



# REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

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## PART I: PROJECT INFORMATION

Project Title: Conserving, Enhancing and Managing Carbon Stocks and Biodiversity in The Chernobyl Exclusion Zone			
Country(ies):	Ukraine	GEF Project ID:	4634
GEF Agency(ies):	UNEP	GEF Agency Project ID:	00785
Other Executing Partner(s):		Submission Date:	25/11/2014
GEF Focal Area (s):	Multifocal Area	Project Duration(Months)	48
Name of Parent Program (if applicable):	NA	Project Agency Fee (\$):	486,395
➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>			

### A. FOCAL AREA STRATEGY FRAMEWORK

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
BD-1	1.1 Improved management effectiveness of existing and new protected areas.	<b>Output 1.</b> New protected areas (number) and coverage (hectares) of unprotected ecosystems: <ul style="list-style-type: none"> <li>One new protected area of 230,000 hectares and improved integrated management of 500,000 hectares of currently unprotected or under-protected ecosystems in the ChEZ and areas around the ChEZ;</li> <li>A Research and Environmental Protection Center (REPC ) is established and functioning;</li> <li>A comprehensive assessment of the trends and current state of natural ecosystems in the ChEZ ;</li> <li>Ensured financial and institutional sustainability of multi-sector conservation programs.</li> </ul>	GEFTF	825,076	8,400,000
CCM-5 LULUCF	5.1 Good management practices in LULUCF adopted both within the forestland and in the wider landscape.	<b>Output 2.</b> Forests and non- forest lands under good management practices: <ul style="list-style-type: none"> <li>To be achieved by the placement of 230,000 hectares the ChEZ into protected status;</li> <li>Assessed status and potential in terms of ecosystem services, values, enhancement of carbon benefits and meeting LULUCF targets in the ChEZ.</li> </ul>	GEFTF	2,846,545	11,200,000
LD-3	3.2 Good management practices in the wider landscape demonstrated and adopted by relevant economic sectors	<b>Output 1.</b> Government agencies collaborating on SLM initiatives across sectors and at multiple scales <ul style="list-style-type: none"> <li>Formulation and initial implementation of an integrated management plan for the ChEZ area.</li> </ul>	GEFTF	949,136	5,600,000
Sub-total				4,620,757	25,200,000
Project management cost			GEFTF	243,198	3,140,000

<b>Total project costs</b>		4,863,955	28,340,000
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## B. PROJECT FRAMEWORK

<b>Project Objective:</b> Enhanced Conservation and Management of Carbon Stocks and Biodiversity in Forest and non-Forest Lands in the Chernobyl Exclusion Zone (ChEZ), in Ukraine.						
<b>Project Component</b>	<b>Grant Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>Grant Amount (\$)</b>	<b>Confirmed Cofinancing (\$)</b>
<b>1.E establishment of a Research and Environmental Protection Center</b>	TA	Improved monitoring and research for large areas of forests, wetlands, and other habitat types and associated carbon benefits in the ChEZ.	<b>1.1</b> The REPC established and fully functional; <b>1.2</b> Comprehensive assessment of the current state and trends of natural ecosystems in the ChEZ; <b>1.3</b> Assessment of the status of ecosystem services and their values and enhancement of carbon benefits in terms meeting LLUCF targets in the ChEZ.	GEF TF	1,621,000	9,640,000
<b>2.Establishment and Management of a Full Protected Area Network</b>	TA	Improved management of natural resources and carbon stocks within and around the ChEZ.	<b>2.1.</b> Formal designation of the ChEZ as Biosphere Reserve for enhancing conservation and management of carbon stocks; <b>2.2</b> Measures developed to ensure financial and institutional sustainability of multi-sector conservation programs.	GEF TF	1,854,000	7,640,000
<b>3. Learning, Field Testing and Dissemination</b>	TA	Increased availability and access to critical information needed for decision-making for effective sustainable management of the ChEZ.	<b>3.1</b> A set of lessons learned and practical recommendations on habitat rehabilitation, carbon stocks management and biodiversity conservation developed and published; <b>3.2</b> Knowledge sharing at national and international level and Training programme field tested and available for replication.	GEF TF	669,757	5,240,000
<b>4. Monitoring and Evaluation and knowledge managemnet</b>	TA	The evaluation of the progress made to achieve the project objectives and otcomes are evaluated and the lessons learned and future implementations are facilitated.	<b>4.1</b> M&E system established to measure project progress and impact and effectively implemented. <b>4.2</b> Project progress reports, Midterm and terminal evaluation carried out and reports available <b>4.3</b> Publications, project web site and other multimedia outreach products.	GEF TF	476,000	2,680,000

<b>Subtotal</b>		<b>4,670,757</b>	<b>28,340,000</b>
Project management Cost (PMC)	GEF TF	243,198	3,140,000
<b>Total project costs</b>		<b>4,863,955</b>	<b>28,340,000</b>

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

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount (\$)
Government of Ukraine	Ministry of Ecology and Natural Resources of Ukraine	Cash	17,300,000
Government of Ukraine	Ministry of Ecology and Natural Resources of Ukraine	In-kind	10,700,000
GEF Agency	UNEP	Cash	70,000
GEF Agency	UNEP	In-kind	230,000
Others	GMFMC	Cash	20,000
Others	GMFMC	Cash	20,000
<b>Total Co-financing</b>			<b>28,340,000</b>

**D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY**

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b)	Total c=a+b
UNEP	GEF TF	BD	Ukraine	868,500	86,850	955,350
UNEP	GEF TF	CC	Ukraine	2,996,364	299,636	3,296,000
UNEP	GEF TF	LD	Ukraine	999,091	99,909	1,099,000
<b>Total Grant Resources</b>				<b>4,863,955</b>	<b>486,396</b>	<b>5,350,351</b>

**F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:**

Component	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
International Consultants	525,000	20,000	545,000
National/Local Consultants	400,000	2,900,000	3,300,000

**G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No**

**PART II: PROJECT JUSTIFICATION**

**A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF**

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.: No change.

A.2. **GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:** No change from PIF.

A.3. **The GEF Agency's comparative advantage:** No change from PIF.

A.4. **The baseline project and the problem that it seeks to address:**

The baseline scenario and the problems the proposed project seeks to address have not changed from those described in the PIF. The problems and issues the project seeks to address have been expanded upon in the PIF, especially in relation to fire risk.

The design of the Full Project proposal is in line with the original PIF proposal. However, following the recommendation of the Project partner counties, the expected outputs have been slightly revised, combined or moved to another location in the logframe in order to make them more consistent with the Project intervention logic. The original three Project components remain intact. The Outcomes are also substantively unchanged but, as is the case with the Components generally, they have been edited and compressed, consistent with information collected during project preparation activities and stakeholder consultations undertaken during preparation so that they would be more action and impact oriented. Component 2 now makes provision for development and implementation of a forest fire management protection plan, seen as necessary given the consensus that potentially catastrophic forest fires pose a danger to inhabitants in Ukraine and surrounding countries. There are no changes to the Outcome of Component 3. In addition, a set of activities have been identified that will enable the evaluation of the progress made to achieve the project objectives and outcomes and to facilitate the lessons learned and future implementations.

In line with the above, **Component 1** aims to improved monitoring and research for large areas of forests, wetlands, and other habitat types and associated carbon benefits in the ChEZ. It will result in creation of a Research and Environmental Protection Center, which will take the lead in efforts to collect and synthesize existing research, undertake a gap analysis, and develop and implement a research program consistent with the establishment and management of a full protected area network in the ChEZ. This component will provide GEF incremental support to the GOU in taking the first steps towards the implementation of a set of appropriate environmental monitoring and management measures for the ChEZ. The Chernobyl region offers a globally unique opportunity for the ongoing conduct of radioecological and radiobiological research in an otherwise natural setting. Such studies are, except for very small-scale experiments, not possible or difficult to perform elsewhere, and this Component will lead to the collection, synthesis, and distribution of important data and information from a single, major center as envisioned in the project. Outcomes and Outputs for Component 1 include:

Component 1	Outcomes	Outputs
<b>Component 1:</b> <i>Establishment of a Research and Environmental Protection Center</i>	Improved monitoring and research for large areas of forests, wetlands, and other habitat types and associated carbon benefits in the ChEZ.	<b>1.1</b> The REPC established and fully functional;  <b>1.2</b> Comprehensive assessment of the current state and trends of natural ecosystems in the ChEZ;  <b>1.3</b> Assessment of the status of ecosystem services and their values and enhancement of carbon benefits in terms meeting LLUCF targets in the ChEZ.

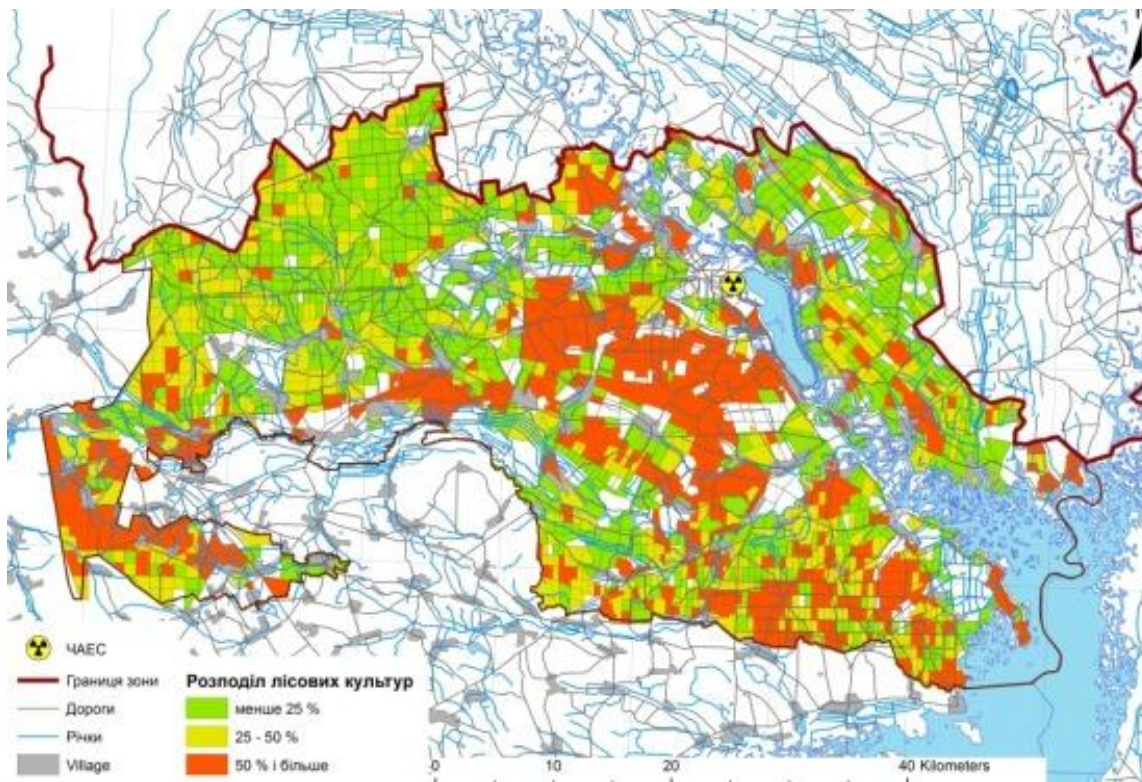
**Component 2** will result in establishment and management of a full-protected area. Within the ChEZ this will be accomplished by a biosphere reserve designation. The Government is currently working to define the zones within a proposed Biosphere Reserve for the ChEZ. While definition is not complete all indications is that the new protected area will be similar to that depicted in Figure 5 (Project Document). Consistent with the Biosphere Reserve designations, there will be in the ChEZ a combination of core areas, buffer zones, and zones where stakeholders work together to sustainably manage the resources of the ChEZ.

There are areas within the ChEZ that pose dramatic fire risk and attendant dangers of consequent radioactive fallout that would pose significant danger to fire fighting personnel, possible danger to Ukraine and other countries, depending on wind direction, and the danger of crop contamination. Areas at risk of forest fires would be part of integrated use settings where necessary thinning and, in some cases, necessary clear-cutting would be

employed. It is also planned that discussions will be held with officials from Belarus with regard to appropriate joint planning for fire risk management.

Following below is a map depicting the various stands of forests (forest blocks) within the ChEZ. Note that the green blocks are areas of highest quality forest and also that part of the overall ChEZ landscape possessing the highest biodiversity values. Note that the most vulnerable blocks, shaded red, are in the areas of highest contamination. Note also that many of the green blocks, denoting the highest levels of biodiversity, adjoin the Polessky Nature Reserve, generally north, northwest and northeast of the national boundary. The project involved officials from Belarus generally, and specifically from the Reserve, during project preparation. Close cooperation and joint activities with the Reserve will continue during project implementation.

### ChEZ forest blocks



The new protected area network will enable protection of biodiversity, mitigate land degradation and maintain carbon stocks in large areas of forest and non-forest lands, including wetlands and other habitat within the ChEZ. This component will include a wide reaching dissemination strategy to secure participation, build and strengthen partnerships, and contribute to further understanding and appreciation of the social, economic, and environmental benefits that will accrue to the ChEZ and surrounding area. Civil society engagement will include informal presentations and media communications on the project and its relevance to society at large. Outcomes and Outputs for Component 2 include:

Component	Outcomes	Outputs
<b>Component 2:</b> <i>Establishment and Management of a Full Protected Area Network</i>	Improved management of natural resources and carbon stocks within and around the ChEZ.	<p><b>2.1.</b> Formal designation of the ChEZ as Biosphere Reserve for enhancing conservation and management of carbon stocks;</p> <p><b>2.2</b> Measures developed to ensure financial and institutional sustainability of multi-sector conservation programs.</p>



**Component 3** captures lessons learned, field-testing and dissemination of results. Component 3 will ensure mainstreaming of project results. The communication process of this Component will include traditional scientific publications to demonstrate the credibility and applicability of project results. The participation of international scientific organizations in project activities will facilitate the communication of results as well as help in ensuring replication in other areas as necessary. Lessons learned will be made widely available through written reports, the project website, and through training manuals developed and distributed by the Research and Environmental Protection Center.

The key Component 3 indicator will be documentation of the number and extent (national/international) of distribution and use of, and feedback derived from use of project-derived lessons learned and best practices, and recommendations developed and published on habitat rehabilitation, carbon stocks management and biodiversity conservation emerged from prior and ongoing work in the ChEZ, and applicable similar situations. Outcomes and Outputs for Component 3 include:

Component	Outcomes	Outputs
<b>Component 3:</b> <i>Learning, Field Testing and Dissemination</i>	Increased availability and access to critical information needed for decision-making for effective sustainable management of the ChEZ.	<p><b>3.1</b> A set of lessons learned and practical recommendations on habitat rehabilitation, carbon stocks management and biodiversity conservation developed and published;</p> <p><b>3.2</b> Knowledge sharing at national and international level and Training programme field tested and available for replication.</p>

A more detailed description of the expected outputs within each component, including baseline and assumptions and risk information, can be found in the Results Framework that appears in this document as Annex A, the Appendix 5. Workplan and Timetable, Appendix 6. Key Deliverables and Benchmarks and Appendix 6. Costed M&E Plan of the Project Document.

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

The principle presented in the PIF was maintained. What is added here is some specificity based data and information gained during the PPG.

At PIF the submission it was noted that without GEF support there is a danger that management of ChEZ will not take into account biodiversity conservation, carbon sequestration and sustainable land management objectives, and will continue on the current and limited dual track of focusing on radioactive safety and economic profit through, for example, the harvesting of biomass for wood gasification at the expense of the values that have emerged over the past 28 years.

The GEF contribution would be additional and incremental to the baseline scenario described in detail in Sections 2.1 and 2.6 of the Project Document. It will focus on the provision of specialized technical assistance, capacity building and limited investment in specialized equipment and infrastructure. This is expected to generate a wide range of Global Environmental Benefits, while supporting the capacity of the GOU towards:

- Ensuring the long-term conservation of globally important biodiversity and ecosystem services in existing and new protected area;
- Enhancing capacity to monitor and account for the climate change mitigation functions of large areas of forests and wetlands within the ChEZ and the new protected area;
- Supporting the establishment of long-term sustainable land-use and forest management practices for the large areas located within the ChEZ and the new protected area, including mitigation of forest fire hazard and consequent dispersal of radionuclides; and

- Development of lessons, principles, policy models, and strategic approaches and methodologies and associated training programs that can underpin the adoption of natural recovery processes for the rehabilitation of other areas of the world affected by nuclear accidents and/or isolated from human interventions for extended periods of time.

The GOU has invested enormous human and financial resources to establish and manage the ChEZ over the years, and plans to continue and expand upon this investment of resources, especially through expanded attention to the establishment and management of existing and an expanded protected area network, as evidenced by confirmed co-finance. The envisaged baseline investment by the Government of Ukraine to control and monitor the status of the extensive ChEZ over the project period of four years will be approximately US\$ 12,100,000. This includes, among other things, the budget for the Agency for the Management of the Exclusion Zone, relevant portions of the MENR budget, management costs, renovation and maintenance (including, e.g. utility payments, security, communication, office and labs maintenance, repair of existing and construction of new infrastructure, staff management, state-level certification and licensing, taxes and mandatory deductions, etc.) for the following main GOU assets and operations relevant to the project objective:

- Establishment and management of existing and an expanded protected area network.
- Laboratory and office facilities of the “International Radioecology Laboratory” and office premises, conference hall and essential equipment Chernobyl Center for Nuclear Safety, Radioactive Waste and Radioecology, consistent with project requirements, and all located in Slavutych town, outside the ChEZ.
- Laboratory premises, lab equipment and auxiliary facilities in Chernobyl town, located inside the ChEZ.
- Monitoring, security, management and maintenance of infrastructure, fire control systems, of the 13 existing Protected Areas within the ChEZ, and of other adjacent protected areas totaling an approximate area of 1,000 sq km. In addition, the GOU is committed to extending this support to the wider ChEZ (2,600 sq km) based on the results of this project and the establishment of a new Protected Area.
- Management and maintenance of Several Landscape Management, Hydro-biological and Ecological Research Testing Grounds located within the ChEZ (including the NPP cooling pond and the Prypiat River).

The above represents a significant GOU baseline investment towards the establishment of the Protected Area and the set-up of the Center.

Further to the PIF submission, the following table represents a summary of the baseline scenario and proposed GEF incremental contribution, by component:

Baseline Scenario (Business As Usual)	GEF Incremental Contribution (what the GEF project will contribute)	Key Outcomes expected with the Alternative Scenario
<p><b>Component 1 – Establishment of a Research and Environmental Protection Center</b></p> <p>Conservation a low-priority for the ChEZ. An under-funded and under-staffed research center with limited research program. No formal linkage with Polesky Nature Reserve.</p> <p>No comprehensive research and field experiments program planned and funded.</p> <p>Ecosystem benefits services for the ChEZ not identified and no assessment planned.</p>	<p>The Research and Environmental Protection center fully established, fully staffed, and functioning with a stakeholder driven research program.</p> <p>Comprehensive assessment of the current state and trends of natural ecosystems in the ChEZ.</p> <p>The status and potential in terms of ecosystem services, values, enhancement of carbon benefits and meeting LULUCF targets in the ChEZ is assessed.</p>	<p>Improved monitoring and research for large areas of forests, wetlands, and other habitat types and associated carbon benefits for the ChEZ</p> <p>.</p>

<p><b>Component 2. Establishment and Management of a Full Protected Area Network</b></p> <p>Current amount of PA in the zone approx. 20% but low level of protection; legislation to expand PA in ChEZ not in place; assessment of carbon stocks and other natural capital in ChEZ incomplete in some cases and not undertaken in others; socio-economic surveys incomplete.</p>	<p>The ChEZ is upgraded to the status of Protected Area network to enhance the conservation and management of carbon stocks including development and implementation of a fire prevention and management plan and secure the long-term basis for appropriate management, monitoring and research for large areas of forests, wetlands and other habitat types</p> <p>Enhanced financial and institutional sustainability of multi-sector conservation programs</p>	<p>Enhanced conservation and sustainable management of natural resources and carbon stocks in large areas of forested and non-forested lands, including wetlands and other habitat types within the ChEZ</p>
<p><b>Component 3 – Learning/Field Testing/Dissemination</b></p> <p>Substantial knowledge gaps exist, and what does exist is scattered which makes access and availability difficult.</p>	<p>A set of lessons learned and best practices recommended and published on habitat rehabilitation, carbon stocks management and biodiversity conservation from prior and ongoing work in the ChEZ, and applicable to similar situations</p> <p>Project results widely disseminated, nationally and internationally.</p>	<p>Existence of a comprehensive data base stored in the REPC .</p>

*Global environmental benefits in biodiversity that would be derived include:*

- The current ChEZ linked to the Polessky State Radio Ecological reserve in Belarus, combined with the nearby Drevlyansky Nature Reserve in Ukraine would create a protected area in and around the ChEZ of over 5,000 sq. kms;
- Permanent protection for the growing number species of vertebrates that have been and will continue to be recorded in the ChEZ;
- Permanent protection for growing numbers of ungulates, carnivores, and other game species whose numbers have dramatically increased since the accident;
- Permanent protection for 55 species that are part of the “Red List” of Ukraine;
- Permanent protection for important habitat for migratory birds as the ChEZ lies at the intersection of several main flyways; and
- Permanent protections for the increasing numbers of lichens, mosses and higher plants that now populate the zone.

In summary, the project would assure continuing protection to the 23 different terrestrial and 7 aquatic phyto-systems, the 12 terrestrial and 8 aquatic zoo-systems, five types of landscapes, and 15 types of soils.

Following is a table depicting the range of Aichi Declaration targets that will be addressed by the project:



## Project Contribution to Aichi Declaration Targets

<b>CBD Aichi 2020 Targets which the project will contribute to:</b>	<b>How the project will support the achievement of each target – initial SMART indicators (to be further selected and refined at CEO submission)</b>
Target 1 (awareness of biodiversity values)	Awareness of BD conservation values and sustainable use is increased at local, national and regional levels as well as globally through the emphasis on actions that will be undertaken to assure that studies, assessments, inventories and other measures undertaken during implementation will lead to an expanded and strengthened PA system based on biodiversity values
Target 2 (BD integrated in local and national poverty reduction strategies...)	Demonstrating of how BD conservation and poverty reduction are integrated in local level planning processes in the ChEZ – and providing lessons for up-scaling at national, regional and international levels.
Target 5 (loss of natural habitats)	Loss of major tracts of natural habitats in the ChEZ will be avoided through identification of values associated with maintenance of existing and growing richness of natural habitats and improved land management practices
Target 7 (sustainable management)	The project will help ensure sustainable management of ChEZ biological resources through development and implementation of a PA management plan and development and implementation of a fire monitoring and response plan
Target 11 (inland water and costal and marine areas)	The project will, through increases in the current size and level of protection for protected areas in the zone, to not only meet but substantially exceed the Aichi target of 17% of protection
Target 12 (species extinctions)	The project will assist in measures to stem species extinctions and afford protection to endangered species through increased amounts of protected terrestrial and wetland areas in the zone, which is part of a corridor for the Eurasian flyway
Target 15 (Carbon stocks enhancement)	As the one of the principal objectives of the project is carbon stock protection and enhancement, this target will be met
Target 18 (traditional knowledge)	Traditional knowledge will be incorporated into project activities through stakeholder involvement; improved knowledge of the natural capital in the ChEZ by virtue of the estimated 300 jobs that will be created for management of the expanded PA system
Target 19 (BD science improved)	Latest BD conservation science based on forest and wildlife inventories and other studies and measures, including climate change considerations, will be applied to the development of the PA network and management plan for the ChEZ.
Target 20 (resource mobilization)	A long term sustainable financing strategy for the ChEZ is developed, focusing on commitment of the government to assure continued finance for the long-term implementation of the PA plan.

*Global environmental benefits in relation to climate change mitigation (CCM) and land degradation* would include:

- Increased levels of carbon sequestration as preliminarily described in this project document. Intensive accumulation of carbon has taken place since 1986 in more than 60 thousand hectares of former agricultural lands, where stable cover of perennial herbs have been replaced by natural regeneration of pine and birch, whose age now ranges from 5-25 years. Further, in areas close to massive forests, perennial grasses have now been formed. The typical succession process of grasslands in the temperate climatic zone of the ChEZ is typically multi-species indigenous forests with consequent high carbon sequestration.
- The mitigation of potentially catastrophic fires in and around the ChEZ. These potential fires would, in addition to threatening the health of local populations, substantially diminish the existing and growing amounts of stored carbon in forests and other landscapes; and
- Through establishment of good management practices, ensure that the substantial present and increasing levels of biodiversity and carbon enhancement value of the ChEZ will continue indefinitely and, through a focus on the provision of ecosystem services, benefit local populations.
- As well, a major activity of the envisioned Center would be to identify and repatriate much existing research that has been conducted in the ChEZ by various researchers, institutions and countries, the results of which have not been made available to Ukraine. The Center would become the central “clearing house” for Chernobyl related research, accessible to national and international organizations.
- The use of an ecosystem-based approach to mitigate threats posed by climate change. This approach is a cornerstone of the project. UNEP has done pioneering work in demonstrating how maintenance of healthy ecosystems is an important line of defense against potential negative influences of climate change. This approach, also known as “Ecosystem-based Adaptation” (EbA), demonstrates that healthy, well-functioning ecosystems enhance natural resilience to the adverse impacts of climate change and reduce the vulnerability of people<sup>1</sup>. Thus ecosystem-based management, consistent with the objectives of this project, offers a valuable yet under-utilized approach for climate change adaptation, complementing traditional actions such as infrastructure development or other investment related initiatives.

At the time of PIF submission and approval, it was stated that information pertinent to Objective 5 of the LULUCF, as described above, would be provided at time of CEO endorsement. While it has not been possible to develop a set of good management practices and a carbon stock monitoring system during project preparation<sup>2</sup>, the other values appearing in the table, indicative of the substantial number of hectares that will move into protected status and the resulting GG avoided emissions and sequestration, have been calculated and appear below:

#### **Target Conservation Areas**

<b>Expected land use change as a project result<sup>3</sup></b>	<b>Total existing before the disaster and recently established preserved areas in ChEZ, ha</b>	<b>Proposed based on criteria of maximum preservation of existing biodiversity values in ChEZ (not included existing preserved areas), ha</b>
Conservation and enhancement of carbon in forests, including agroforestry	5027.9 ha	60736.2 ha
Conservation and enhancement of carbon in non-forest lands, including peat land		32804.4 ha (Including 10031,2 of peat lands)

<sup>1</sup> Ecosystem-Based Adaptation Guidance: Moving from Principles to Practice. UNEP Working Document: April 2012

<sup>2</sup> These values will be addressed during project implementation.

<sup>3</sup> Estimate of expanded ChEZ protected area as suggested by the Chernobyl Center. Information generated by Dr. Sergiy Zibstev.

Avoided deforestation and forest degradation		10400 ha (Including an est. 5000 ha of prevented large fire events)
Afforestation/reforestation		22773.2 ha Grass lands of potential reserve in ChEZ that will naturally become forests under preservation regime

### GHG avoided emission and sequestration

	CO2 eq tons	Comments
Lifetime direct GHG emission avoided	1408218	Emissions avoided because no harvesting will be allowed on protected area, large fires will be prevented, grasslands will not be ploughed for energy plantations
Lifetime indirect GHG emission avoided	693187	Emissions from loss of C from forest litter and soil avoided due to prevention of harvesting, fires and plowing
Lifetime direct carbon sequestration	8406001	Direct carbon sequestration on potential ChEZ biosphere reserve (area 93540,6 ha) as proposed by the Chernobyl Center
Lifetime indirect carbon sequestration	1115887	Natural conversion of grasslands that inside of natural reserve to forests with additional sequestration of C

**Estimation of carbon accumulation in forests, grass and peat lands on the territory of potential biosphere reserve in ChEZ (total proposed by Chernobyl International Center area of the reserve – 93540 ha)**

Category of land of potential preserved area in ChEZ	Area, ha	Amount of CO <sub>2</sub> , t/ha				Total est. carbon storage in potential preserved area, 1000 t CO <sub>2</sub>
		soil	litter	biomass	total	
Forests	44897.4	18	0.4	67.00	85.40	3834.24
Grasslands	22773.2				18	409.92
Swamps under forests	15838.8	100	0.8	67.00	167.80	2657.75
Peat lands	10031.2	150			150.00	1504.68
<b>Total</b>	<b>93540.6</b>					<b>8406.59</b>

The project is also responsive to LD-3 *Integrated Landscape Management: Reduce pressures on natural resources from competing land uses in the wider landscape* through the formulation and initial implementation of an integrated management plan for the ChEZ area.

**A.6. Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:** A more in depth risk analysis and corresponding mitigation options has been carried out and added since the PIF. Please refer to section 3.5 in the Project Document. Assumptions and Risks related specifically to the achievement of the project Outcomes are also addressed in the Project Results Framework (see Annex A to this document)

**A.7. Coordination with other relevant GEF financed initiatives:** Coordination has advanced during preparation phase and will be further developed during implementation to ensure that synergies are maximized, redundancy avoided and lessons learned find continued application. For the status at present refer to section 2.7 in the Project Document.

**B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

**B.1 Describe how the stakeholders will be engaged in project implementation.**

During the preparation phase potential stakeholder's involvement in the project was examined at different levels, with special attention given to existing programs that could support project activities. Possible synergies and inter-institutional alliances promoting greater efficiency and effectiveness in the use of project resources are explained in the tables below. Key stakeholders who can contribute to project implementation in both countries are listed in Table below. It is highly likely that other contributing stakeholders will be identified and included during project execution phase.

The project is unique in that there has been no permanent population living in the ChEZ over the past twenty-seven years (since the nuclear accident), and there is no projected date on which there will be allowable population within the zone. However, the project is of significant importance for several groups of stakeholders:

- A wide array of government Ministries and Agencies, including, among others, the Ministry of Ecology and Natural resources, the Agency for Management of the Exclusion Zone, and the Chernobyl Center;
- Day workers operating within the exclusion zone;
- Populations living around the exclusion zone; who i.e. would be adversely affected by forest fires in the zone, transfer of radioactivity from the zone, adversely affected by ingesting contaminated crops illegally harvested within the zone, etc.;
- The academic community: as described throughout this project document, the extent of effort required to collect, synthesize and undertake a gap analysis of existing, targeted scientific research, and the conduct of research to fill identified gaps will require focused attention on the involvement of appropriate scientific personnel within Ukraine and internationally;
- The global community including governments and international research organizations with a focus on nuclear accidents and remediation of nuclear contaminated areas; and
- Ukrainian and international NGOs such as Mama86 and other Ukraine-based groups, and international NGOs such as the World Wildlife Fund (WWF), Wetlands International, and Birdlife.

As there are no legal residents within the zone, and thus no municipal governments, that level of governance does not exist as a stakeholder. There are, however, stakeholders at local (abutting the zone), national, and international levels as presented in the following table:

**Table Stakeholder Mapping**

Organization	Responsibility	Role in the project
<b>GOVERNMENT:</b>		
Community level governance structures in surrounding areas (and formerly resident within the ChEZ)	Support for the activities and outcomes of the project during and post implementation	Important participants in/beneficiary of project outcomes and outputs
Ministry of Ecology and Natural Resources (Kyiv)	Overall responsibility for nature reserves, biodiversity conservation etc. at the national level	Lead Government Executing agency for the GEF project (Chair of project Steering Committee)
State Agency for ChEZ (Kyiv, Chornobyl)	Full responsibility for the zone: radioactive waste management; forest management; management of waterways and flood plains; monitoring of radioactivity	Key project executing partner given its historical role as controlling all issues related to the ChEZ (Steering Committee member)
– Chernobyl Center for Nuclear Safety, Radioactive Waste and Radioecology (Chernobyl Center) (Slavutych, Kyiv oblast)	Investigation of radioactive safety of various objects and ecosystems of the zone	Belongs to the State Agency for ChEZ (see above) – is preliminarily identified as possibly evolving into the Environmental Resource Center envisioned in project design (Steering Committee member)
– State Environmental Investment Agency	Responsible for all carbon and Kyoto protocol related activities in Ukraine	Possible project partner in terms of demonstration and reporting of carbon-related benefits (Steering Committee member)
– Drevliansky Nature Reserve (Narodychi district)	Maintaining protected area contaminated by the Chernobyl	Sharing expertise, coordination and joint activities (member of

of Zhytomyr oblast);	fallouts	Technical Advisory Group)
State Forestry Resources Agency	Formulates the state policy in forestry, responsible for management of forests (but not in the zone)	Coordination of activities and sharing of expertise on forest management to support project activities in the project area (Steering Committee member)
Kyiv oblast State Administration	Responsible for land use and economic activities in Kyiv oblast	Coordination with project team on land-use and economic development activities in the project area (member of Stakeholder Advisory Group)
– Kyiv oblast Department for Environmental Protection (Kyiv)	Environmental control of land allocation and use in the oblast, issuing permits etc.	Environmental control of land allocation and use in the oblast, issuing permits
– Slavutych City State Administration (Slavutych)	The city where majority of people working in the 30-km zone live	Potential project partner, as the planned nature reserve will create job opportunities for city inhabitants (member of Stakeholder Advisory Group)
Zhytomyr oblast State Administration	Lands adjacent to the 30-zone (Narodytsky Rayon and Ovrutsky rayon)	Coordination with project team on land-use and economic development activities in the 30-km zone and outside the zone project area; member of Stakeholder Advisory Group)
<b>ACADEMIA</b>		
State Ecological Academy (SEA)	Provider of ecological knowledge and assessment	Source of ecological expertise and other project services
Academy of Sciences of Ukraine and it's Institutes (of plant physiology and genetics; zoology; botanic; molecular biology)	Coordination of research activities, allocation of funding for research programs	Advisory capacity to the project, coordination of research activities with possible financial support (member of the Project Steering Committee)
Institute of Agricultural Radiology of the National University of Life and Environmental Sciences (Kyiv)	Research at agricultural and forest lands impacted by Chernobyl radioactive fallout	Expertise, contribution to the design and establishment of the planned nature reserve (member of Technical Advisory Group)
Zhytomyr Agroecological University (Zhytomyr)	Among other tasks, field investigations in areas contaminated by Chernobyl fallouts	Expertise, contribution to the design and establishment of the planned nature reserve (member of Technical Advisory Group)



Institute of Forestry and Forest Melioration (Kharkiv);	All issues related to forestry	Information on the forest resources within the ChEZ and continuing provision of expertise (member of Technical Advisory Group)
<b>INTERNATIONAL ORGANIZATIONS:</b>		
UNEP	Implementation of the project	GEF Implementing Agency. Overall project oversight and supervision (represents the GEF in the project Steering Committee); provision of technical support and specific support to project execution if/as appropriate.
UNDP	Historical, extensive, and ongoing socio-economic work within the ChEZ	Collaboration and ongoing coordination with UNEP and national government agencies involved in the project; assistance/support in project execution and in-country administration of GEF funds in support of government agencies
The World Bank	History of Chernobyl involvement including afforestation carbon project (Biocarbon Fund)	Sharing of technical experience from prior and ongoing afforestation programs.
EU	Technical support for fire protection in the 30-km zone; ongoing assistance to the Ukraine on efforts to increase the number and extent of protected areas nationally	Existing and potential future donor; sharing expertise
Yale University	History of Chernobyl involvement and interest in forestry issues and fire control issues within ChEZ	Involved during preparation and ongoing technical partnership with national agencies and academic institutions during project execution, focusing on wildfire management and forestry issues
U.S. Forest Service	Involvement in fire prevention strategies for the ChEZ	Continued involvement in development of fire prevention strategies for the ChEZ
The Global Fire Monitoring Center	Global center at University of Freiburg (Germany) with expertise in global level fire prevention strategies and measures	Involved during preparation and will continue involvement during project implementation
Other interested parties and potential donors (e.g Embassies of	Various	Contribution of expertise and co-

Belarus, Russian Federation, Japan, USA, Switzerland etc.)		finance for project activities
<b>OTHER STAKEHOLDERS:</b>		
Belarus - Polesky State Radiation Ecological Reserve	Maintaining adjoining Belarus protected area contaminated by the Chernobyl accident; ongoing research of radioecological effects in the Belarus contaminated zone	Sharing expertise, research and other coordination activities, and other joint activities including fire management and control (Observer status in Technical Advisory Group)
Residents of communities in surrounding areas (and formerly resident within the ChEZ)	Greater community level buy-in to help achieve sustainability	Sharing an abundance of local knowledge about the landscape
NGOs, domestic and international (Mama86, WWF, Wetlands International, Birdlife International etc.)	Advocacy, implementing complementary projects aimed at achieving goals in respective area of interest (biodiversity conservation, forestry, birdlife, wetlands protection etc.)	Support to project design and justification by formulating opinions of concerned public in respective area of interest (biodiversity conservation, forestry, birdlife, wetlands protection etc.) - members of Technical Advisory Group and Stakeholder Advisory Group)

**B.2 Describe the socioeconomic 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/NPIF) or adaptation benefits (LDCF/SCCF):**

The project strategy and approach aims to achieve both positive environmental and social impacts, through a focus on assisting the government to develop and implement a triad approach to the long-term management of the resources within the ChEZ. This will lead to a combination of developing economic opportunities within and around the zone and simultaneously facilitating the valuation and integration of ecosystem services into sectoral and developmental planning and policy processes. The project takes into consideration the gender relations and will ensure that there is fair representation of both women and men in the project, its activities and its results. It should be noted that many of the government officials, academic experts and NGOs that have been involved during the project preparation, and will continue to be involved in the project implementation, are women. Further, one of the most important NGOs that work for the project during preparation is MAMA-86. While it is not possible to know the exact makeup of the estimated 300 positions that would be necessary for management of the new protected area, every indication is that a substantial portion would be women. Further baseline data and information collected during the project implementation concerning the socio-economic aspects will be gender-disaggregated where possible.

Factoring ecosystem services into planning and decision making at multiple scales will contribute to raising the value that can be attributed to ecosystem use and thus increase the appreciation of biodiversity conservation by multiple stakeholders. Continuing, targeted research, continued development of mapping tools, and development of scenarios of possible futures will allow for a further integration of environmental considerations into sectoral and developmental policies.

The project also aims to develop capacities of decision makers, users and beneficiaries of ecosystem services to assess trade-offs and development choices that contribute to strengthened biodiversity, ecosystem resilience, and capacity for carbon sequestration to develop and apply appropriate ecosystem management tools within sectoral planning frameworks and macroeconomic planning models.

The multi-scale approach of the project will be further guided by considerations of equitable access to ecosystem services. Unless equity and fairness issues are explicitly addressed, response strategies have a high likelihood of failing to meet the objectives of reversing ecosystem services decline. Institutional reforms and incentives might be required to minimize the risk to equity and fairness. Decisions on ecosystem use options will take into account the values of all services for the various dimensions of human well-being across the entire stakeholder landscape, so as to develop equitable and pro-poor development choices that incorporate sustainable ecosystem usage concerns.

Required Tables related to Environmental and Social Safeguards appear later in this project document as Appendix 12.

### **B.3. Explain how cost-effectiveness is reflected in the project design:**

The favorable co-finance to GEF ratio (approaching 5.8:1) is a clear demonstration of strong project support on the part of the Government and represents a relatively small incremental cost while achieving significant biodiversity and CCM-5 related benefits as described in paragraph 114 and as demonstrated in Tables 5, 6 and 7 on Pages 41-42.

The project will work closely with existing government structures, national organizations, local stakeholders and regional and global stakeholders to share existing and future research efforts in the ChEZ. This approach is adopted to generate greatest possible synergies at all levels, and therefore maximizes cost-effectiveness. This approach will generate global benefits in terms of (a) positively contributing to the enhanced conservation status of an important ecosystem, and (b) will positively contribute to the on-going international dialogue on the consequences, remediation of, and future uses for contaminated areas as a result of a nuclear catastrophe. The coordinated approach among project activities at all levels, facilitated by the UNEP/DEPI and Project Steering Committee, will avoid duplication of activities and investment, maximize synergies with other relevant initiatives, and thus improve cost-effectiveness.

Again, for the modest incremental cost to the GEF the project has the potential to provide:

- The largest area in Europe without anthropogenic impact; and
- An opportunity to achieve substantial levels of carbon sequestration given the substantial forest base and peatlands.

More specifically, cost-effectiveness measures include:

- Building on existing programs and grassroots efforts at local, national, regional and international levels;
- Building on and adding to extensive experience and data that has been and will be generated as a result of project activities;
- Harmonizing activities and creating synergies with and among all relevant stakeholders; and
- Targeting a broad range of stakeholders through existing local, national, regional and global networks, so as to maximize lessons learned and creation of a centralized data base that will be available to all interested individuals, organizations and governments.

### **C. DESCRIBE THE BUDGETED M & E PLAN:**

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

The project M&E plan is consistent with GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 7 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are also summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.

The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The Project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and may establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

At the time of project approval limited baseline data are available. Further baseline data collection, synthesis and gap analysis will be among the first activities undertaken during project implementation. It is expected that baseline data gaps will be addressed during the first year of project implementation, coordinated by the PMU, and will involve relevant government agencies, national level consultants, and, to a lesser degree, international consultants and organizations and institutions that have generated research in the ChEZ. A plan for collecting the necessary baseline data is presented as part of Appendix 5. Workplan and Time table Baseline data collection is specifically addressed in Outputs 1.1, 1.2 and 1.3.

Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project that will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR process. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources. Monitoring will also include periodic assessments of the project's performance in relation to the environment and social safeguards put in place by GEF Implementing Agencies.

A mid-term management review, managed by the UNEP Task Manager or an external and independent mid-term evaluation will take place in Project year 3, as indicated in the Project milestones. The Project Manager and partners will participate actively in the process. The purpose of the Mid-Term Review (MTR) or Mid-Term Evaluation (MTE) is to provide an independent assessment of project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and

sustainable way. The project Steering Committee will participate in the MTR or MTE and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented. An MTR is managed by the UNEP Task Manager. An MTE is managed by the Evaluation Office (EO) of UNEP. The Evaluation Office of UNEP will determine whether an evaluation is required or whether a mid-term review managed by the UNEP TM is sufficient.

An independent terminal evaluation (TE) will take place at the end of project implementation. The EO will be responsible for the TE and liaise with the UNEP Task Manager throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes:

- (i) to provide evidence of results to meet accountability requirements, and
- (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP and executing partners.

While a TE should review use of project funds against budget, it would be the role of a financial audit to assess probity (i.e. correctness, integrity etc.) of expenditure and transactions.

The TE report will be sent to project stakeholders for comments. Formal comments on the report will be shared by the EO in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the EO when the report is finalized. The evaluation report will be publically disclosed and will be followed by a recommendation compliance process.

The direct costs of reviews and evaluations will be charged against the project evaluation budget.

The GEF tracking tools are attached as Appendix 14. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. The mid-term and terminal evaluations will verify the information of the tracking tool.

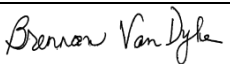
**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

- 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 form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dr Vadym POZHARSKYI	GEF Operational Focal Point, Ukraine	Ministry of Ecology and Natural Resources	AUGUST/31/2011

**B. GEF AGENCY(IES) CERTIFICATION**

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

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Brennan Van Dyke, Director, GEF Coordination Office, UNEP		November 25, 2014	Marieta Sakalian, UNEP Senior Programme Management /Liaison Officer (CGIAR/FAO), Biodiversity	+39 06570 55969	Marieta.Sakalian@unep.org



## ANNEX A: PROJECT RESULTS FRAMEWORK

PROJECT STRATEGY	OBJECTIVELY VERIFIABLE INDICATORS					
	OBJECTIVE LEVEL INDICATORS	BASELINE	MID-TERM TARGETS	END OF ROJECT TARGETS	MEANS OF VERIFICATION	ASSUMPTIONS AND RISKS
<b>PROJECT LONG TERM OBJECTIVE</b>  Enhanced Conservation, and Management of Carbon Stocks and Biodiversity in Forest and non-Forest Lands in the Chernobyl Exclusion Zone (ChEZ), in Ukraine.	Number of hectares declared as Biosphere Reserve with formalized links to Polessky Nature Reserve;	<p>The current extent of protected area within the ChEZ is approximately 20% (46,000ha), with generally a low level of protection;</p> <p>Lack of formalized links with the Polessky nature reserve.</p>	<p>Legislative and regulatory mechanisms necessary to long-term management of the newly protected areas in place by the end of year 2;</p> <p>Extensive stakeholders consultations for establishment of the new PA initiated by end of year 1.</p>	<p>Presidential Decree upgrading the ChEZ to Biosphere Reserve (230,000 ha) status expected by mid- year 3;</p> <p>By beginning of year 4 sustainable use activities through development and implementation of a “Triad Approach” has begun;</p> <p>Results of the triad approach are apparent and are quantified by the end of year 4.</p>	Records of stakeholder discussions/inputs; copies of staffing pattern, contracts and job descriptions; memoranda of Agreement or similar documents with Polessky Nature Reserve; evaluation mission to the offices of the reserve.	Assumes continued government support for establishment of a large, new protected area in the ChEZ; risk that PA will not have sufficient level legal status and thus of protection; risk that Ukraine and Belarus will fail to enter into cooperative arrangements.
	A formally adopted Protected Area Management Plan for the ChEZ	No sustainable management plan has been implemented for the ChEZ; Some initial forestry planning.	<p>By mid-year 2 draft management plan developed;</p> <p>Final draft submitted to government for approval and funding by the end of year 2.</p>	At end of year 2/mid-year 3 a sustainable management plan has been developed for a 230,000 ha Biosphere Reserve, with formalized links to Polessky Nature Reserve.	Records of stakeholder consultations; draft and final versions of an approved management plan for ChEZ; project and government legal documents related to PA establishment.	Assumes a timely, efficient and ultimately successful set of consultations necessary for development of the PA Plan.

	Formally established and operational ChEZ Research Environmental protection Center (REPC)	<p>The current Chernobyl Research Center is understaffed and underfunded;</p> <p>Limited Center focus on environmental protection <sup>4</sup>.</p>	<p>Beginning of year 2 center staffing and budgetary needs detailed and submitted to government for approval;</p> <p>End of year 2 centre staffed and working with an approved research plan;</p>	<p>End of year 4 the Center is fully functional with full complement of staff, approved budget, and agreed upon research agenda.</p> <p>A collaborative transboundary international program on radioecological research, monitoring and management of carbon stocks in forest and non-forest lands, and protected areas management is initiated with the Polessky State Reserve in Belarus.</p>	<p>Government documents related to the establishment of a new, large PA in the ChEZ.</p> <p>Evidence of sustainable funding mechanism for plan implementation;</p> <p>Written staffing pattern, position descriptions, and budget document</p>	<p>Assumes adequate and successful level of inter-ministerial support for and provision of sustainable financing from government and other sources (bi and multi lateral donors, cooperative ventures with other research institutions).</p> <p>Assumes continued government commitment to establishment of a fully functional Center</p>
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<sup>4</sup> The priority within the ChEZ over the past 26 years has been reduction of threat levels from radionuclides with no emphasis placed on conservation and sustainable use;

<b>Component 1: Establishment of a Research and Environmental Protection Center</b>						
	<b>Indicator</b>	<b>Baseline</b>	<b>Mid-Term target</b>	<b>End of Project targets</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<b>Outcome 1.</b> Improved monitoring and research for large areas of forests, wetlands, and other habitat types and associated carbon benefits in the ChEZ.	Environmental monitoring systems designed and operational and generating information on state of the ChEZ environment.	No conservation based research or field experiment program in place in ChEZ;  Limited research program that does not meet the requirements of an expanded and upgraded protected area in the ChEZ.	By mid year 2 a stakeholder driven research plan developed;  End of year 2 research plan forwarded to government for appropriate action.  Linkages with at least four relevant national and/or international educational institutions established.	Center based activities (ec. publishing and making available monitoring data) Begin by the end of year 3.  End of year 3, linkages created with relevant international agreements and platforms (e.g CBD, Ramsar, CCD).	Project and government reports;  Minutes of stakeholder meetings; approved budgets;  Published research agenda and publications of research results;  Annual reports of REPC.	Overall risk that government decisions on extractive resource uses within the zone will prevent enhanced management consistent with project objectives.
<b>Output 1.1</b> The REPC established and fully functional	Budget of ChEZ EPC in Mill USD  Number of jobs created to manage the reserve.  Research and business plan in place with	As of year 2014 no budget allocated to manage the natural resources of the ChEZ.  An under-funded and under-staffed research center;	Beginning of year 2 center staffing and budgetary needs detailed and submitted to government for approval;	3 Mill annual budget allocation for the management of the Biosfere reserve by project end.  By end of year 3 the REPC is fully staffed – up to 300	Review of the approved staffing pattern;  Staff contracts and ToR;  Copies of an approved research plan with	Assumes long-term government support for the ChEZ, including provision of sufficient finance; assumes that jobs created by the PA and international support for the Center will be sustained.

	stakeholder input;		Staff list and ToRs developed by end of year 1.  Procurement plans developed by end of year 2. Research and business plan completed by end year 3.	jobs created  Required equipment purchased and operational;  Implementation of related activities begins end year	timetables.	
<b>Output 1.2</b> Comprehensive assessment of the current state and trends of natural ecosystems in the ChEZ	Components of a research and field experiment program designed and launched;  Results of Ukrainian and international publications made available on the project website and through other means such as scientific journals , etc.	No comprehensive program planned	Research and field experimental program designed by mid-year year 2;  Program delivered to government with request for funding end of year 2; By end year 2 extensive physical description of forest and wetland habitat completed;	Programme for , targeted radioecological and sustainable forest and wetlands management research launched by beginning of year 3; A study of the impact of radioactivity related factors on selected habitats, species and populations of global importance published by end of year 4 ;  Summary report of socio-economic benefits derived to date at end of year 4	Project reports and minutes; draft and final version of an approved program	Assumes that initial government funding will be sustained over recurring budget years
<b>Output 1.3</b> Assessment of the status of ecosystem services and their values and enhancement of carbon benefits in terms meeting LLUCF	Analysis/description of ecosystem services deriving from the ChEZ, including values and benefits of meeting LLUCF targets.	Ecosystem services benefits for the ChEZ not identified and no assessment planned.	Terms of reference for ecosystem services assessment mid-year 2;  Assessment begins end year 2;	Assessment completed by the end of year 3 and forwarded to government: • An assessment of the status and pattern of rehabilitation processes of forest	Project records including contracts and ToR for assessment preparation; draft and final assessment reports.	Assumes government ability to provide the necessary financial and human resources as part of the co-finance commitment

targets in the ChEZ				<p>and wetland habitats, and evaluation of their role in terms of CC mitigation and meeting LULUCF targets completed by mid- year 3;</p> <ul style="list-style-type: none"> <li>• Appropriate sustainable habitat management measures for the rehabilitation of Forests, Wetlands and Marshlands contributing to the conservation and enhancement of carbon stocks and meeting LULUCF targets developed by end of year 3.</li> <li>• A study of the ongoing natural succession processes in the various habitat types affected by radiation in the ChEZ completed and published by</li> </ul>		
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				<p>mid-year- year 3;</p> <p>A fire monitoring system established within the ChEZ by end if year 3;</p> <p>Peer reviewed research publications and monitoring results available end of year 4.</p>		
<b>Component 2: Establishment and Management of a Full Protected Area Network</b>						
	<b>Indicator</b>	<b>Baseline</b>	<b>Mid-Term target</b>	<b>End of Project targets</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<p><b>Outcome 2.</b></p> <p>Improved management of natural resources and carbon stocks within and around the ChEZ.</p>	<p>Number of hectares declared as Biosphere Reserve with formalized links to Polessky Nature Reserve;</p> <p>Stakeholders contributing to maintain and protect nature reserve;</p> <p>Approved management plan;</p>	<p>Current amount of PA in ChEZ approximately 20% (46,000ha), but low level of protection;</p> <p>Legislation to expand PA in ChEZ not in place;</p> <p>Assessment of carbon stocks and other natural capital in ChEZ incomplete in some cases and not undertaken in others;</p>	<p>Legislation focused on expanded ChEZ PA in place by mid-year 2;</p> <p>Draft of ew/expanded protected area plan by mid- year 2;</p> <p>Established cooperative arrangements with</p> <p>Polessky Nature Reserve end of year 2.</p> <p>Public consultations have occurred by</p>	<p>At end of year 2 a sustainable management plan has been developed for a 230,000 ha Biosphere Reserve, with formalized links to Polessky Nature Reserve, and submitted to government for approval.</p> <p>PA management structure in place end year 3;</p> <p>Records or public involvement contain gender segregated data.</p>	<p>Legal documentation establishing new protected areas;</p> <p>Public participation plans and proceedings; Approved management plans; Carbon stock assessments; Maps of new biosphere reserve;</p> <p>Initial analysis of effectiveness of the management plan.</p>	<p>Assumes applications for natural resource use in the zone will be undertaken only after studies and inventories have been completed</p>



			mid-year 2.			
<b>Output 2.1</b>  Formal designation of the ChEZ as Biosphere Reserve for enhancing conservation and management of carbon stocks.	Number of hectares declared as Biosphere Reserve with formalized links to Polesky Nature Reserve;	No PA focus or priority in the ChEZ;  Low level of protection for existing PA in the zone;  Ecological surveys rudimentary and/or out of date.	A protected area zoning plan, defining areas with various degrees of carbon stocks enhancement and conservation potential developed by end of year 2.	Presidential Decree upgrading the ChEZ to Biosphere Reserve status expected by mid-year 3;	Presidential Decree Management plans; ToR and draft/final reports; interviews w/ project staff and contractors; Copies of survey results;  Legal instruments	Assumes applications for natural resource use in the zone will be undertaken only after studies and inventories have been completed.
	PA management plans designed in line with the results from carbon stock, ecological and socioeconomic surveys		First draft monitoring and research plan developed mid-year 2;  Carbon stock, ecological and socioeconomic surveys initiated by beginning of year 2.	Carbon stocks inventory complete end year 2;  Comprehensive ecological and socioeconomic surveys are conducted by end of years 2 and 4 containing gender segregated data by end of year 3.  Final comprehensive PA management plan by mid-year 3.		Assumes continued and growing support for the objectives of the project from the Government of Ukraine and other national and international stakeholders
<b>Output 2.2</b> Measures developed to ensure financial and institutional sustainability of multi-sector conservation programs.	Approved budgets and workplans of relevant government ministries and other national and international stakeholders.	No ChEZ specific budget allocation or work programs w/in the MENR;	End of year 2 MENR budgets and workplans contain financial and other resources specifically dedicated to sustainability of the new protected area.	A protected area management structure, an initial core team of staff, equipment and associated professional capacity on place by end of 3.	Budgets and programs of relevant government ministries;  Budgets and programs of other relevant national and international stakeholders.	Assumes continued governmental support, i.e. funding and a multi-agency level of support for the conservation related objectives of the project.

	Number of jobs created to manage the reserve.	Budgets of Agency for Management of Exclusion Zone make no provision for environment or nature reserve based activities.		By end of year 3 budget for the PA management formally part of approved MENR annual budget.  Up to 300 jobs created		
<b>Component 3. Learning, Field Testing and Dissemination</b>						
	<b>Indicator</b>	<b>Baseline</b>	<b>Mid-Term Targets</b>	<b>End of Project targets</b>	<b>Source of verification</b>	<b>Assumptions</b>
<b>Outcome 3.</b> Increased availability and access to critical information needed for decision-making for effective sustainable management of the ChEZ.	System for tracking number of requests for data and other information.	Substantial knowledge gaps exist;  What knowledge does exist is scattered which makes access and availability difficult.	By end of year 2 establishment of a comprehensive data base that would drive efforts to physically or electronically repatriate critical knowledge in the REPC initiated.	By end of year 4 comprehensive data base completed and located in the REPC;  Repositories in place and access protocols and data sharing agreements finalized by end of year 4.	Verification of the data base and evidence of its accessibility and use.	Assumes that individuals, organizations and governments are willing to share existing and future data re. the ChEZ.
<b>Output 3.1</b> A set of lessons learned and practical recommendations on habitat rehabilitation, carbon stocks management and biodiversity conservation developed and published.	Number and extent (national/international) of distribution and use of, and feedback derived from use of project derived lessons learned.  Written report enumerating and describing, on the project website and through other distribution mechanisms, lessons learned widely uptaken/cited/used;  Interviews with national and international	Project not yet implemented.	Written summaries of project outputs of lessons learned and dissemination available at end of year 2.  End of year 2 report of lessons learned from prior work on habitat restoration, carbon stocks management and biodiversity conservation.	Written summaries of project outputs of lessons learned and dissemination expanded upon at end of year 4  By end of years 3, and 4 reports developed for ongoing work; end of year 4 Final Report of lessons learned and recommendations.	Level of uptake of Project products: e.g.# of website clicks/unique visits, project reports used/cited by others (as measured by media reports, etc.); external peer review and demonstrated inclusion of project results into relevant international meetings/fora/similar cases in other countries (e.g. Fukushima, etc.)	Assumption is that relevant international organization and regional and international stakeholders willing to cooperate with and participate and/or learn from project experiences and lessons learned.

	organizations and individuals targeted for lessons learned distribution.					
<b>Output 3.2</b>  Knowledge sharing at national and international level and  Training programme field tested and available for replication	Distribution lists and numbers distributed;  Training manuals and list of trainers;  Dedicated project website;  Project presence (representatives, project displays, etc.) at relevant national and international events.	Project not yet implemented.  .	Distribution lists prepared by end of year 1;  Distribution lists and description of yearly distributions at end of year 2.	Description of yearly distributions for all project years;  Trainers recruited and trained at end of year 3;  List of number of people trained at end of year 4; Final Report at end of year 4;  National education center opened at end of year 4.	Web site review to determine # of hits and interactive exchanges; interviews with selected visitors to the Project web site; interviews with project staff and contractors.	Assumes continued government support for staffing and budgetary allocations for the REPC.

**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).

**RESPONSE TO GEF SECRETARIAT REVIEW**

Items to consider at CEO endorsement/approval. (FSP)	UNEP Response
At CEO endorsement the cost-effectiveness of the CCM-5 funds in producing CCM-5 related benefits needs to be shown	A description of the cost effectiveness of the CCM-5 and other funds can be found in the Cost Effectiveness section of the project Document in paragraphs 209-212 on Pages 70-71.
a) Table A and Table B match;	Done
<p>b) We expect the items listed in the review of question 11 to be addressed or included;</p> <p><i>The text in Part II, section A.1.1. describes the CCM-5 activities as Good practice through the establishment of monitoring and sustainable management systems for large areas of forests and wetlands. The description indicates there are over 110,000 ha of protected forest and major areas of wetlands. a) Please add a few more sentences describing the vegetation types, including approximate area of unprotected forests if there are any, area is in wetlands or perhaps forested wetlands. This is important because a carbon and other greenhouse gas monitoring system for wetlands is usually quite different (may cost more) than for forests. b) Please list any other major land uses in</i></p>	<p>The project document contains substantial additional descriptive text as requested in this request a), and b) and c). This additional information can be found in Pages 10-18, paragraphs 23-53, and Figures and Tables on those pages; Additional, relevant information can be found in paragraphs 95-98, and Figure 5 on page 34. In paragraphs 52-53 on P. 18; with specific regard to c) the ChEZ is considered unmanaged in the national GHG inventory.</p>

<i>the ChEZ, and the approximate area. c) Please describe if this area is currently considered unmanaged in the national GHG inventory.</i>	
c) funding ratios by component to be refined;	Done
d) clarification as to how any CO2 benefits can result from a project that is not an investment, but instead TA.	The CO2 benefits are derived from the substantial level of carbon sequestration that will result from protected area status being given to the forest, grassland and peatland areas of the ChEZ. The extent of projected benefits is described in Tables 5, 6 and 7 presented on Pages 41-42, Table 12 on page 55; paragraph 53 on page 18; in paragraphs 114, page 40 of the Project Document; and in paragraphs 154-155 on page 56.
At CEO endorsement, the project proponent has also to submit a concept on how the GEF support to the Research and Environment Protection Center will be clearly visible for wider public awareness.	The key Component 3 indicator (See P. 48 of the Prodoc) will be documentation of the number and extent (national/international) of distribution and use of, and feedback derived from use of project-derived lessons learned and best practices, and recommendations developed and published on habitat rehabilitation, carbon stocks management and biodiversity conservation emerged from prior and ongoing work in the ChEZ, and applicable similar situations. This documentation will be stored in the Environmental protection Center, and will be distributed noting clearly that the Center was established as a direct project objective funded by the GEF. See also Output 2.2.2 on P. 48 of the Prodoc.

## RESPONSE TO STAP at PIF

<p>1. “STAP understands the desire of the Government of Ukraine to reduce this burden and begin revitalizing the Chernobyl Exclusion Zone (ChEZ), and eventually to welcome it back into a state of economic production and social security”</p>	<p>The Government of Ukraine understands the need <b>to set-up an appropriate ecological and radiological monitoring and management system in the ChEZ, as a first essential step in this direction</b> (that we fully realize is going to be a very gradual and long-term process). This continues to be a high priority for Ukraine, and it is the principal reason for the proponent’s request to the GEF for this project.</p> <p>The set-up of an appropriate ecological and radiological monitoring and management system in the ChEZ is the primary focus of the project. The GEF funding will provide the required technical advisory support to lay the foundations for the possible and subsequent revitalization of the area (which in itself is not an immediate objective of the GEF project).</p> <p>An increasing risk of forest fires is associated with the well-documented ongoing degradation of non-managed forests within the ChEZ (see specific references to this in the project document and further references below). The associated risk of re-suspension and transport of radioactive particles in forest-fires smoke to inhabited areas outside the ChEZ is well-documented (and several publications on this issue are also provided in this response). Therefore a “no action” scenario is not considered a safe option.</p> <p>The active research and monitoring programmes proposed under this GEF project and as described in Component 1 and in each of the outcomes and outputs of Component 1, are an essential first step to lay the scientifically sound foundations for subsequent habitat conservation measures that can ensure the long-term conservation of the significant biodiversity and carbon stocks currently held in the ChEZ, and the mitigation of risks to human health.</p>
<p>2. EBRD reports that the New Safe Confinement (NSC) (or Shelter) at Chernobyl, a structure designed to replace the structurally unsound and deteriorating Sarcophagus that was temporarily put in place shortly after the accident, will be finalized only in mid 2015 [2].</p>	<p>We continue to be fully aware of this ongoing complex and extremely costly NPP Decommissioning programme that is undertaken by the Government of Ukraine with support from EBRD and other partners.</p> <p>The State Agency of Ukraine on the Exclusion Zone Management (SAEZ) (responsible for the above programme) is one of the main project partners, together with the Ministry of Environment and Nature Protection (MENP), in which the SAEZ is embedded. Other partners involved in construction of the new containment structure, such as the EU and the IAEA are also partners in the proposed project.</p> <p>All project activities were designed to build upon and be fully synergistic with the above programme. However it should be clear that the proposed project <u>will not</u> focus on the NPP/NSC decommissioning and rehabilitation aspects, as these efforts are (a) clearly not GEF-eligible; (b)</p>

	covered by the above other ongoing GoU programmes; and (c) focusing only on a limited core area where the NPP is located, i.e. at the relatively small centre of the much larger (2,600 km <sup>2</sup> ) Chernobyl Exclusion Zone (ChEZ).
<p>3. Further, in February 2003 a group of 8 UN agencies (IAEA, FAO, UNDP, UNEP, UNOCHA, UNSCEAR, WHO and The World Bank) together with Belarus, Russian Federation and Ukraine established the Chernobyl Forum [3] in order to "generate authoritative consensual statements on the environmental consequences and health effects attributable to radiation exposure arising from the accident as well as to provide advice on environmental remediation and special health care programmes, and to suggest areas where further research is required."</p>	<p>We are fully aware of this report to which UNEP and Government of Ukraine also contributed. Its findings and recommendations were reviewed, and waretaken fully into account during project preparation.</p> <p>The proposed project is largely focusing on Technical Assistance (TA) and is designed to help Government of Ukraine meet some of the stated objectives agreed at the Forum.</p> <p>In particular, the GEF project will contribute to an improved understanding of the ongoing natural recovery processes, and will provide the basis for possible subsequent management actions. These should only be supported by sound scientific evidence and should be based on accurate monitoring protocols overseen by the new Research Centre.</p> <p>We also note the critical external independent reviews of elements of the mentioned UN forum reports (ref. <i>"the other report on Chernobyl (TORCH): an independent scientific evaluation of health and environmental effects 20 years after the nuclear disaster providing critical analysis of a recent report by the international atomic energy agency (IAEA) and the world health organisation (WHO)"</i> authors: Ian Fairlie, PhD, UK. David Sumner, DPhil, UK (2006) (<a href="http://www.chernobylreport.org/?p=summary">http://www.chernobylreport.org/?p=summary</a>)</p>
<p>4. Some of the key conclusions of the Forum, inter alia [4]:</p> <ol style="list-style-type: none"> <li>1. "In the Chernobyl Exclusion Zone and in some limited areas of Belarus, Russia and Ukraine some restrictions on land use should be retained for decades to come."</li> <li>2. "Particularly high 137Cs activity concentrations have been found in mushrooms, berries, and game. These high levels have persisted for two decades, and this can be expected to continue for several decades."</li> <li>3. "Irradiation caused numerous acute adverse effects on the plants and animals living up to 10-30 kilometers from the release point. A few years were needed for recovery from major radiation-induced adverse effects in populations of plants and animals."</li> <li>4. Due to removal of human activities, the Exclusion Zone has paradoxically become a unique sanctuary for biodiversity. There</li> </ol>	<ol style="list-style-type: none"> <li>1. We concur with this statement, and the proposed project will comply with all existing restrictions.</li> <li>2. Research on this topic is still very limited and further research investigations will be supported by the GEF project in the framework of ongoing cooperation with Belarus and other international research institutes</li> <li>3. Existing literature on this was preliminarily reviewed during PIF development and during PPG.</li> <li>4. We concur with the first sentence. However we wish to provide additional clarifications with regards to the second sentence: there is increasing evidence that the threat posed by forest fires may: <ul style="list-style-type: none"> <li>(a) seriously disrupt the ongoing natural recovery processes,</li> <li>(b) jeopardise the survival of the "plants and animals" in the ChEZ, and</li> <li>(c) cause serious negative impact on the environment and on human health, due to re-suspension and redistribution of radionuclides outside the ChEZ . This is widely recognized in existing literature and perhaps was not sufficiently emphasized in the PIF. Language describing the threats posed by forest fires in the zone, and selected references are included in the Project Document in paragraphs 131, 137, 138 and in the risk and risk mitigation Table on page 50.</li> </ul> </li> </ol>

<p>is nothing that can be done to remedy the radiological conditions for plants and animals residing in the Exclusion Zone that would not have an adverse impact on plants and animals."</p> <p>5. "Priority for Ukraine should be the decommissioning of the destroyed Chernobyl Unit 4 and the safe management of radioactive waste in the Chernobyl Exclusion Zone, as well as its gradual remediation."</p>	<p>5. We fully concur with this statement. The Nuclear Power Plant (NPP) decommissioning process is proceeding as a high priority for the GoU and it runs on a parallel track <i>vis a vis</i> the proposed GEF project that will focus on the outer areas and naturally recovering habitats of the ChEZ and not on the core NPP industrial site itself (see above).</p>
<p>5. In addition, the Chernobyl Forum Report [5] also highlights the envisaged future of the Exclusion Zone for the next hundred years:</p> <ul style="list-style-type: none"> <li>• Construction and operation of the NSC and relevant engineering infrastructure for the reactor 4 of the NPP;</li> <li>• De-fuelling, decommissioning and dismantling of Units 1, 2 and 3 of the NPP and the Shelter;</li> <li>• Construction of facilities for processing and management of radioactive waste, in particular a deepgeological repository for high-activity and long-lived radioactive material;</li> <li>• Development of natural reserves in the area that remains closed to habitation; and</li> <li>• Maintenance of environmental monitoring and research activities.</li> </ul>	<p>Points 1-3 are being addressed by the SAEZ with significant funding and efforts by the GoU and with donor support, including support from the EBRD.</p> <p>The proposed GEF project will focus on supporting the GoU in the achievement of goals 4 and 5, as clearly outlined in the PIF, and in the project document across each of the three substantive Components and associated outcomes and outputs.</p>
<p>6. STAP supports one of the key Report's recommendations stating that "A coherent and comprehensive strategy for rehabilitation of the Exclusion Zone is needed with particular focus on improving safety of the existing waste-storage and disposal facilities. This will require development of a prioritization method for remediation of the sites, based on safety-assessment results, aiming at decisions on which sites from which waste will be retrieved and disposed, and at which sites the waste will be allowed to decay in situ."</p>	<p>We concur with these recommendations and wish to underline that:</p> <p>(a) these activities mentioned in the UN report pertain to the NNP decommissioning, and are therefore covered by parallel high priority ongoing programmes of the GoU – SAEZ (see above), and</p> <p>(b) the proposed project was designed and will be implemented in synergy with the above, and with the full involvement of the same Agency and the MENR.</p>
<p>7. STAP is mindful of the 'precautionary principle' which states that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action. In the case of ChEZ, application of the principle would suggest that no action is preferable at this stage.</p>	<p>We fully concur with the 'precautionary principle' approach.</p> <p>We also wish to clarify that the proposed project proposal does not envisage any intrusive "action" <i>per se</i> in the ChEZ at this stage. Instead, <u>the project will help understand if and what action is required, on the basis of sound science and environmental monitoring</u> (which is currently not available).</p> <p>The project envisages the establishment of a Research and Environmental Protection Centre and</p>



	<p>Protected Area. This will be achieved through the provision of significant Technical Assistance and capacity building. This is expected to:</p> <ul style="list-style-type: none"> <li>(a) improve our understanding of the ongoing ecological and radiological processes,</li> <li>(b) provide the basis for the future scientifically-sound management decisions for the long-term preservation of Biodiversity and Carbon Stocks in the ChEZ, by mitigating the risk of forest fires and of plant diseases that may jeopardise the ongoing natural recovery processes, and</li> <li>(c) ensure protection of human health in surrounding areas by mitigating the risk of re-suspension and re-distribution of radionuclides associated with forest fires (see above).</li> </ul>
<p><b>8.</b> The PIF notes that flora and fauna diversity has increased spectacularly. Therefore, the ChEZ is effectively bringing about the aims of the intended project without the need for intervention. Interventions would run the risk of disturbing the activation products of radionuclides including the isotopes of plutonium, neptunium and curium.</p>	<p>We have demonstrated in the Project Document that forest fires in the zone, unless that threat is mitigated, will in fact disturb and activate the products that are mentioned in this comment, which is why we believe the threat needs to be addressed as soon as possible. We wish to bring to STAP's attention the same papers mentioned under point 6, highlighting the high risk of forest fires in the ChEZ (repeated here for easy reference – abstracts or PDF articles are provided in Annex 2). Further descriptions on forest fire risk, the hazards that would result, and the mitigation measures that should be undertaken, and rationale for same are detailed in the Project Document in paragraphs 131, 137, 138 and in the risk and risk mitigation Table on page 50:</p> <ul style="list-style-type: none"> <li>• <i>J. Environ Radioact.</i> 2006;87(3):260-78. Epub 2006 Feb 14: "Resuspension and redistribution of radionuclides during grassland and forest fires in the Chernobyl exclusion zone: part II. Modeling the transport process"</li> <li>• Dusha-Gudym, S.I. 2005. <i>Transport of Radioactive Materials by Wildland fires in the Chernobyl Accident Zone: How to Address the Problem.</i> <i>Int. Forest Fire News</i> No. 32, 119-125.</li> <li>• Goldammer, J.G., M. Statheropoulos, and M.O. Andreae. 2009. <i>Impacts of Vegetation Fire Emissions on the Environment, Human Health and Security – A Global Perspective.</i> In: <i>Wildland Fires and Air Pollution</i> (A. Bytnerowicz, M. Arbaugh, A. Riebau, and C. Andersen, eds.), 3-36. Elsevier B.V., <i>Developments in Environmental Science</i>, Vol. 8. DOI:10.1016/S1474-8177(08)00001-6. ISBN 978-0-08-055609-03; ISSN 1474-8177.</li> <li>• <i>Developments in Environmental Science</i>, Volume 8 265, A. Bytnerowicz, M. Arbaugh, A. Riebau and C. Andersen (Editors), Copyright © 2009 Elsevier B.V. All rights reserved. ISSN: 1474-8177/DOI:10.1016/S1474-8177(08)00012-0, Chapter 12 "Vegetation Fires, Smoke Emissions, and Dispersion of Radionuclides in the Chernobyl Exclusion Zone" Wei Min Hao, Oleg O. Bondarenko, Sergiy Zibtsev and Diane Hutton</li> <li>• "Needs for development of wildfire management in the Chornobyl Exclusion zone" Oliver C.D.; Zibtsev S.V.; Hohl A.M.; Goldammer, J.G., Mc Carter J.; Petrenko M.; Borsuk O. – <i>Proceedings of the International Conference "Twenty-five years after Chernobyl Accident – Safety for the Future"</i> April 2011, Kyev, Ukraine.</li> <li>• Goldammer, J.G., and S. Zibtsev (eds.). 2009. <i>Advanced Seminar "Wildfires and Human Security: Fire Management on Terrain Contaminated by Radioactivity,</i></li> </ul>

	<p><i>Unexploded Ordnance (UXO) and Land Mines”, Kyiv / Chornobyl, Ukraine, 6-8 October 2009, Abstract Volume, 41p. <a href="http://www.fire.uni-freiburg.de/GlobalNetworks/SEEurope/GFMC-CoE-OSCE-Seminar-Ukraine-Brochure-Final-06-Oct-2009.pdf">http://www.fire.uni-freiburg.de/GlobalNetworks/SEEurope/GFMC-CoE-OSCE-Seminar-Ukraine-Brochure-Final-06-Oct-2009.pdf</a></i></p> <ul style="list-style-type: none"> <li>• <i>Chernobyl Resolution on Wildfires and Human Security. Challenges and Priorities for Action to address Problems of Wildfires burning on Terrain Contaminated by Radioactivity, Unexploded Ordnance (UXO) and Land Mines. Released by the participants of the Advanced Seminar “Wildfires and Human Security: Fire Management on Terrain Contaminated by Radioactivity, Unexploded Ordnance (UXO) and Land Mines”, Kyiv / Chornobyl, Ukraine, 6-8 October 2009. Int. Forest Fire News No. 40 (in press).</i></li> </ul> <p>We also wish to emphasise that the majority of forests contained in the ChEZ were former forest plantations, as opposed to natural forest. These are largely mono- or oligo-specific forest that were left untouched and without any human intervention for 25 years. As a result, their increased understorey density makes them dangerously fire-prone and disease-prone, much more than in a properly managed forest. For additional information see also the FAO Unasylva paper: “<i>Fire prevention in radiation contaminated Forests</i>” G. Allard, Forest Protection, Officer in the Forestry Department, FAO, Rome - link: <a href="http://www.fao.org/docrep/004/y2795e/y2795e08a.htm">http://www.fao.org/docrep/004/y2795e/y2795e08a.htm</a></p> <p>Therefore the proponents argue that sound scientific research and appropriate monitoring of ongoing natural recovery processes (to be supported by the GEF project) is urgently required to assess whether “no action” is really the best option for the long-term preservation of Biodiversity and Carbon Stocks as well as for the mitigation of significant risks to Human Health.</p>
<p><b>9.</b> Although the best-available scientific evidence is that overall doses from these activation products are expected to remain low, compared with the doses from caesium-137, it is just not known what effects they may have on health of visitors to the EZ and any projected PA.</p>	<p>We concur with this assessment, and wish to emphasis again that no intrusive intervention is planned in the framework of the GEF project. Rather, the project will lay the scientifically sound research-based foundations to help GoU understand whether any intervention is desirable and possible, to (a) allow, monitor and support the continuation of the ongoing natural recovery processes, and (b) mitigate any possible risk to human health.</p> <p>It should also be noted that at present a significant number of workers (e.g. for the NPP decommissioning process) and even visitors are accessing the ChEZ on a regular basis. This is done following existing restrictions and radioactivity monitoring protocols. It is also known that some former residents have illegally returned to live within their former properties in the ChEZ (i.e. and this is against existing restrictions). Some un-controlled tourism is also known to be going on, as the area has become an attraction for visitors.</p> <p>The above situation therefore requires increased monitoring and management capacity at the site.</p>

	<p>The proposed project will:</p> <p>(a) Ensure full compliance with existing rules and restrictions in terms of access to the ChEZ, in all aspects of its work,</p> <p>(b) Assist the GoU to monitor, analyse and understand the longer-term effects that low-dosage radioactivity may have on the health of workers and possible visitors to the outer areas of the ChEZ, and</p> <p>(c) Closely monitor and support the ongoing natural recovery processes within the ChEZ.</p>
<p><b>10.</b> The PIF's only legitimate response to encourage action to create a managed PA is the observation that "experts are questioning the status and quality of biological diversity and the general health of ecosystems. STAP cannot find the source of this observation and it is not referenced in the PIF. It would also appear counter-factual in that nature is repairing the ecosystem itself. If there were evidence that, for example, there are major incursions of invasive alien species, then the situation might be different.</p>	<p>The reference for the sentence "<i>experts are questioning the status and quality of biological diversity and the general health of ecosystems</i>" is the Ministry of Environment and Nature Protection of Ukraine (contained in the proponent's original proposal to the GEF). The above sentence is not meant to contradict the fact that "nature is repairing the ecosystem itself." Instead it highlights the fact that there is no sufficient sound science and monitoring being undertaken on the above subjects, and that exiting published articles are not always in agreement on their findings.</p> <p>The GEF project aims to address the above issues by providing the required TA and capacity building to set-up and operate an adequate research and monitoring programme as the essential basis for a ChEZ that can then be well-managed in the long term.</p> <p>Also, there are no studies on the status and distribution of Invasive Alien Species within the ChEZ (e.g. possible former agriculture-related species that may have become invasive, etc.). This too requires careful consideration and studies (that may be supported by the GEF project) before any intervention is even considered.</p> <p>In addition, an initial review of the existing scientific literature seems to corroborate the above: sound scientific evidence on the status of Biodiversity and ecosystems in the ChEZ is yet indeed very scarce and its findings are sometimes contradictory. Abstracts from some selected articles are attached to this response for the information of STAP and for its consideration and review include:</p> <ul style="list-style-type: none"> <li>• Health Phys. 2007 Nov;93(5):418-26. "<i>Chernobyl radionuclide distribution, migration, and environmental and agricultural impacts.</i>" Alexakhin RM, Sanzharova NI, Fesenko SV, Spiridonov SI, Panov AV. Source: Russian Institute of Agricultural Radiology and Agroecology, Obninsk, Kaluga Region, 249032, Russia. alexakhin@riar.obninsk.or</li> <li>• Environ Int. 2008 Aug;34(6):880-97. Epub 2008 Jan 30. "<i>Effects of non-human species irradiation after the Chernobyl NPP accident.</i>" Geras'kin SA, Fesenko SV, Alexakhin RM. Source: Russian Institute of Agricultural Radiology and Agroecology, Obninsk, Russia. stgeraskin@gmail.com</li> <li>• Radiats Biol Radioecol. 2006 May-Jun;46(3):259-67. "<i>Genetic effects in plant populations in the zone of the Chernobyl accident</i>" [Article in Russian], Abramov</li> </ul>

	<p>VI, Rubanovich AV, Shevchenko VA, Shevchenko VV, Grinikh LI.</p> <ul style="list-style-type: none"> <li>• Radiats Biol Radioecol. 2006 Mar-Apr;46(2):189-99. "Radiation injury of the plants in the zone of influence of the accident on Chernobyl Nuclear Power Station (NPS)". [Article in Russian]. Grodzinskiĭ DM, Gudkov IN.</li> <li>• Health Phys. 2007 Nov;93(5):427-40. "Radiation-induced effects on plants and animals: findings of the United Nations Chernobyl Forum" Hinton TG, Alexakhin R, Balonov M, Gentner N, Hendry J, Prister B, Strand P, Woodhead D. Source: Savannah River Ecology Laboratory, University of Georgia, Aiken, SC, USA. thinton@srek.edu</li> <li>• Radiat Environ Biophys. 2006 Sep;45(3):167-77. Epub 2006 Jul 22. "Transgenerational accumulation of radiation damage in small mammals chronically exposed to Chernobyl fallout." Ryabokon NI, Goncharova RI. Source: Institute of Genetics and Cytology, National Academy of Sciences of Belarus, Akademichnaya street 27, 220072 Minsk, Republic of Belarus. nrabakon@yahoo.com</li> </ul>
<p><b>11.</b> Given the aforementioned points, the lack of full containment of the sources of radioactive contamination, and finally that the entire exclusion zone and much of the surrounding area has become a de facto protected area which has already delivered significant global environmental benefits, as outlined in the PIF, STAP questions the necessity of a GEF-funded intervention as currently described and urges re-consideration of planned activities.</p>	<p>We hope that our response to the above points provides STAP with some additional references and points for reflection. In summary, the proponents' main points are that without the GEF project:</p> <p>(a) The significant global environmental benefits currently delivered by the ChEZ <i>as is</i>, are at serious risk of being irreversibly lost, unless sound and science-based management is applied in the long-term, and</p> <p>(b) Existing and well-documented serious risks to Human Health will persist and increase, unless immediate science-based management action is taken to mitigate the risk of forest fires and associated radionuclides re-suspension and re-distribution (see key references above).</p>
<p><b>12.</b> The PIF states that the current status of the ChEZ is equivalent to the highest category IUCN conservation status (no human activity is allowed).</p>	<p>We concur with this statement. However we also note that the level of environmental research and monitoring currently occurring within and around the ChEZ is limited and certainly suboptimal, unlike in a IUCN highest "Category Ia" reserve. In a Category Ia reserve, research is the only activity allowed and often the main purpose for its establishment.</p> <p>Ref. IUCN: "<i>Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. <b>Such protected areas can serve as indispensable reference areas for scientific research and monitoring</b></i>" – which is currently not the case for the ChEZ.</p> <p>In addition to the Biodiversity conservation and CC mitigation research angles, long-term sound monitoring and science capacity in the ChEZ will not only benefit Ukraine, but also help the global community to understand the dynamics of the ongoing natural recovery process, and identify any required and minimal management action required to facilitate such processes and minimize the risks to human health in surrounding areas.</p>

<p>The Panel notes that the current de-facto protected area status of the zone has already resulted in significant gains in carbon sequestration along with biodiversity richness and population levels “ without formal intervention as proposed in this initiative and in the virtual absence of human interference.</p>	<p>See above in our response to point 10, where we argue that the “no action” option, without an underlying sound scientific research and monitoring programme (to be supported by the GEF project) - including monitoring of forest fires risks- may cause the irreversible loss of globally important Biodiversity and Carbon Stocks in the ChEZ, as well as cause significant damage to human health outside the ChEZ.</p> <p>The “no action” option may also represent a missed opportunity to better understand and foster the ongoing natural recovery processes, i.e. generating important scientific knowledge for other areas affected by similar accidents (e.g. Fukushima).</p>
<p><b>13.</b> The intent of fire resistant tree species and other silvo-cultural practices is not without merit; however, in terms of overall GEBs with respect to carbon and biodiversity, the incremental benefits from the project (given the level of projected investment) versus a business as usual scenario of no intervention, is questionable.</p>	<p>There is increasing evidence that existing largely mono-specific forest habitats are also increasingly under threat by common diseases, and this may jeopardise their survival. <i>Source: Dr. Sergiy Zibtsev, Associate Professor, Ph.D. (Forestry), Head of International Programs, Institute of Forestry and Landscape-Park Management, National University of Life and Environmental Sciences of Ukraine, Kyev, pers. comm.</i></p> <p>In view of the above, the proposed GEF investment is actually highly cost-effective, when compared with the enormous potential risk to the environment and human health associated with a “no-action” and –most importantly- a “no sound research/monitoring” baseline scenario.</p>
<p><b>14.</b> In addition, the likely socio-economic benefits (section B.3) stemming from this initiative are extremely vague, with no discussion as to how these may support intended global environmental benefits. Finally, the exact geographic scope of the initiative as described is unclear. Greater specificity regarding proposed intervention areas beyond the demarcated exclusion zone would be useful.</p>	<p>At the time of PIF submission the socio-economic benefits associated with the proposed GEF project were only defined to a limited extent, as baseline data was very limited or non-existent at that stage. Tentative planning on the part of the MENR, during project preparation, resulted in a conclusion that approximately 300 jobs would be created as a result of the establishment of an expanded and strengthened protected area within the ChEZ. This is outlined in section 3, 3.4, 3.5 and 5 of the project document. More specifically, the project strategy and approach aims to achieve both positive environmental and social impacts, through a focus on assisting the government to develop and implement a triad approach to the long-term management of the resources within the ChEZ. This will lead to a combination of developing economic opportunities within and around the zone and simultaneously facilitating the valuation and integration of ecosystem services into sectoral and developmental planning and policy processes. Further, Factoring ecosystem services into planning and decision making at multiple scales will contribute to raising the value that can be attributed to ecosystem use and thus increase the appreciation of biodiversity conservation by multiple stakeholders. Continuing, targeted research, continued development of mapping tools, and development of scenarios of possible futures will allow for a further integration of environmental considerations into sectoral and developmental policies.</p>
<p><b>15.</b> Overall, STAP questions the approach of this project in its current design. Decisions regarding future interventions in the ChEZ should be taken sequentially, starting with securing the contamination</p>	<p>In summary, we believe that not only are the measures described in this project necessary, we believe them to be urgent the level of environmental research and monitoring currently occurring</p>

<p>sources within the zone, putting comprehensive rehabilitation plans in place, and then gradually looking at those areas with more rapid rates of decontamination with an eye to returning them to productivity.</p> <p>The proposed Research Centre could certainly play a role in this. However, STAP believes that additional measures as described in this PIF would be premature at this stage, particularly in terms of the significant unknowns that remain in terms of the potential remaining threats from opening the ChEZ at this time. STAP strongly recommends a major rethinking of this project in line with recommendations from current scientific assessments.</p>	<p>within and around the ChEZ is limited and certainly suboptimal, unlike in a IUCN highest “Category Ia” reserve. In a Category Ia reserve, research is the only activity allowed and often the main purpose for its establishment.</p> <p>Ref. IUCN: <i>“Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring”</i> – which is currently not the case for the ChEZ.</p> <p>In addition to the Biodiversity conservation and CC mitigation research angles, long-term sound monitoring and science capacity in the ChEZ will not only benefit Ukraine, but also help the global community to understand the dynamics of the ongoing natural recovery process, and identify any required and minimal management action required to facilitate such processes and minimize the risks to human health in surrounding areas. Further, the “no action” option, without an underlying sound scientific research and monitoring programme (to be supported by the GEF project) - including monitoring of forest fires risks- may cause the irreversible loss of globally important Biodiversity and Carbon Stocks in the ChEZ, as well as cause significant damage to human health outside the ChEZ. The likelihood of such losses, through potentially catastrophic forest fires and encroachment into the zone by myriad interests, made possible by the current lack of adequate protection of the zone’s natural resources, is immediate.</p>
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**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS**

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: 130,000			
<i><b>Project Preparation Activities Implemented</b></i>	<i><b>GEF/LDCF/SCCF/NPIF Amount (\$)</b></i>		
	<i><b>Budgeted Amount</b></i>	<i><b>Amount Spent To date</b></i>	<i><b>Amount Committed</b></i>
1. Integrated national workplan developed	20,000	20,000	0
2. Desk review/gap analysis	35,000	35,000	0
3. Initial stakeholder inputs/national workshop	40,000	40,000	0
4. FSP development	86,818	86,818	0
<b>Total</b>	<b>181,818</b>	<b>181,818</b>	<b>0</b>

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

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

N/A