REQUEST FOR CEO ENDORSEMENT[1]

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: PROJECT INFORMATION

Project Title: Phase out of CFC consumption in the manufacture of aerosol metered-dose inhalers (MDIs) in the Russian Federation			
Country(ies):	The Russian Federation	GEF Project ID:[2]	4387
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	XX/RUS/11/X01
Other Executing Partner(s):	Ministry of Natural Resources and Environment	Submission Date:	2011-09-15
GEF Focal Area (s):	Ozone Depletion Substances	Project Duration(Months)	24
Name of Parent Program (if applicable): For SFM/REDD+ ☐		Agency Fee ($):	255,000

A. FOCAL AREA STRATEGY FRAMEWORK[3]

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount ($)	Cofinancing ($)
(select) CHEM-2	Outcome 2.2 ODS phased out and their releases reduced in a sustainable manner. Indicator 2.2.1 Amount of CFCs phased out from consumption or production, measured as ODP tons against baseline.	Output 2.2.1 CFCs phase out plans under development and implementation. Indicator 2.2.1.1 Number of countries with CFCs phase out plans under development and implementation.	(select)	2,500,000	5,500,000
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
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(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
		Subtotal		2,500,000	5,500,000
		Project management cost[4]	GEF TF	50,000	100,000
		Total project costs		2,550,000	5,600,000

B. PROJECT FRAMEWORK

[1] It is important to consult the GEF Preparation Guidelines when completing this template
[2] Project ID number will be assigned by GEFSEC.
[3] Refer to the Focal Area/LDCF/SCCF Results Framework when filling up the table in item A.
[4] This is the cost associated with the unit executing the project on the ground and could be financed out of trust fund or cofinancing sources.

Project Objective: The objectives of this project are (a) through appropriate technology transfer, to phase-out the consumption of 212 ODP tones of CFC-11 and CFC-12 (2010) used in the manufacture of Aerosol Metered-Dose Inhalers (MDIs) in the Russian Federation (RF) and (b) to reduce future GHG emissions by approx. 1.7 MMT CO2 t/equivalent, by introducing, through technology transfer a lower GHG propellant. The two MDI companies in the RF will require technology transfer from one, or more, established multinational enterprises that have experience in the development and manufacture of MDIs using CFC-free technologies, and who have the right to transfer such technology to the Russian Federation (RF) without infringement of any intellectual property related to either the drug molecule, the method of formulation, the design of the metering valve or actuator or the filling process. This proposal addresses the requirements for conversion of a manufacturing facility currently using CFCs to manufacture MDIs with CFC-free propellant.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount ($)	Confirmed Cofinancing ($)
1. Institutional and regulatory capacity building for ODS phase out in the RF for converting CFC-based MDI production to HFA	TA	1.1. Policies reviewed and CFC legislation improved, if necessary. 1.2. ODS and CFC import/export legislation updated to reflect final phase out of CFCs in MDIs.	1.1 Analysis of the level of residual demand of CFC after 2010 and by looking at the stock of ODS in the Russian Federation; 1.2. Training of 50 customs officers and procurement of ODS control equipment for customs enforcement; 1.3. MDI producers phase out commitments agreed; 1.4. Awareness in the form of information and educational material and information management systems upgraded; 1.5 At least two centralized training symposia to train representatives from the Ministry of Health; 1.6. Policies reviewed; relevant laws and regulations in place.	GEFTF	50,000	100,000
2. Phase out of 212 MT of CFC consumption in the Medical Aerosol (MDI) sector at two Russian enterprises	Inv	2.1. To meet Montreal Protocol phase out obligations (Phase out of 212 ODP tonnes of CFC (CFC-11 and CFC-12)) 2.2.Technical assessment of	2.1.Aerosol filling line/s with two dispensers in double stage filling process at Federal State Enterprise «MosChimPharmPreparaty» and line/s with two indexing machines in	GEFTF	2,300,000	4,700,000

		production capacity within the MDI sector	single stage filling process at Altayvitaminy installed; 2.2. Guidance of the Russian experts on the MasterValidity Plan (MVP) including Installation Qualification (IQ), Operational Qualification (OQ), Performance Qualification (PQ of new equipment provided; 2.3. Overall project management incorporating both the elements of MDI design and development and supervision of equipment installation rendered; 2.4. Assistance from technology provider (new MDI-Salbutamol production, engineering services, equipment and instrumentation, etc.) required for conduction of three pilot batches made; 2.5. Three experimental batches of a new MDI (1500 pcs) together with a reference placebo batch (minimum placebo 500 MDIs) carried out at the two enterprises; 2.6. Pilot production of CFC free MDI Salbutamol 200 dose, 100 µg/ dose label claim of Salbutamol Base at Altayvitminy and Salbutamol Sulphate at Moschimpharmpreparat y carried out and terminal phase out of			

			CFC consumption in the MDI sector and reduction of GHG emissions achieved.			
3.Technology transfer for developing a new HFA-based MDI	Inv	3.1 Design and development of new MDI products that meet national and internationals standards	3.1.Design and development of a new HFA-based MDI-Salbutamol made by a technology provider including the drug formula, selection of MDI materials and components and transfer of all possible know-how needed to start manufacturing and testing of new MDIs; 3.2. All materials and primary packaging components (valve, canister and actuator), of the MDI product excluding the secondary packaging components (carton, package insert etc.) selected; 3.3 Final conversion of CFC based MDI Salbutamol 200 dose, 100 µg/ dose label claim of Salbutamol Base (equivalent) (may be formulated using Salbutamol Sulphate and/ or specified in an acceptable manner as the Dose ex mouthpiece achieved.	GEFTF	100,000	500,000
4. Registration of new MDI products by the Ministry of Health	TA	4.1 New MDI products registered at the Ministry of Health for use	4.1. 2 or 3 key events [pilot production, stability tests of new MDI] in the Working Plans of the two companies; 4.2. 2 or 3 key events [testing results from the local labs, MDI registration] in the Working Plans of Rossdravndazor; 4.3. Clinical tests and final registration of	GEFTF	50,000	200,000

			new MDI products.			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
			Subtotal		2,500,000	5,500,000
			Project management Cost[5]	GEFTF	50,000	100,000
			Total project costs		2550000	5600000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME ($)

Sources of Co-financing	**Name of Co-financier (source)**	**Type of Cofinancing**	**Cofinancing Amount** ($)
GEF Agency	UNIDO	Grant	50,000
GEF Agency	UNIDO	In-Kind	50,000
Private Sector	Two pharamceutical companies in the RF: MosChimPharmPreparaty, Moscow and Altayvitaminy Ltd., Biysk, Altay region	In-Kind	5,500,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Co-financing			5,600,000

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY[1]

GEF Agency	**Type of Trust Fund**	**Focal Area**	**Country Name/ Global**	**(in $)**		
				Grant Amount (a)	**Agency Fee** (b)[2]	**Total** c=a+b
UNIDO	GEF TF	Ozone Depletion Substances	The Russian Federation	2,550,000	255,000	2,805,000
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				2,550,000	255,000	2,805,000

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

[5] Same as footnote #3.

Component	Estimated Person Weeks	Grant Amount ($)	Cofinancing ($)	Project Total ($)
Local consultants*	4,480.00		1,120,000	1,120,000
International consultants*	60.00	150,000	0	150,000
Total		150,000	1,120,000	1,270,000

* Details to be provided in Annex C.

F. PROJECT MANAGEMENT COST

Cost Items	Total Estimated Person Weeks/Months	Grant Amount ($)	Co-financing ($)	Project Total ($)
Local consultants*	360.00		90,000	90,000
International consultants*	16.00	40,000		40,000
Office facilities, equipment, vehicles and communications*				0
Travel*		10,000	10,000	20,000
Others**	Specify "Others" (1)			0
	Specify "Others" (2)			0
Total		50,000	100,000	150,000

* Details to be provided in Annex C. ** For others, to be clearly specified by overwriting fields *(1) and *(2).

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? No

(If non-grant instruments are used, provide in Annex E an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund).

H. DESCRIBE THE BUDGETED M &E PLAN:

The Ministry of Natural Resources and Environment is responsible for the total CFC phase out in the RF and it has been involved in execution of the ODS Phase-out Programme of the RF. The Ministry of Health and Population is on-line Ministry to which the two Russian MDI enterprises are subordinated. This Ministry will be responsible for the final conversion of CFC-based MDI production to CFC-free MDI production at the two Russian enterprises, subject of this project, and for all necessary arrangements associated with control and monitoring of CFC-free MDI imports into the country.

A Project Steering Committee (PSC) will be formed at the inception stage of the project, the PSC, which will meet twice a year and be responsible for the overall strategic and policy guidance of the Project. A detailed schedule of project reviews will be developed by the project management team, in consultation with project implementation partners and representatives of the participating communities (for example, Russian Lung Association, etc.), during the early stages of project initiation. Such a schedule will include tentative timeframes for PSC meetings, and monitoring and evaluation of the Project activities by the PSC.

In order to use efficiently funds, it is suggested that this UNIDO CFC Phase out Project in the MDI sector can be also monitored by the Project Monitoring Unit (PMU) established for the HCFC Phase out Project in the Russian Federation, especially in organizing annual PSC meetings. The UNIDO office in Moscow will be a coordinator of the whole GEF programme in the RF including the monitoring this project implementation.

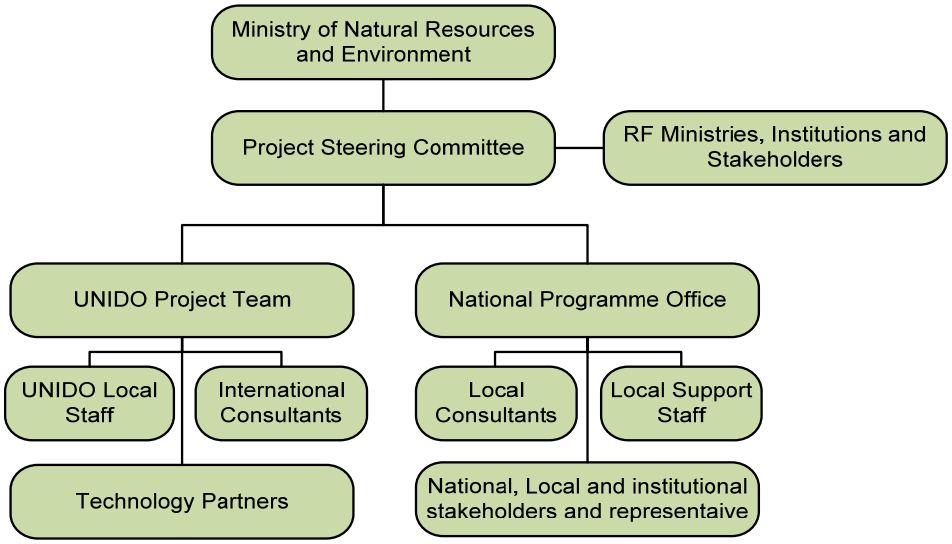


Figure13. Project management structure

The project management structure is given in Figure 13 above. The project will be subject to GEF Monitoring and Evaluation rules and practices of the GEF and UNIDO. The project management team and the UNIDO focal point will develop criteria for participatory monitoring of the project activities. Appropriate participatory mechanism and methodology for performance monitoring and evaluation will be established at the outset of the project. Monitoring &Evaluation activities will be based on the Logical Framework Matrix and the funds will be allocated for terminal evaluation in the amount of US$ 50,000.

The overall M&E format for the project will follow the instructions and guidelines of the GEF and UNIDO. In accordance with the GEF requirements, Quarterly Progress Reports will also be provided to GEF during the course of the project implementation. The M&E planned activities are presented in table below.

M&E Activities		
Type of M&E activity	Responsible Parties	Time frame
Inception Report	Project Management Team	No later that 4 months after project starts
Steering Committee Meetings	NPM UNIDO PM	Subsequently twice a year
Quarterly progress reports	UNIDO PM	Every three months
APR and PIR	NPM	Annually
Mid-term Review	UNIDO PM	At the mid-point of project implementation or after one year of the start of the project
Terminal Project Evaluation and Report	Project Management Team UNIDO PM and M&E evaluation group	At the end of project implementation
Lessons learned	Project Management Team	At the end of project implementation
Visits to field sites	UNIDO PM Government representatives (UNIDO staff travel costs to be charged to agency fees)	Minimum yearly

Project Inception Report

The inception report prepared by the project team will take place no later than four months after the project start-up. The report will include a detailed annual work plan with clear indicators and corresponding means of verification for the first year of the project, fine tuning of Terms of Reference (TOR) for project professionals, TOR for sub-contractual services, progress to date on project establishment and start up activities, amendments to project activities/approaches, if any, and it will be submitted to GEF.

The Annual Project Report /Project Implementation Report

The Annual Project Report /Project Implementation Report in a prescribed format will be prepared and submitted annually by the project management as per guidelines set for the same. The Annual Project Report /Project Implementation Report will inform the annual review meeting (ARM) of the project, which will be held in conjunction with the annual Steering Committee meetings and should therefore be circulated to PSC participants well in advance. The final Annual Project Report /Project Implementation Report will be submitted to GEF as per standard procedures.

The independent mid-term project evaluation would focus on preparation of the MDI Salbutamol production at the two Russian enterprises with a new propellant HFC 134a including the technology transfer for the new product, equipment procurement and its installation. The final evaluation will focus on similar issues as the mid-term evaluation but will also look at early signs of potential impact and sustainability of results, including the contribution of the 6 months stability tests and clinical tests of the new MDI-Salbutamol product and its registration at the health authorities concerned.
Recommendations for follow-up activities would be included in each of these review processes.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. The GEF focal area/LDCF/SCCF strategies:

The proposed project is consistent with GEF FA Objective CHEM-2: "Phase out of Ozone Depleting Substances (ODS)", Outcome 2.2 "Ozone Depleting Substances", Output 2.2.1 is 212 MT of CFCs. It is an annual amount of CFC to be phased out at the two Russian MDI producers. The planned CFC consumption for 2011 is 248 MT as an annual quota already granted to the Russian Federation as Essential Use Nomination (EUN) by the MOP.

A.1.2. For projects funded from LDCF/SCCF: the ldcf/sccf eligibility criteria and priorities:

N/A

A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

National Plan of Action to phase out the use of Ozone Depleting Substances in the manufacture of Metered Dose Inhalers in the Russian Federation by the Ministry of Natural Resources and Environment of the Russian Federation, 2004. The total phase of CFCs in the MDI sector is to be achieved by end of 2012.

The project is based on GEF-5 Strategic programme: Phasing out CFCs and Strengthening Capacities and Institutions.

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

A position paper summarizing the Russian Country Program and phase-out strategy has been prepared by the Ministry of Environmental Protection and Natural Resources (MEPNR) and was submitted to the May 1995 meeting of the Parties to the Montreal Protocol (the Parties). This Country Program has since been formally adopted by the Government with the issuing of a Government Resolution that provides a legal basis for its implementation. While considered in compliance with the control measures of the MP in 1995, Russia has acknowledged that it will be in a non-compliance position beginning in 1996 and has conveyed its commitment to ODS phase-out as set out in the Country program to the Secretariat of the Vienna Convention and Montreal Protocol. It has also resumed formal reporting of ODS consumption, production and trade as required under its obligations to the MP. At the November 1995 meeting of the Parties, Russia agreed to provide additional information relating to the country's political commitment, implementation progress, and enforcement measures, particularly in regard to trade regulations. An agreement was also reached between Russia and the Parties on issues associated with exports. Russia's export of ODS to other supply dependent countries

in the FSU after January, 1996 would be accommodated on a transitional basis, conditional on it also taking the necessary action to ensure no re-export takes place from these countries. Russia has agreed to comply fully with the overall export ban requirements of the MP to other countries.

The Russian Federation, in its capacity as the legal successor to the former USSR in respect of the international obligations flowing from the Vienna Convention on Protection of the Ozone Layer (1985), the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) and the London Amendment and adjustments to the Montreal Protocol (1990), was under an obligation to phase out the production of ozone-depleting substances (ODS) by 1 January 1996 and also to fulfill a number of other obligations associated with the phase-out of ODS in the consumption sector.

In compliance with the decisions adopted by the Government of the Russian Federation in 1999 and 2000, the production of substances listed in Annexes A and B to the Montreal Protocol (including CFC-11 and CFC-12) was fully phased out on 20 December 2000. However, the Russian Federation has required CFCs for the production of metered-dose inhalers (MDIs) to meet patient demand. Technical assistance is still required to convert the production of CFC metered-dose inhalers (MDIs) to ozone-friendly HFC -134a at the two local MDI enterprises. According to the National Plan of Action to Phase-out of Ozone -Depleting Substances in the Manufacture of MDIs over the Period 2005-2007 (2004) the total phase-out of CFCs in the MDI sector in the Russian Federation as planned to be achieved in 2008. However, this task has not yet been fulfilled because funds were not available at the time to assist in this conversion.

A project entitled "Russia Ozone Depleting Substance Consumption Phase-out Project" was established in 1996 with a total budget estimated at US$ 104 million, comprising US$ 60 million grant from Global Environmental Facility (GEF) to be supplemented by US$ 44.3 million from enterprise contribution.

The origin of the Project was the international community's recognition of the difficulty that the Countries with Economies in Transition (CEITs) in Eastern Europe and the Former Soviet Union (FSU) would have in meeting their obligations under the 1990 London Amendment to the Montreal Protocol (MP), namely the elimination of Annex A and B Ozone Depleting Substances (ODS) consumption and production by December 31, 2000. As non-article 5 countries under the MP they were not eligible for international assistance available under the Montreal Protocol Multilateral Fund (MPF). As a consequence, the Global Environmental Facility (GEF) formally opened an Ozone Focal Area in 1995 for CEITs, who had Country Programs endorsed by the Parties to the MP and had ratified the London Amendment. The World Bank (WB) was a key participant in the development of the Ozone Focal Area starting in 1992, which coincided with an initial project concept being developed for assistance to the Russian Federation. However, the preparation of an actual project could not be completed until GEF Operational Strategy including the Ozone Focal Area was adopted and bilateral programs supporting the Country Program development were completed.

At a general level, the Project's original objectives were adequately defined what the Project was intended to accomplish within the context of international and national priorities at the time. However, unlike GEF initiatives in other CEITs, this Project was not intended to be a comprehensive country phase out in that it was initially limited to phase out investment in only two high consumption sectors (aerosol and refrigeration equipment). As a result of the implementation of the ODS phase out programme CFC production ceased in 2000 in the Russian Federation and further import of Essential-Use CFCs for MDI production is being now regulated on the basis of the annual quota from the Ministry of Natural Resources (MNR) or supplied from the stockpile. Russia has been importing ODSs from China and India since 2003.

Unfortunately, the CFC phase out programme in the Russian Federation had not included the technical assistance in phasing out CFCs in the production of Metered-dose Inhalers (MDIs) in the

country. MDIs are being now produced by the two Russian enterprises, i.e. «Altayvitaminy Ltd. », Biysk, Altay region and Federal State Enterprise «MosChimPharmPreparaty», Moscow. These two MDI producers are still consuming annually about 212 MT of CFC-11 (solvent) and CFC-12 (propellant) (2010) needed for MDI production of the asthma rescue medicine Salbutamol. This project is consistent with the country's priorities and is designed to terminal phase out of CFCs in the RF by end of 2012.

Decision XXI/4(8) of the Meeting of the Parties (MOP) requested the Technology and Economic Assessment Panel (TEAP) and its Medical Technical Options Committee (MTOC) to "organize and undertake a mission of experts to examine the technical, economic and administrative issues affecting the transition from CFC metered dose inhalers to CFC-free alternatives in the Russian Federation, and to report the results of this mission to the meeting of the thirtieth Open-ended Working Group. The recommendation of the TEAP was that financial support is the main priority and GEF funding should be investigated urgently as the first option since finance governs the success of the transition in the Russian Federation. Based on the TEAP/MTOC mission, the Parties could expect that 18-24 months would be the overall time for conversion of the two enterprises once funding is approved by the implementing agency.

Expected project outcomes

The project includes four major outcomes:

1. Technical assistance in converting a CFC-based MDI production to HFA –based MDI
2. Phase out of CFC consumption -212 MT (2010) in the Medical aerosol (MDI) sector
3. Technology transfer in developing a new HFA –based MDI
4. New developed MDIs registered at the Ministry of Health and Social Development.

Component 1. Institutional Capacity for Converting CFC-based MDI Production to HFA

The project aims at establishing the relevant policy and legal framework and strengthening the institutional capacities for sustainabe CFC phase out, through development and implementation of training, awareness and capacity-building activities for key Government departments, legislators, decision-makers and other institutional stakeholders. Special attention will be given to the harmonisation of regulations in the Russian Federation with EC regulations, GMP as well as, the up-grading of ODS import/export legislation and ODS destruction.

The technical capacity assistance component of the Project has been allocated a total funding of US$ 0.1 million. Efforts should be made jointly by the Ministry of Health and Social Development (MOH) of the RF, healthcare providers, physicians, pharmacists and nursing staff and all sectors linked to Health. All these parties implementation support for the Project's investment activities. It should be understood that the transition is not optional and that, over the next few years, all patients currently using CFC products will have to change to CFC-free devices. They should be prepared to help patients to understand the reasons for the change and assist them during the transition period of two years. Patients should be reassured that:

- The new inhalers are as safe and as effective as the previous ones;
- CFCs are damaging to the global environment but not damaging to the health of the individual;
- Although they will experience differences in appearance, dosage and taste, these do not imply any reduction in the effectiveness of the medicines.

It is clear from other transition programs that they will have a pivotal role to play in the success of the transition strategy. It should be considered that either way (Domestic manufacture vs Import only strategy) there will be the need to manage patient perceptions in the transition from CFC MDIs. Asthma and/or COPD patients, as with any patient with a chronic disease, are deeply attached to any medication that proves to be effective in controlling his/her conditions. In Russia physicians and asthma/COPD related associations treat patients based on scientific facts and international guidelines as they believe. As groups of specialists and physicians are broadly using and supporting international guidelines for diagnosis and treatment of asthma and COPD as mentioned earlier, the need of a national guideline/program for asthma and COPD is strongly felt. The education and sensitising campaign for the introduction of new products (HFA MDIs) will therefore be both necessary and challenging in this situation. Considering the above-mentioned elements the implementation of an education programme involving health professionals, patients, their families and the community from the very beginning becomes a priority, led by the Ministry of Health.

Medical studies show that asthma education reduces by 50% asthma severe episodes and substantially improves patient's quality of life. The Ministry of Health strongly believe that an education campaign will be the core of a transition strategy. In this sense, in Russia with a population of about 150 million and a good health system with pro-active involvement and leadership from the MoH, this issue has an important role. At a global level, GINA (Global Initiative for Asthma) in its Programme Review of 2002 focused its attention on the education of the patient and his/her family as one of the objectives for controlling asthma.

In this sense, there should be cooperation between the professionals involved on a local or regional basis to discuss how the transition is to be implemented. Contacts and exchange of information with Associations of "GPs", "Asthma and Allergy", "Lung Disease", the Russian Federal Pulmonology Centre, pharmaceutical and other professional associations should be established to ensure that all professional healthcare providers receive adequate and correct information regarding the new products and that; patients receive adequate information, both orally and in writing. This is essential to build the confidence of patients in the new products. Choice of medication should be made by the physician but the patient expects an explanation for such choice of a specific medicine, particularly when a change from a familiar product is involved. Several surveys have shown that when a change from CFC inhalers to alternatives is recommended by the physician and adequate information is given, most patients happily agree to the proposal.

Efforts should be made jointly by the Ministry of Health and Social Development (MOH), healthcare providers, physicians, pharmacists and nursing staff and all sectors linked to health. All these parties should understand that the transition is not optional and that, over the next few years, all patients currently using CFC products will have to change to CFC-free devices. They should be prepared to help patients to understand the reasons for the change and assist them during the transition.

Appropriate visual and written educational materials should be developed to foster this process and media should be used for their dissemination. Mass media can and must play a fundamental role in raising awareness. In Russia, easy and broad access to mass media is available to public. The relationship with educational authorities has proved to be highly positive for the development of health programmes. Primary and secondary schools are natural centres for raising awareness and disseminating information, both for children and adolescents and their families. Therefore the education plan should consider a close relationship with educational institutions.

The pharmaceutical industry also plays a significant role in a successful implementation of the programme, not only by providing information through educational material and supporting scientific events intended for physicians, but also with dissemination of material for the general public. Organizations involved in the transition will be approached early in the process to determine the type of support they will be able to provide to the initiatives. It is expected that domestic manufacturer and

will be the primary sources of funding of these initiatives. Activities will have to be scaled according to the funds available.

The key elements of this transition strategy are as follows:

a) To ensure that the health and safety of patients during the transition will be safeguarded.
b) To ensure that importers of CFC containing MDIs fully realize their obligations to withdraw such products from the Russian market, in a timely manner. The withdrawal to be conducted in a manner such as to manage the primary objectives of the transition strategy;
c) To encourage importers of inhalation products in to the Russian Federation to support the patient awareness/ education programme, either directly or indirectly.
d) To develop an educational training package to facilitate communication with patients and allow the roll out of training to a local level;
e) To plan and execute at least two centralized training symposia to train representatives from local authorities and healthcare providers, in the use and onward training of the educational packages;
f) To oversee the roll out of training initiatives to ensure that individuals in direct contact with patients receive both training and adequate supporting materials to support patient awareness;
g) To generate suitable awareness enhancing media (posters, leaflets etc.) for location in environments to support patient awareness (hospitals, pharmacies, clinics, surgeries etc.);
h) To actively promote via appropriate media (advertising, conferences, interviews etc.) awareness of the implications of the transition;
i) To ensure that the nomination, approvals and licensing systems will be operated with efficiency, consistency and transparency.

In approval of new HFA MDIs in the RF either domestically manufactured or imported the MOH must seek to ensure that:

- Any new CFC free inhaler is at least as safe as the previous one;
- Any new CFC free inhaler is as effective as the previous inhaler it is intended to replace;
- There should be sufficient quantities of the alternative(s) available to assure an uninterrupted supply of medication. This is a key consideration and needs to consider the geography of the RF and distribution issues. Many imported MDIs are only available in a few pharmacies in Moscow and other larger cities;
- Post-marketing surveillance data must confirm the safety of the alternative product(s);
- There should be sufficient types of alternatives available to meet the needs of different patient sub-groups.

Manufacturers of the alternative(s) will be requested to confirm that they can adequately supply the whole RF market and to provide information on the production capacity of the manufacturing facilities and on the measures they intend to put in place to ensure the supply of the RF market.

The MOH with the support of external agencies where possible will develop an integrated package of materials, (printed, recorded etc.) for the purpose of training primary, secondary and tertiary training staff. Where possible importers of inhalation products to the RF will be contacted directly to review what current and future resources they can make available. It is not practical to disseminate the key messages to all individuals with direct patient interaction, in a single communication event. It is more practical to train selected individuals and provide them with materials to; in turn train key personnel at a more regional level. A number of top level training symposia need to be planned, one for MOH representatives from throughout the RF.

Support needs to be given at a local level to facilitate workshops, symposia, printed material, to ensure that the individuals trained in the primary sessions can distribute the key messages to all primary patient contacts. For the following years several local and regional workshops should be planned for information sharing, and elaboration and discussion of the guidelines to be approved, where the transition to CFC-free MDIs will be included in the National Programme of Asthma and COPD. Also where appropriate supporting materials for direct patient awareness (posters, advertisements, leaflets etc.) need to be produced and distributed via doctors and pharmacists.

All importers applicable will be formally contacted in writing by MOH and given details of the phase out programme for CFC MDIs and advised of their obligations to remove any such products from the Russian market. Encourage importers of inhalation products to support the patient awareness/ education program. Importers of inhalation products will be contacted directly to review what current and future resources they can make available.

Component 2. Phase out of CFC Consumption in the Medical Aerosol (MDI) Sector

Ideally the conversion of CFC MDIs to a CFC-free formulation would require zero-ODP replacements for both CFC-11 and CFC-12 that possess similar physical, chemical, and toxicological properties. However, replacements with such properties are not available. The CFC MDI conversion process led by the established multinational pharmaceutical companies has spawned new formulations, new manufacturing processes, as well as non-aerosol dry powder inhalers (DPIs). Many of these products are the subject of intellectual property that covers either the drug molecule, the method of formulation, the device (in the case of DPI) or the filling process.

Both HFC-134a and HFC-227ea have been developed as zero-ODP replacements for CFC-12 to serve as the propellant function in CFC-free MDIs, and in some products also as the CFC-11 replacement. However, differences in the physical (e.g. boiling point) and chemical (e.g. solubility) properties of these substances and the CFCs they replace, require changes to the manufacturing process and equipment, as well as to seal materials used in both MDI valves and manufacturing equipment. HFC-134a and HFC-227ea, again manufactured to recognized pharmaceutical standards, are commercially available and are now widely used throughout non-Article 5 countries.

The project deals with the design, manufacture, shipping, installation and commissioning of dedicated HFA MDI filling lines and associated equipment, vessels, pumps, etc.:

a) one filling line with two filling dispensers in a double stage filling process at MosChimPharmPreparaty , and
b) one filling line with two filling dispensers in a single stage filling process at Altayvitaminy in order to achieve the phase out of 212 ODP tones CFC (CFC-11 and CFC-12) at the two enterprises.

This represents a total investment in equipment per site of US$1,706,375 for Altayvitaminy and US$ 1,374,000 for Moschimpharmpreparaty. Therefore, the investment in new equipment required from both sites will be about of US$ 3.0 million. The cost of equipment is preliminary and based on the offer from Pamasol, Switzerland dated May 2011. This cost is due to the fluctuation of the exchange rate of Swiss CHF and US Dollar. The total cost of equipment for Altayvitaminy (single line with two filling dispensers in single stage filling) is higher than the equipment for Moschimpharmpreparaty, which selected the double stage filling equipment. The single stage filling process requires the use of a high pressure vessel for mixture IPA and propellant, which is not allowed to be in use in Moschimpharmpreparaty by Fire Protection Department of Moscow city, since the factory buildings are situated in the center of Moscow city.

The amount of US$ 2.3 million of the GEF is planned to be allocated for the procurement of project equipment, this is US$ 1.15 million for each enterprise and the difference in equipment cost will be borne by each enterprise as agreed. An international tender of UNIDO for equipment procurement will take place after project approval (3-6 months after project proposal submission to GEF) and the new cost of equipment is expected. Therefore, both enterprises may pay even higher equipment cost, subject of the value of Euro or CHF to US Dollar at the moment of the international tender.

Note the above costs do not include the provision of qualification documentation data and support (IQ,OQ,PQ) from the equipment manufacturer. It will fall to the beneficiaries to develop their own equipment and process validation protocols etc. Technical assistance will be provided by equipment supplier during the testing and installation of the equipment. Guidance of the Russian experts on the Installation Qualification (IQ), Operational Qualification (OQ), Performance Qualification (PQ) of new equipment by equipment supplier will be also rendered. The program management of the overall project incorporating both the elements of MDI development and supervision of equipment installation will be rendered by a selected technology provider as well as technical assistance (technology transfer, engineering services, equipment and instrumentation, etc.) required for conversion of to the new HFA propellant.

Component 3. Technology Transfer

It is clear from a review of the companies'technical capabilities in respect of formulation development and understanding of the increasing regulatory demands fro the Ministry of Health, that both companies require significant technical support in the development and successful registration and industrialization of HFA MDIs. Failure to obtain this support will expose the programme to unacceptably high levels of risk of failure.

Although the enterprises have skills and capabilities in the manufacture of CFC MDIs, they have no capability or experience in the development of HFA MDIs. Therefore to implement the selected replacement technologies, both Altayvitaminy and Moschimpharmpreparaty will require technology transfer from one, or more, established multinational enterprises that have experience in the formulation and manufacture of CFC-Free MDIs using alternative technologies and that have the right to transfer such technology without infringement of any intellectual property related to either the drug molecule, the method of formulation, the design of the metering valve or actuator, or the filling process.

It must be recognized that without such transfer of technology it would likely take the local enterprises between 6-10 years to develop and obtain approval for CFC-free replacements for their current CFC MDIs. This timescale will likely result in the RF's non-compliance with its 2010 CFC phase out of CFC use under the Montreal Protocol, but more seriously, it is likely to impact the production and availability of CFC MDIs in the RF, with resultant adverse health consequences for the large numbers of the Russian population that suffer from asthma, chronic obstructive pulmonary disease (COPD), and other lung diseases characterized by obstruction of airflow and shortness of breath.

The both Russian enterprises agreed to finance the development and formulation of the new MDI through an independent technology provider. The cost estimate of this component would be around US$ 500,000. For bidding local pharmaceutical laboratories and research pharmaceutical centers would be invited. The task will be the re-formulation of a single re-formulated HFA Salbutamol data package. This bidding is to be immediately started with the beginning of the project implementation. The technical review of offers may take place in three months time. An international consultant will be invited in reviewing the results of technical tender.

Component 4. Registration

Registration of the drugs in the Russian Federation is fully responsibility of Ministry of Health and Social Development (MOH) through its agency called Rossdravnadzor.

The process of registration is consists of several steps including:

- Completion of all applicable forms.
- Submission of a suitable registration data package.
- Generation of suitable stability data (ICH Q1F Stability Data Package for Registration Applications in Climatic Zones III), on product that is representative of production.
- Bio-equivalence studies (if appropriate).
- Clinical trials (data if appropriate)
- Supporting samples.

Historically this process may have taken nearly 2 years to get approval for registration, from initial submission. As with many other international regulatory bodies Rossdravnadzor have implemented a streamlining programme. The initial objective is to reduce the approval times to around 6 months from full submission. Bearing in mind the international nature of this project, Rossdravnadzor has already promised to register this project within 3-6 months. Therefore, as soon as the first pilot production of the three batches is completed, all the documents and samples will be given to Rossdravnadsor for registration before the start of mass production at the two Russian MDI enterprises.

After successful completion of the 6 months test of the new MDI together with the selected technology provider using new machinery to be purchased of UNIDO and review of all the testing results by the international consultant, the project authorizes of each enterprise will submit to Rossdravnadzor the above lest of documents for the MDI product registration. To expedite the process of registration assistance from UNIDO and Ministry of Health may be needed. If the results of tests are accepted by the Rossdravnadzor, the MDI product is registered, if not, a new plan of action will be needed to eliminate any drawbacks. An additional testing of the MDI can be required. The process of registration will take place after completion of all project activities and conduction of 6 months stability tests at the end of the project.

In October 2005 the technical committee of Rossdravnadzor finalized a decision to give Russian companies using CFC gas in pharmaceutical/ medical products a permission period until 2013 to replace the use of CFC with another substance. Any new propellant used must undergo for toxicity and safety tests, or have suitable data available from the suppliers to demonstrate its safety. Before CFC-free MDIs can be prescribed to patients they need to receive marketing authorization from Rossdravnadzor. Such authorization is only granted when the competent authority is satisfied that the proposed alternative product is safe and effective.

The Government will review the license applications of non-CFC alternatives as fast as possible and if a non-CFC alternative contains the same dosage of the same drug substance, under the same administration route as the effective CFC MDI, then specified parts of the documents required for the application may be omitted. Data and documents originating in foreign countries can also be used for license application.

On the basis of preliminary screening tests, the aerosol producer shall determine the substitution route according to the specific conditions (such as the properties and cost of alternative product), and apply for approval of modification of the medical excipient according to the Law of Drug Administration of the RF, the Regulations on Drug Registration, and the use requirement of the substitute. According to the Regulations on Drug Registration, different sets of technical documents shall be submitted

corresponding to the following two cases of modification of medicinal adjuvant:

a) the excipient was already approved in the RF for medical applications;
b) new medicinal excipient to be used first time in the RF (to register as new medicinal adjuvant, and determine the application type according to the actual conditions of the aerosol producers).

In accordance with the relevant regulations, each manufacturer has to make registration and get its license for their new MDI aerosol product based on its formulation and production process, though some products may also be produced by multiple manufacturers at Rossdravnadzor.

The project will be sustainable since it merges ecological (elimination of the CFC use in the RF) and economical aspects into one system. The both enterprises will be economically successful after the project implementation. The cost of production of a MDI product would not be changed.

Phase out of CFC Consumption in the MDI Sector

As it was said above a total investment in equipment per site as per preliminary offer from an equipment supplier is US $1,706,375 for Altayvitaminy and US$ 1,374,000 for Moschimpharmpreparaty and the investment in new equipment required from both enterprises in the region of US$ 3.0 million. The amount of US$ 2.3 million of the GEF is planned to be allocated for the procurement of project equipment, it is US$ 1.15 million for each enterprise and the difference in equipment cost need to be borne by each enterprise. An international tender of UNIDO for equipment procurement will take place after project approval (3-6 months after project proposal submission to GEF) and the new cost of equipment is expected. Therefore, both enterprises may pay even higher equipment cost, subject of the value of Euro or CHF to US Dollar at the moment of the international tender.

There is a significant investment required on the part of both the beneficiaries. Both companies have prepared an anticipated investment profile. This identifies that the counterparts (Altayvitaminy and Moschimpharmpreparaty) funding as agreed early will be in the region of US$ 5.6 million. However, two counterparts' joint additional contribution to the project may be also needed. This amount includes additional and auxiliary equipment and which are required to ensure that the resulting manufacturing operation meets the norms of current Good Manufacturing Practices (not a requirement at the time of commencement of MDI manufacturing, but now a requirement). Although not a task of this project, the two companies have to solve it in the future.

Although the enterprises have skills and capabilities in the manufacture of CFC MDIs, they have no capability or experience in the development of HFA MDIs. Therefore to implement the selected replacement technologies, both Altayvitaminy and Moschimpharmpreparaty will require technology transfer from one, or more, established multinational enterprises that have experience in the formulation and manufacture of CFC-Free MDIs using alternative technologies.

Technology transfer will be provided through the development of suitable replacement HFA MDI and the transfer of all know-how required to manufacture and test same as well as the selection of all materials and primary packaging components (valve, canister and actuator), excluding the secondary packaging components (carton, package insert etc.) including procurement of materials, components etc. for the formulation development and manufacture of up to three pilot batches for each formulation together with a reference placebo batch (minimum placebo 500 MDIs) against contribution from the two companies (US$ 500,000).

Final conversion of CFC based MDI Salbutamol 200 dose, 100 µg/ dose label claim of Salbutamol Base (equivalent) at MosChimPharmPreparaty with a valve from a selected producer, for example VARI, Italy and Salbutamol Sulphate at Altayvitaminy with a similar valve and/ or specified in an acceptable manner as the Dose ex mouthpiece, if agreed will be performed.

Project Milestones

This type of project should have clearly defined and measurable milestones. They are:

- Preparation and completion of the formal Work Plan for the formulation and development of the HFA-MDI product for Altayvitaminy and Moschimpharmpreparaty, to include agreed and signed of product performance specifications, agreed and signed off test protocols and a detailed and signed off project plan.
- Development of the Two Salbutamol HFA-MDI formulations, evidenced by formal signed and accepted test reports demonstrating compliance of the trial formulation batches to the agreed product performance specification, together with a summary report detailing formulation details, manufacturing steps and analytical methods developed.
- Successful completion of the production of batches for each of the HFA formulations evidenced by a summary report capturing the compliance of the product release samples to the agreed product release criteria, also evidence of the successful completion of training of key personnel with respect to formulation and analytical aspects of the formulations.
- Successful completion of the stability and full performance testing of the production batches for each of the HFA formulations evidenced by a summary report capturing the compliance of the products to the agreed stability and performance criteria.
- Submission of registration data to the Russian Health Authorities, as evidenced by the submission of one application for marketing approval of the HFA formulations.
- Approval of one HFA formulated product by Rossdravnadzor for each company including the presentation of a report summarizing the approval.

B. 2. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

The Russian Federation has demonstrated a significant commitment to the elimination of the use of Ozone Depleting Substances (ODS) in a number of industrial sectors. With the assistance of significant grants from the Global Environmental Facility (GEF) CFC manufacture has ceased in Russia and the use of CFC has been dramatically reduced. However the issues associated with the use of CFCs in MDIs were effectively deferred. It became evident that without some intervention in the form of financial assistance, it is most probable that the MDI projects would either continue to slip, or that the enterprises may be placed in a position where they have to consider ceasing manufacture of MDIs, as they are no longer commercially viable or the approved materials (CFCs) are no longer available. A number of reasons for the slippage in the programme for the development of HFAs have been cited, including

- Lack of funding from the procurement of equipment required to develop the new MDI formulations.
- Lack of funding for the procurement of new industrial scale equipment to produce stability batches etc. This equipment will also facilitate the adoption of GMP ways of working with respect to MDI

manufacture.

- Significant personnel changes within the two companies that resulted in the loss of continuity and experience.
- A general lack of experience relating to the demands of developing a new type of a MDI with HFC-134a propellant (an HFA MD).
- Competing priorities for limited resources. The resources in place have commitments to existing production, manufacturing systems improvement e.g. Good Manufacturing Practices (GMP) and product development.

B.3. Describe the socio-economic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF). As a background information, read Mainstreaming Gender at the GEF.":

The Russian Government determines priorities for health care where one of the main goals is the treatment of a group of diseases categorised as socially important, including heart, lung and oncological diseases. MOH determines a list of life-saving drugs that provides the basis for government reimbursed medicines, and makes affordability of medicines very important to the Government. The list is updated annually and includes medicines for treating asthma including some, but not all, MDI products. Asthma patients on a disability, or about 5 million people, are eligible for free medicines from regional authorities.

The accelerated action on CFCs phase out will achieve maximum benefits for the environment, businesses, and individuals; it is an important turning point in the recovery of the ozone layer. It also reduces health risks and leads to using of new technologies that can save the energy and prevent pollution.

Rosszdravnadzor, or the Federal Service of Health Supervision, is the government authority responsible for the control of medical products, including their registration and placement on the market. Rossdravnadzor also regulates the maximum wholesale prices for the medicines on the list of life-saving drugs. Retail mark-ups of life-saving drugs are determined by the regional authorities and limited to 30 percent of the wholesale prices. This does not apply to all asthma drugs because only some are included on the list of life-saving drugs. FSNS is also the project partner responsible for registration of non-CFC MDI Salbutamol.

In August 2008, the Russian Ministry of Industry and Trade announced a new draft strategy for the development of the national pharmaceutical industry, called “Industry Development to 2020”, which focuses on developing the local industry to produce medicines according to international quality standards and increasing patient access to innovative drugs. By 2020, the Ministry wants the market share of locally produced pharmaceuticals to reach 50 percent.

There are two established domestic manufacturers of MDIs, currently operating in Russian Federation. In addition to the locally produced MDIs, a number of inhalation products are imported from multinational companies. The two Russian enterprises supply Salbutamol to the Russian market, only one drug produced by these two local companies, which covered in 2009 79% of the total market. Salbutamol supplied by foreign companies amount to 21%. The both companies have launched in 2009 the experimental batches of Beclamethasone, 99 doses, which could be produced in 2011 onwards. The cost of one can of Salbutamol is US$ 1.5 and this is the lowest cost worldwide. About 10% of Russian population is covered by this product. Primarily two Russian enterprises supply Salbutamol to the Russian market, the balance being supplied by imported product.

The both companies are still using CFCs for MDI production. The cost of CFCs has been expected permanently to go up, especially after 1 January 2010, CFC deadline target and as a result the cost of MDI products would be increasing. The quick conversion of MDI production facilities to the non-CFC MDl production at the both Russian companies would allow these producers to keep prices at affordable level

for low-income population and thus facilitating access to vital medication for poor people in the Russian Federation. Thus, the conversion of the current CFC-based production lines is of strategic importance contributing to the protection of both, environment and population's health, in particular the millions of people suffering under respiratory diseases in Russia. Due to this project 212 ODP MT of CFCs will be eliminated in the MDI sector in the Russian Federation according to the Montreal Protocol Agreement ratified by the Russian Federation.

Global Warming

In addition to Ozone Depletion, CFC propellants are significant Greenhouse gasses. Currently although the domestic manufactured CFC MDIs in the RF are only labeled to deliver 90 doses, they contain a significant amount of propellant. This is due to:

a) The fact that they employ metering valves with a delivered volume of 100µl.
b) The overage in the canisters 30 -35 “puffs” is consistent with industry practice but represents a high percentage as the MDIs are only labelled for 90 doses (as opposed to 200).

For 2010 the amounts of CFC consumed by the two enterprises in the Russian Federation were:

CFC	CFC Consumption tones	
	Moschimpharmpreparaty	Altayvitaminy
CFC-11	21.2	44.24
CFC-12	84.8	61.76

Applying this consumption to the equivalent CO2 emission data known from many sources of information, the equivalent CO2 impact (assuming constant 2010 usage levels) can be determined.

CFC	**CO_{2e}**		**CO_{2e} (actual 2010)**	
	20 Year	**100 year**	**20 Year**	**100 year**
CFC-11	6,730	4,750	440,411	310,840
CFC-12	11,000	10,900	1,612,160	1,597,504
Total			2,052,571	1,908,344

This shows that the manufacture of around 12 million CFC MDIs has a GWP impact (100 year CO_{2E}) of 1.7 Million tonnes. As the HFA formulations considered currently for the RF are based on the use of 50µl valves and contain in the region of 12% v/v ethanol, then the volume of HFA filled per canister is below that of the current CFC products (approximately 13 grams). Further the GWP of HFA 134a is much lower than that of either CFC.

Assuming the same number of MDIs as in the above table (12.00 million), the GWP figures for the proposed HFA MDIs would look like:

CFC	**CO_{2e}**		**CO_{2e} (156 MT as per MDI numbers in 2010)**	
	20 Year	**100 year**	**20 Year**	**100 year**
HFA 134a	3,830	1,430	597,480	223,080
Total			597,480	223,080

This represents a reduction in CO2 equivalent emissions in the RF (100 year CO_{2E}) of 1,685,264 tonnes or around 88%.

The above picture is a conservative model as it is based on a 1:1 replacement of MDIs. However the

current domestic CFC MDI is only labelled to deliver 90 doses. The proposed HFA replacement would be labelled to deliver 200 Doses. If a 1:1 dose replacement model was followed, then this would represents a reduction in CO_2 equivalent emissions in the RF (100 year CO_{2E}) of 2.1 Million tonnes or around 95%. However the reality lies between these two positions, it is probable that not all patients will use their MDI to end of label claim, therefore the equivalence model should lie between the above two positions. With either model considered the reduction in 100 year CO_{2E} emissions is very significant.

The two leading HFA Salbutamol products imported in to the Russian Federation are based on an HFA suspension, which necessitates the use of larger amounts of HFA propellant, a canister with a thicker wall (more Aluminium) and an applied internal coating (requiring baking.)

In addition to the cost savings associated with the use of a 50µl metering valve (as opposed to the current 63µl valve) and the replacement of a proportion of the HFA propellant with ethanol, the mass of HFA (a known Greenhouse gas) emitted to the atmosphere is reduced. Assuming that both the current HFA MDIs and those to be formulated in the future contain 240 actuations (200 labelled and 40 overage industry norm), then for the manufacture of 12,000,000 MDIs per annum, client would use 56 tonnes less HFA, for example if applying V.A.R.I. & Co developed products (valve, canister produced by VARI, Italy). By applying other companies (Bespak, UK, Vallois, France), with their own valves, the results of calculations will be different.

Based on GWP values and lifetimes from 2007 IPCC AR4 p212, HFA 134a has the following GWP impacts:

CFC	**CO_{2e}**		**CO_{2e} (56 MT)**	
	20 Year	**100 year**	**20 Year**	**100 year**
HFA 134a	3,830	1,430	214,480	80,080
Total			214,480	80,080

The canister used in many HFA suspension formulations being imported has a thicker wall and is internally coated. Both of these factors increase the amount of energy (and hence liberation of CO_2). It is possible to make some very basic calculations in this regard.

Additional Aluminum (approximately 25% more per canister), which translates in to 1.26 grams per canister. For a usage of 12,000,000 cans per annum, this translates in to an extra 15 tons of Aluminum. It takes four tones of bauxite to make two tones of alumina, which makes one tone of aluminum, consuming around 15,000 kWh electricity equivalents to around 12 tons of CO_2. Therefore the CO_2 emissions which could be saved, resulting from the use of less aluminum in the canisters is in the region of 180 tonnes. However, it depends on a formulation approach selected by the project. This is not generated in the Russian Federation but is liberated further up the supply chain.

Little data is published on the efficiency of the baking operation related to the application of the internal coating of the canisters. However a conservative estimate would be 5 kWh per 1,000 canisters. Therefore for 12,000,000 canisters per year, this would equate to a further 30,000kwh (48 tonnes of CO_2) saved using an HFA MDI formulation containing ethanol.

The total direct reduction in CO_2 emissions based on the above calculations as a result of transferring to a domestically produced HFA/ ethanol formulation, is in the region of 228 tonnes, when compared to the imported HFA only suspension products.

B.4 Indicate risks, including climate change 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:

RISKS	LEVEL	RISK MITIGATION MEASURES
1. Lack of national support in the enactment of proposed CFC-related legislations	Low	The Ministry of Natural Resources and Environment of the RF is the initiator of this project and it will ensure the active participation of all principal stake-holders including the suppliers of CFCs. The lack of CFCs for production of MDI makes local producers to make conversion to the new HFA propellant. The cost of CFC propellant is increasing and the two companies are very much interested in making conversion to HFA. There is also a risk of non-availability of CFCs in the RF and that may course a serious problem with 10 million asthmatic patients.
2. Delays in project implementation and coordination of project activities	Low	The two remaining pharmaceutical companies in the RF involved in the CFC-based MDI production will enable timely implementation due to their big interest (lack of CFCs for production of MDIs, CFC products cannot be exported, etc.). UNIDO as a GEF agency responsible for the project will be using its accumulated experience in implementing similar projects in Article 5 countries, especially in technology transfer issues to assist the two manufacturers to successfully transfer to the new propellant.
3. Climate change	Zero	No climate change related risk. Any quantity of CFCs in the stock will be incinerated. Transportation to the dismantling facilities will be done following the requirements for safe handling (CFCs being considered as toxic chemicals). These measures will minimize the risk. Moreover, the Russian authorities are planning to set up ODS destruction facilities under the HCFC program. No change possible back to the old CFC-based technologies. There will be absolutely a new design of the MDI products.
4. Import of CFCs for MDI production limited	Low	The result of this would be patients who are dependant on the regular availability of essential medication, may be placed at risk during the time of the project implementation. As the global phase out of CFC in pharmaceutical MDIs is reduced it is widely acknowledged that management of the supply of pharmaceutical grade CFC will be via very rigidly administered essential use nomination allowances. This will lead to significant limits on the availability of CFCs and no ability for companies to increase production to meet potentially increasing market needs. In the event that manufacture of MDIs ceased in the Russian Federation, then there is a current demand for MDIs in 15 million per annum. If Russian patients are not to suffer shortages of essential medication then this quantity would need to be sourced from international companies. 15 million per annum is a significant

		quantity and may well exceed the current "spare" manufacturing capacity of the companies who may be interested in importing products into Russian Federation.
5. Failure in technology transfer	Low	UNIDO has already made conversion of 16 MDI products in et world with a HFC-134 a propellant applying a new formulation formula and a new design of the MDI product. In case, the selected supplier of technology, does not copy with the task on new MDI development and formulation, another solution exists to achieve a positive conversion with assistance of the producers of MDI valves.
6. Lost of a local market for Russian MDIs producers	Low	When converted new MDIs has different taste when used, its weight is lower, another smell different to CFC-based MDI. This may cause lack of interest from local asthmatics and purchase of foreign MDIs. The two companies will provide their own funds for marketing new products and for a future awareness campaign. Several training workshops are needed to address the above issues.
7. No financial assistance received and as a result find it too commercially challenging to convert their products to HFA MDIs	High	There is already a significant increase in the cost of pharmaceutical grade CFC propellant worldwide. There is an expectation of very significant increases in the costs of CFC propellants in the future. As in a typical Salbutamol the propellant may account for 30-40% of the total cost of the MDI, then any increase in the cost of propellant will impact in the cost of the MDI. An MDI price increase is risky for the two producers. Of equal importance to cost and availability of the medication to the patient is quality. In some circumstances an MDI may be a life saving medicine. As a result it is absolutely essential that any patient can rely on the quality and efficacy of the product in their hand. This is clearly recognized in the Russian Federation as is evidenced by the programme for the implementation of GMP. The Government of the RF want to introduce the GMP in all the pharmaceutical companies in the RF by 2013 including projects counterparts. There is an additional risk, however minimal, to the two Russian MDI producers. However, due to this international project the two companies have been assured that the GEF certification will be positively evaluated by the Government. Lack of financial assistance will have a major impact on the two enterprises, which have to solve the two tasks simultaneously, i.e. conversion to HFA and transfer to the GMP.

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

The Ministry of Health and Social Development; the Federal Service for Health Supervision (Rossdravnadzor); the Ministry of Natural Resources and Environment will be the principle national

counterparts of the project. The Ministry of Health and Social Development will be involved in developing/modification any regulations on the use of CFCs in the production and importation of MDIs. It will be also responsible for final MDI product registration after assessment of the results of stability and clinical tests to be conducted by the own lab of Rossdravnadzoz. It will be also responsible for establishing requirements and stimulus for the two enterprises to implement the Montreal Protocol Agreement.

The following is a non-exhaustive list of Government Agencies and other interested parties that will play a role in the development and implementation of the transition strategy for the phase-out of CFC MDIs, project approval and its implementation and their responsibilities:

Ministry of Natural Resources and Environment (MNRE) (through the Ozone Unit):

- Coordinate various activities resulting from the transition strategy: national education campaign, conversion of the national industry, formulation of the necessary legal provisions together with the Ministry of Health and Social Development (MOH).

Ministry of Health and Social Development (MOH):

- Carry out the national education campaign in coordination with all other stakeholders, MOH, Local enterprises, and the MNRE
- Withdraw domestically produced CFC MDIs, if any from the market in compliance with the agreed timetable and criteria (according to Rossdravnadzor there are no CFC-based MDIs are available presently on the Russian market).
- Formulate the necessary legal provisions concerning MDI import together with the MNRE.
- Support the national education campaign.

Rossdravnadzor:

- Grant marketing authorizations for CFC-free MDIs

Local enterprises (Moschimpharmpreparaty and Altayvitaminy):

- Support to the national education and sensitisation campaign
- Make conversion of the CFC-based MDI production to HFA
- Provide CFC-free products within the terms agreed in the transition strategy (to achieve the CFC phase out in MDI production till 31 December 2013
- Withdraw CFC products within the terms agreed.

The Russian Federal Pulmonology Centre, pharmaceutical and other professional associations should be involved to ensure that all professional healthcare providers receive adequate and correct information regarding the new products and that the patients receive adequate information.

B.6. Outline the coordination with other related initiatives:

Decision XXI/4(8) of the Meeting of the Parties (MOP) requested the Technology and Economic Assessment Panel and its Medical Technical Options Committee of the Montreal Protocol Fund to "organize and undertake a mission of experts to examine the technical, economic and administrative issues affecting the transition from CFC metered dose inhalers to CFC-free alternatives in the Russian Federation, and to report the results of this mission to the meeting of the thirtieth Open-ended Working Group. The Technology and Economic Assessment Panel was requested to examine:

(a) The status of transition in the enterprises manufacturing CFC MDIs;

(b) Technical, financial, logistical, administrative or other barriers to transition;

(c) Possible options to overcome any barriers and facilitate the transition.

Experts for the Russian Federation mission team were selected by the co-chairs of the Medical Technical Options Committee (MTOC) in consultation with the Technology and Economic Assessment Panel (TEAP). Funding for the mission was provided by the Ozone Secretariat via grants provided by the Governments of Sweden and Finland, and the two enterprises of the Russian Federation manufacturing CFC MDIs.

The TEAP/MTOC team visited the Russian Federation from 8-12 February 2010, at the invitation of the Ministry of Health and Social Development, which coordinated a number of meetings. The team met with a range of experts from the Russian Federation including: the Ministry of Health and Social Development; the Federal Service for Health Supervision (Roszdravnadzoz); the Ministry of Natural Resources and Environment; the State Federal Unitary Enterprise "Federal Centre of Geoecological Systems"; the Ministry of Industry and Trade; the two Russian Federation enterprises manufacturing CFC MDIs (JSC Moschimpharmpreparaty and JSC Altayvitaminy); the Russian Federation enterprise that imports pharmaceutical-grade CFCs - JSC Phyton.

As a conclusion of the mission was the necessity of urgent project financing. Since finance governs the success of the transition in the Russian Federation, financial support is the main priority. GEF funding recommended to be investigated urgently as the first option. Based on the TEAP/MTOC mission, the Parties could expect that 24 months would be the overall time for conversion of the two enterprises once funding is approved by the implementing agency.

In September 2010, the U.S. Governmental delegation comprising of two people paid a visit to Moscow, to negotiate with the Ministry of Natural Resources and Environment the issues relating to conversion of the production at the two MDI producers to HFA propellant and in order to expedite the process of CFC total elimination in the RF. The delegation confirmed an interest of the USA Government in providing technical assistance to the conversion process at the two companies. It also participated at the Workshop on Exchange of Experience in Transiting to CFC-free MDI Production (September 28-29, 2010), attended by UNIDO.

The Russia - US bilateral workshop discussed the opportunities of US consulting support and constructive recommendations on transition of functional production facilities to CFC-free substances and techniques to be provided to the Russian manufacturers. The meeting also considered current and future barriers to transition in Russia and challenges faced by U.S. in transition and description of how those were met. The USA representatives guaranteed US-state support of technology transfer, if any difficulties occur in connection with conversion of functional production facilities to non-ozone-depleting ones through the GEF/UNIDO project. They handed over to Russian authorities materials of educational-promotional nature for their use by making a conversion to new MDI. In addition, the parties reached an agreement in principle on continuation of contacts and support Russian MDI manufacturers' activities aimed at ceasing the use of chlorofluorocarbons (CFC-11 and CFC-12) in MDI manufacturing operations.

C. GEF AGENCY INFORMATION:

C.1 Confirm the co-financing amount the GEF agency brings to the project:

There is a significant investment required on the part of both beneficiaries. Both companies have prepared an anticipated investment profile and cost estimates for the funding and investment that will be required on their part to complete the project. This is reflected in the table below (all values are in $000's).UNIDO will provide the co-financing in cash and in-kind for project implementation, as well as

monitoring and evaluation.

Item	Altayvitaminy	Moschimpharm preparaty	Optional
Difference in actual cost of equipment and allocated amount from GEF as per enterprise to be paid by counterparts	556	224	
Preparation of normative and technical documentations:			
Technology costs for preliminary in house development	14		
Technology costs in preliminary external development/ access		25	
Formulation optimization, Screening and pilot scale stability.	40	100	
Development of normative and technical documentation incl. draft of the enterprise pharmacopoeial article	15	15	
Measuring equipment			
Procurement of equipment to quality control testing/ release etc.	149		
Procurement of equipment for Laboratory scale manufacture (optimization, testing QC etc.)		364	
Registration			
Examination in RosZdravNadzor	15	15	
Clinical tests	35	35	
Registration in MinZdravSotsRazvitiya	20	20	
Batches production			
Formulation Industrialization on Commercial line and manufacture of three stability/ registration batches Labour and Materials	65	65	
Pre-tests of the three stability batches and receipt of MinZdravSotsRazvitiya's permission for large-scale MDI production	20	20	
Project management and engineering			
Project Management (1 FTE)	50	50	
Engineering (3 FTE)	150	150	
Manufacturing (4 FTE)	160	160	
Laboratory (3 FTE)	150	150	
Office facilities, equipment and communications	25	25	
Project travel	25	25	
Development of MDI manufacture project meeting the GMP- requirements	50	50	
Dismantling of two existing aerosol lines	36		
Auxiliary equipment			

Procurement of equipment for production and use of water purified, compressed oil-free air, ventilation and air conditioning, power supply x 2			1660
Procurement of equipment for washing station, tank- and pipe-line chilling system	605	767	
Procurement of automatic in-line Check Weigher x 2			210
Procurement of automatic packing machine x 2			500
Clean room Construction work (GMP) x 2			160
Installation work and commissioning x 2			2600
IQ/OQ/ PQ for manufacturing equipment	100	100	
PQ and associated documentation for large-scale production	72	72	
Procurement and installation of functional testing and labelling equipment	408	408	
Total (two companies contribution to the project)	2,800	2,800	5,130
Total including optional equipment and auxiliaries	**5,600,000**		10,730,000

As shown in the table above, counterpart funding (Altayvitaminy and Moschimpharmpreparaty) already agreed to contribute to the project in US$ 2.8 million each. Both enterprises have submitted their endorsement letters addressed to the Ministry of Natural Resources and Environment confirming their contribution to the project.
However, two counterparts joint additional contribution to the project can be in the region US$ 10.73 million. This amount includes additional and auxiliary equipment for further production improvement and corresponding services as per above Table, which are required to ensure that the resulting manufacturing operation meets the norms of current Good Manufacturing Practices (not a requirement at the time of commencement of MDI manufacturing, but now a requirement). This additional and auxiliary equipment and services is a subject of further negotiations with the two counterparts. Any other contribution in cash/kind will be discussed between UNIDO and counterpart companies later on in the process of project implementation.

The project recommends achieving the GMP certification during the project implementation, if possible. However, due to additional significant investment, it can be postponed until the funds are available at the two companies.
Some additional costs associated with project monitoring and evaluation activities rendered by the UNIDO Centre in Moscow and the PMU activities established within the frame of the HCFC phase out programme are not included in the above Table.

A coordinator of the whole GEF programme in the Russian Federation, as potentially responsible for the proper and effective implementation, including monitoring, will be the UNIDO office in Moscow, already involved in the ongoing GEF UNIDP project in the Russian Federation.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The Government of the RF has requested UNIDO in 2009 to provide technical assistance to the two enterprises in converting CFC-based production of the MDIs into CFC-free one. UNIDO is one of the MP

Implementation Agencies responsible for development of MP programmes and projects worldwide. Moreover, UNIDO has been involved in the MDI conversion process worldwide since 2006 when the first UNIDO project in the MDI sector was approved for Egypt. Then it was followed by the projects in China, Mexico and Iran.

A GEF project is urgently needed by the both companies in the RF due to lack of CFCs on international markets and it should be equipped with new CFC-free equipment, which allows the use of HCF-134a propellant in the MDI production. The RF, moreover, applied to the Meeting of the Parties of the Montreal Protocol in 2009 (241 MT), 2010 (212 MT) and 2011 (248 MT) for Essential Use Nomination of CFCs for the MDI production in 2010-2012. The projects in Iran and Mexico have been successfully completed and the Government of Iran has recently informed the Ozone Secretariat of the MLF that due to the success of the UNIDO project the total phase out of CFCs in the MDI production has been achieved and Islamic Republic of Iran decided to withdraw its request for Essential Use Nomination of CFCs for the MDI production in 2010-2011. There are some delays with the MDI project implementation in Egypt They are due to two major problems, i.e. delay with equipment supplier and in delay with construction of clean rooms and engineering aspects of the new production. All the problems have been solved and UNIDO is planned to complete the MDI project in Egypt by end of 2011. However, due to availability of CFCs in stock in Egypt the Government has not applied for the EUN of CFCs for MDI production in 2010 for 2011.

Under the GEF/UNIDO project entitled "Phase-out of HCFCs and promotion of HFC-free energy efficient refrigeration and air-conditioning systems in the Russian Federation through technology transfer" aimed at achieving indirect GHG emissions reduction through reduced electricity consumption in the commercial and industrial refrigeration sectors, of approximately 10 MMT CO_2 in 5 forthcoming years. The integrated approach put forward in HCFC proposal is to use additional funding from the GEF climate area to stimulate a secondary intervention around the design of refrigeration and air-conditioning equipment (Voluntary Carbon Trading) which specifically delivers a step change in the energy efficiency of equipment being produced in the Russian Federation and respond specifically to the GEF Strategic Programme on Technology Transfer and Climate change.

The combination of the legislation/incentives created during the MDI project life, successful improvement of the domestic legislation, lack of CFC, UNIDO accumulated technical knowledge and skills as well as UNIDO experience in implementing the MDI programs in other Article 5 countries would permit the project team to achieve the total phase out of CFCs in the production of the MDIs in the Russian Federation. The MDI project in the RF fits into the UNIDO program to achieve the total phase of CFCs and HCFCs by making conversion to other technologies and designing energy efficient products. Due to the similar nature of the two projects it is recommended that a PMU for the HCFC project can also monitor the implementation of the MDI conversion project.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. INSTITUTIONAL ARRANGEMENT:

UNIDO is well positioned to act as an effective implementer of project activities based on its comparative advantage in the area of environmentally sound management, ODS phase out and energy efficiency.

It will be responsible for the overall management of the project and its funds. It will assist the National Project Unit (NPU) in the execution of the project through the provision of timely assistance at key phases of project implementation, i.e. equipment procurement and installation, technology transfer and production of pilot batches of a new MDI, in the review of technical and evaluation reports prepared as outcomes of the project, in the disbursement of funds necessary for the recruitment of an international adviser and in guiding the NPU.

UNIDO will complement to the complete CFC phase out in the Russian Federation, by converting the two last

enterprises in the Russian Federation to a new technology, and therefore assist the Russian Government to fulfill its obligations under the Montreal Protocol.

B. **PROJECT IMPLEMENTATION ARRANGEMENT:**

The Ministry of Natural Resources and Environment of the Russian Federation is the designated national leading agency and focal point of the implementation of the Montreal Protocol. The project will be implemented through UNIDO that will provide periodic progress and financial reports to the GEF, as required.

In order to use efficiently funds, it is suggested that this UNIDO CFC Phase out Project can be also monitored by the Project Management Unit (PMU) established for the HCFC Phase out Project in the Russian Federation. A project focal point will be established within UNIDO to assist in the project execution. This focal point will be comprised of a part-time professional and support staff engaged in the management and coordination of UNIDO's programme of support to Multilateral Environmental Agreements. UNIDO will make these services available as part of its in-kind contribution to the project.

Though the responsibility for execution lays with Ministry of Natural Resources and Environment, the project components will be implemented in close cooperation with Ministry of Health and Social Development and with Rossdravnadzor. Indeed, the project success and its sustainability rely heavily on a close cooperation between these Ministries involved, Rossdravnadzor and the two MDI producers.

Based on this project implementation time schedule the key milestones are reproduced below:

TASK	MONTH*
(1) Project document submitted to beneficiary	1-2
(2) Project document signature	2-3
(3) Implementation Appraisal	3-4
(4) Signature of Contract for CFC-free MDI Technology Transfer	5
(5) Equipment Bid Documents prepared and Bids requested	5-6
(6) Bids Analysis, Vendor Selection, & Contracts Awarded	6-7
(7) Commence MDI Transition Strategy Activities	10
(8) MDI Manufacturing Equipment Delivered, Installed	8-12
(9) Commence Production of CFC-free MDIs on manufacturing equipment for Stability Testing, Clinical Trials, Registration, & Approval	13-18
(10) CFC-free MDI Approval	24
(11) Start of Commercial CFC-free MDI manufacture	24>
(12) Post Market Surveillance Data Collection	26 - >
(13) Verification & Certification of Project Completion	30
(14) Confirmation of Destruction/Disablement of baseline CFC MDI equipment replaced with GEF funding	30
(15) Submission of Project Completion Report	30

* As measured from the project approval

Registration of the drugs in the RF is fully responsibility of Ministry of Health and Social Development (MOH) through its agency called Rossdravnadzor.

The process of registration is consisting of several steps including:

- Completion of all applicable forms.
- Submission of a suitable registration data package.

- Generation of suitable stability data (ICH Q1F Stability Data Package for Registration Applications in Climatic Zones III), on product that is representative of production.
- Bio-equivalence studies (if appropriate).
- Clinical trials (data if appropriate)
- Supporting samples.

As soon as the first pilot production of the three batches is completed, all the documents and samples will be given to Rossdravnadsor for registration before the start of mass production at the two MDI enterprises.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF

The project proposal has been designed to reflect closely the concept and structure of the original PIF. The project is designed to support its four main components as detailed in the PIF and the FSP. When developing this document an author has undertaken careful analyses of the production capacity requirements at the two Russian enterprises and new equipment production capacity in order to meet these requirements. A slight modification of the production equipment and its technical specification in comparison with those in the PIF were done as a result of these analyses for the Altayvitaminy company.

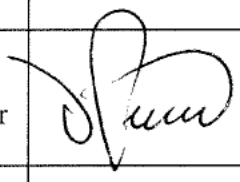
PART V: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT 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 OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Rinat R. Gizatulin	Deputy Minister, GEF Operational Focal Point	THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT	07/23/2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date *(Month, day, year)*	Project Contact Person	Telephone	Email Address
Dr. Dmitri Piskounov Managing Director of UNIDO		09/15/2011	Mr. Yuri Sorokin 	43-1-26026-3624	y.sorokin@unido.org

ANNEX A: PROJECT RESULTS FRAMEWORK

Annex A: Project Results Framework

Output	Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions	Risk
Component 1: Institutional and regulatory capacity building for ODS phase out					
1.1 Analysis of the level of the residual demand of CFC after 2010 by looking at the stock of ODS in the country made	Request from the Government for EUN quota for the RF without looking at the stock of ODS in the country. Policies reviewed and CFC legislation checked. CFCs consumption and import analysed.	To compare the level of MDI production in the last three years and conduct analysis of import of CFCs data from the customs	Customs data available. Production data from two MDI producers available. Rossdravnadzor data on MDI sales in the Russian Federation available.	The stock of CFCs at the two MDI producers could be available. Such stocks have to be taken into account in the EUN requests by the Ministry of Natural Resources and Environment.	Two Russian producers may be reluctant to divulge stock data. CFCs used for production of MDIs should be pharmaceutical grade and they can be not available in the stock.
1.2. Training of 50 customs officers done and procurement of ODS control equipment for customs made	Check with the customs, whether CFCs control equipment is available. Conduct training for custom officers on difference between HCFCs and CFCs.	A training workshop for custom officers has been conducted. Aide-memoire prepared.	Training report	Custom infrastructure exists to enable tests.	The level of custom staff qualification is low. It could be some organizational difficulties in checking CFC substances.
1.3. Two MDI producers and CFC supplier framework developed and commitments made	Further collection of MDI production and import data in the RF. Along with the two CFC-based MDI producers, at least one	Annual reports to be prepared by Rossdravnadzor reflecting the current status with MDI production and import	Verification reports prepared by local consultants for Rossdravnadzor Official reporting data	Data is available from customs, Rossdravnadzor, international marketing reports	The interest of the Governmental authorities can be low to monitor the situation with import and production of

	additional HFA-based MDI company is known..				MDIs not allowing any more CFC-based MDIs.
1.4. Awareness, educational information and environmental management systems upgraded	Brief local public relations officers at the Ministries on the ban of CFC use in the RF Develop a plan for 2 years for communications purposes: preparation of leaflets, placates on the project which deals with complete CFC phase out in the country	Plan prepared and submitted to the Ministries involved. All project stakeholders are to be informed on this Plan.	Available public and private communications across all appropriate media		Public relation activities are required a lot of financial resources. Two MDI producers can be reluctant to participate in the awareness campaign, which is necessary for promotion of new HFA MDIs.
1.5 At least two centralized training symposia to train representatives from the Ministry of Health conducted	To develop a training course for doctors , pharmacists, lung specialists on the new HFA MDIs techniques including the details of new therapy	Training materials approved by UNIDO and Project Team. Aide-Memoire and work programme for two symposia prepared	Training certificates for participants, evaluation reports Aide-Memoirs, workshop reports	Without training it would be difficult to promote new MDIs due to specific issues. Already established pharmacy chain would allow to solve the problem	Local implementation difficulties, low-experienced lecturers, not prepared in advance training materials.
1.6. Policies reviewed, relevant laws and regulations in place	Domestic legislation is necessary to accommodate CFCs free MDIs	Laws and regulations adapted	Official documents available	This issue will be addressed through the Ministry of Health	Risk is low
Component 2: Phase out of CFC consumption in the Medical Aerosol (MDI) Sector					

2.1. Aerosol filling line/s with two dispencers in a doublr stage filing process at MosChimPharmPreparaty and line/s with two indexing machines in s asingle stage filling process at Altayvitaminy installed	Alternative technologies are to be selected for the two MDI producers TORs for equipment procurement are prepared by UNIDO	TOR for equipment available	Visits to the two companies by a team of supplier for equipment installation, conduction of SAP and FAP	UNIDO has accumulated a large experience on the machinery needed for production of HFA MDIs	Risk is low, although the project can expect the delay with equipment manufacture up to one year, due to delivery, customs, installations, etc.
2.2. Guidance of the Russian experts on the MVP - Installation Qualification (IQ), Operational Qualification (OQ), Performance Qualification (PQ) of new equipment carried out	Preparation of the Master Validity Plan, including GMP certification to conduct IQ, OQ and PQ tests	IQ, OQ, PQ qualifications tests conducted by the equipment supplier. MVP prepared by a team of local experts	International Consultant Project Report, Visits to the two companies, Installation Report of the equipment supplier	MVP can be drafted on the basis of the results from IQ, OQ, PQ qualifications tests by a Project Team to be proved by an international expert	Risk is low, since the Government of the RF demanded the conduction of GMP certification of all pharmaceutical companies till 2013
2.3. Overall project management incorporating both the elements of MDI design and development and supervision of equipment installation made	All engineering aspects of MDI production need to be verified and validated Engineering Plan need to be prepared	Engineering Plans at the two companies prepared, factory teams assigned to their implementation	International expert report	Engineering plans are to be prepared by project local teams to be proved by an international consultant.	Not included in the project scope of activities, assumed that this is a work to be done by the two companies
2.4. Assistance (new MDI-Salbutamol production, engineering services, equipment and instrumentation, etc.) for conduction of three pilot batches rendered by a technology provider	Engineering plan developed for production of three pilot batches of new MDIs by a technology provider Provision of all necessary	Three pilot batches of MDIs produced by each company Technical assistance will be given by a technology provider and an International	Report of a Technology provider, Report of International consultant	Assumed to be produced by a selected technology transfer company	Based on the results of development of a new MDI product to be done by a third party. It depends on the level of experience of

	materials on part of tecahnology provider	consultant			this company, plus a risk of a copy of the marketed MDI
2.5. Three experimental batches of a new MDI (1500 pcs) together with a reference placebo batch (minimum placebo 500 MDIs) carried out at the two enterprises	Engineering plan developed for production of three experimental batches of a new MDI (1500 pcs) together with a reference placebo batch (minimum placebo 500 MDIs) Provision of all necessary materials on part of project counterparts	Three experimental batches of a new MDI (1500 pcs) together with a reference placebo batch (minimum placebo 500 MDIs) at the two enterprises	Report of a Technology provider, Report of International consultant	Assumed to be produced by two Russian MDI producers after new equipment installation New equipment installed, Installation qualifications completed	Based on the results of development of a new MDI product to be done by a third party and to be produced by project counterparts If equipment is not properly installed there could be delay in project implementatio n
2.6. Pilot production of CFC free MDI Salbutamol 200 dose, 100 µg/ dose label claim of Salbutamol Base (equivalent) carried out and terminal phase out of CFC consumption in the MDI sector and reduction of GHG emissions achieved	Engineering Plan developed for pilot production of a final batch of new MDI. Provision of all necessary materials on part of project counterparts	Final experimental batch of new MDIs after the pilot and experimental batches for registration purposes produced	Cease of CFC consumption. Certificates issued by the project counterparts confirming not-use of CFCs Project report, International consultant's report	Assistance may be necessary here from an international consultant to make measurements of technical parameters of the final product	There might be a delay in production of this final batch since the results of two previous steps need to be very positive. Staff may not ready to use a new equipment due to lack of sufficient experience
Component 3: Technology Transfer for developing a new HFA-based MDI					

3.1. Design and development of a new HFA-based MDI-Salbutamol made by a technology provider including the drug formula, selection of MDI materials and components and transfer of all possible know-how needed to start manufacturing and testing of new MDIs	Drafting TOR for a technology provider, Job Description for an international consultant Preparation of tendering documents	Preparation of a pharma dossier for the new MDI including the drug formula, selection of MDI materials and components and transfer of all possible know-how needed to start manufacturing and testing of new MDIs	International Consultant report Pharma dossier prepared	The contract for technology transfer is issued and signed according to the agreed work plan. The contractor delivers the services according to the agreed work plan	The technology provider selected may not have sufficient experience in developing a new MDI. It may cause unnecessary delay in project implementation
3.2. All materials and primary packaging components (valve, canister and actuator), of the MDI product excluding the secondary packaging components (carton, package insert etc.) selected	Inclusion of all materials and packaging components in the TOR for technology provision	Interim report of a Contractor on All materials and packaging components selected Selection criteria adopted by the two Russian MDI producers	Interim report prepared	This part of the contract is fulfilled according to the agreed work plan	The new packaging components can be costly in comparison with CFC-based MDIs and it may cause disagreement of the two enterprises
3.3. Final conversion of CFC based MDI Salbutamol 200 dose, 100 µg/ dose label claim of Salbutamol Base (equivalent) (may be formulated using Salbutamol Sulphate and/ or specified in an acceptable manner as the Dose ex mouthpiece achieved	Conduction of 6 months stability tests proving that the new MDI Salbutamol 200 dose, 100 µg/ dose label claim meet the technical requirements of the Drug Regulations of the Ministry of Health	Inclusion of conduction of the 6 months stability tests in the TOR for technology provision	Test report prepared Final Report on the Technology Transfer prepared	The contractor delivers services according to the agreed work plan	There could be negative results with 6 months stability tests. It may cause the delay with project implementation

Component 4: New developed MDI products registered at the Ministry of Health					
4.1. 2 or 3 key events [pilot production, stability tests of new MDI] in the Working Plans of the companies included	Pilot production, stability tests of new MDI in the Working Plans of the two enterprises included	Conduction of 6 months stability tests after the production of three commercial batches at the two enterprises.	Evaluation Report on results of tests prepared by the two companies	The analytical methods for conduction of stability tests well known to the staff at the two enterprises	These tests are to be conducted by the two enterprises themselves. They may have not sufficient experience, the lack of measuring instruments may delay the project
4.2. 2 or 3 key events [testing results from the local labs, MDI registration] in the Working Plans Rossdravnadzor included	Testing results from the local labs submitted, MDI registration timing in the Working Plans of the Rosssdravnadzor included	Assesment of the test results done	Evaluation Report prepared by Rossdravnadzor,	The staff is well prepared for assessment of testing data. The work to be done is included in the Work Plan of Rossdravnadzor.	Depend on timely completion of analyses
4.3. Clinical test and final registration of new MDI products achieved	A meeting and follow up with Rossdravnadzor on registration procedures of new MDIs conducted.	Complete set of requested documents required by Rossdravnadzor submitted.	Final Registration Certificate issued by Rossdravnadzor.	Registration procedures at Rossdravnadzor already established. This work should be included in the Work Plan of Rossdravnadzor.	Excessive time taken to go through all the procedures of registration.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF/LDCF/SCCF RESOURCES

Position Titles	*$/ Person Week**	*Estimated Person Weeks***	*Tasks To Be Performed*
For Project Management			
Local			
International			
Technical adviser, expert on MDI technology transfer	2,500	16	Overall strategy guidance, introduction of experience on foreign countries, assistance in conducting stability and clinical tests, review of technology transfer documentation, assistance in preparing Master Validity Plan (MVP)
Travel	5,000	2	Several missions have to be undertaken. Travel incudes the cost of the ticket and fee
Justification for travel, if any: Travel is necessary to regularly visit the two enterprises in Biysk, Altay region and Moscow			
For Technical Assistance			
Local			
Local technical consultants will be funded from co-financing component			
International			
	2,500	60	Technical assistance in implementating Component 1 and Component 3, especially the last one including travel.
Justification for travel, if any: Travel is necessary to visit the two enterprises, in Biysk, Altay region and Moscow by international consultants and included in the overall cost			

* Provide dollar rate per person week. ** Total person weeks needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

THE PPG HAS FINANCE THE DETAILED SCOPING AND DESIGN OF THE PILOT FS PROJECT. THROUGH DETAILED DEVELOPMENT OF THE PILOT PROJECT CONCEPT, WORKING PLAN, BUDGET AND OPERATING MODELS THE NECESSARY INPUTS, OUTCOMES AND OUTPUTS REQUIRED TO ACHIEVE THE PROJECT OBJECTIVES WERE OPTIMIZED. IT ALSO ALLOWED THE DEVELOPMENT OF THE RESULTS-BASED FRAMEWORK AND INDICATORS TO EFFECTIVELY MONITOR THE IMPLEMENTATION PROCESS AND IT WPOULD ENSURE THAT THE RESOURCES PROVIDED UNDER THE FSP ACHIEVE THE GREATEST POSSIBLE IMPACT. DETAILED SPECIFICATIONS OF APPROPRIATE TECHNOLOGY TRANSFER COMPONENTS INCLUDING THE COST OF THE PROJECT EQUIPMENT FOR THE CONVERSION OF CFC-BASED PRODUCTION OF MDIS AT THE TWO RUSSIAN ENTERPRISES –MEDICAL AEROSOLS SECTOR HAVE BEEN DEVELOPED. IN ORDER TO FACILITATE DETAILED FS PROJECT DESIGN UNIDO PROVIDED ADDITIONAL FUNDING TO COORDINATE AND SUPPLEMENT WITH IN-HOUSE EXPERTISE THE ACTIVITIES AND INPUTS OF THE PROJECT DESIGN.

AN ADDITIONAL WORSHOP OF ALL THE STAKEHOLDERS INCLUDING REPRESENTATIVES FROM ALL THE MINISTRIES, LUNG ASSOSCIATIONS AND PHARMACEUTICAL LABORATORIES ACTIVE IN RUSSIA, REPRESENTATIVES FROM TWO MANUFACTURING COMPANIES WAS AGREED TO CO BE CONDUCTED IN 4-5 OCTOBER 2011 CLOSE TO THE DATE OF PROJECT APPAROVAL BY GEF. UNIDO WILL PRESENT THE SCOPE OF THE FSP AND TIME SCHEDULE FOR THE COMPLTE PHASE OUT OF CFCS IN THE RF.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

THERE ARE NO CONCERNS ON PROJECT IMPLEMENTATION AT ALL. ALL THE PARTIES ARE VERY MUCH INTERESTED IN PROJECT IMPLEMENTATION IN SPITE OF THE LIMITED GEF FINANCING LEVEL AGREED. THE TWO MDI PRODUCERS AGREED TO CONTRIBUTE TO THE PROJECT BUDGET THE AMOUNT OF US$ 5,6 MILLION TOGETHER , WHICH ALLOW IN PRINCIPLE TO MAKE CONVERSION OF THE TECHNOLOGICAL LINES AT THE TWO COMPANIES TO CFC-FREE MDIS.

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

Project Preparation Activities Approved	*Implementation Status*	*GEF/LDCF/SCCF Amount ($)*				*Cofinancing ($)*
		Amount Approved	*Amount Spent Todate*	*Amount Committed*	*Uncommitted Amount**	
Detail work plan of PPG activities developed	Completed					10,000
Report related to ODS consumption in the MDI sector in the RF, and assessment of the MDI market in the RF prepared	Completed	10,000	10,000			5,000
Stakeholder meeting on MDI production at the two Russian companies to analyze the level of MDI production and marketing in the RF conducted	Completed	20,000		20,000		15,000
Draft project proposal formulated and draft FSP project document developed and	Completed	20,000	10,000	10,000		20,000

management						
	(Select)					
	(Select)					
	(Select)					
	(Select)					
Total		50,000	20,000	30,000	0	50,000

* Any uncommitted amounts should be returned to the GEF Trust Fund. This is not a physical transfer of money, but achieved through reporting and netting out from disbursement request to Trustee. Please indicate expected date of refund transaction to Trustee.

ANNEX E: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF Trust Fund or to your Agency (and/or revolving fund that will be set up)