Programs. The project will also coordinate with the current MLF-funded projects implemented by UNDP in Kazakhstan.

The country's expertise and established consultative networks, involved in previous GEF financed programs would be utilized in the implementation of the proposed project. This will include institutional, industrial and public stakeholders.

It is envisioned that the National Ozone Unit will provide a robust interface for continued implementation of HCFC phase-out strategies and action plans for the effective update of Country Programs. The project will also coordinate with the current MLF-funded projects implemented by UNDP/UNEP in Kyrgyzstan, Armenia, and Moldova, by UNDP in Georgia and by UNIDO in Turkmenistan, and with the GEF/UNDP ongoing projects in Tajikistan, Ukraine and Belarus, and the GEF/UNIDO project in Azerbaijan.

***6. Consistency with National Priorities*. Is the project consistent with the National strategies and plans or reports and assessements under relevant conventions? (yes ☒ /no☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.**

As a part of fulfilling commitments taken by Kazakhstan in connection with ratification of the Vienna Convention and the Montreal Protocol, and their respective amendments, the Government of Kazakhstan has adopted a number of specific regulations aimed at ensuring the institutional process of reducing consumption ODSs (CFCs and HCFCs) is in place. In the Environmental Code a specific Chapter on "Government's control and regulation of national activities in the sphere of Greenhouse and ODS gases' emissions" is included which (in its Article 313) outlines important HCFC control aspects such as:

- ODS emission limits on their maximum permissible emissions, and quotas of annual ODS consumption;
- Specific licensing requirements on ODS and ODS product imports/exoprts, including within the Customs Union's trade agreements with the Russian Federation, Belarus, Armenia and Kyrgyzstan;
- Licensing requirements on servicing of ODS-based RAC equipment, its assembly and commisioning/decomissioning;

From 2012 on, HCFC import quotas were confirmed by the Ministry of Energy and currently a decree on the quota limits for 2016-2019 period is in force, which is line with relevant adopted decisions with respect to Kazakhstan's situation as adopted by the Meeting of Parties of the Montreal Protocol.

The proposed project also corresponds to the aims of the national "Concept on Green Economy" adopted in Kazakhstan, in specific reference to low GWP technological requirements for the country.

***7. Knowledge Management.* Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.**

An enhanced knowledge base will be developed in terms of information management and technical capacity to sustain planning, decision making and program execution related to the HCFC phase-out in Kazakhstan, as well as engagement in effective information exchange nationally and globally.

The proposed project intends to share the results and knowledge both nationally as well as with other project partners. The knowledge and lessons learned will also be disseminated through participation in regional meeting arranged by UNEP and other regional for a as found appropriate.

As the project progresses and implementation results become tangible and demonstrable, the knowledge management system will be used to develop benchmarks for typical installations and replacement technologies, lists of recommended interventions and technologies and associated savings; and fully developed case-studies for general circulation and promotional activities.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT[11] OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Gani Sadibekov	Vice-Minister GEF Operational Focal Point	**MINISTRY OF ENERGY OF THE REPUBLIC OF KAZAKHSTAN**	**03/03/2017**

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies[12] and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date *(MM/dd/yyyy)*	Project Contact Person	Telephone	Email
Adriana Dinu, Executive Coordinator, UNDP-Global Environmental Finance		03/03/2017	Xiaofang Zhou, Director, MPU-Chemicals	00-1-212-906-5782	xiaofang.zhou@undp.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

[11] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

[12] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF and CBIT