PROJECT IDENTIFICATION FORM (PIF).

PROJECT TYPE: FSP
TYPE OF TRUST FUND: GEF TF

PART I: PROJECT INFORMATION

Project Title:	Upgrading of China SHP Capacity Project		
Country(ies):	China	GEF Project ID:[1]	**6919**
GEF Agency(ies):	UNIDO	GEF Agency Project ID:	140196
Other Executing Partner(s):	Ministry of Water Resources, Ministry of Finance International Centre for Small Hydro Power (ICSHP)	Submission Date: Resubmission Date:	08/08/2014 22/08/2014
GEF Focal Area(s):	Climate Change	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of parent program:	*N/A*		

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

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	**Trust Fund**	**(in $)**	
		GEF Project Financing	**Co-financing**
CCM-1 Program 2	GEFTF	8,925,000	60,000,000
Total Project Cost		8,925,000	60,000,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Environmental upgrading of rural SHP stations in China

Project Component	**Financing Type[3]**	**Project Outcomes**	**Trust Fund**	**(in $)**	
				GEF Project Financing	**Co-financing**
1. Policy and institutional framework promoting green SHP plants.	TA	1.1 Policy and institutional framework for promoting green SHP plants are strengthened.	GEFTF	1,200,000	6,250,000
2. Greening and improving the management and safety standards of existing SHP plants.	Inv	2.1 15 refurbished green SHP plants are fully operational and improved management and safety standards are in place.	GEFTF	5,500,000	42,500,000
	TA	2.2 Improved performance and safety management for SHPs in place.	GEFTF	500,000	2,000,000
3. Knowledge base and capacities in the fields of green SHPs and improved and safe SHP management.	TA	3.1 Knowledge and awareness of decision makers, experts and technicians about green SHP retrofitting and management are improved.	GEFTF	1,150,000	5,900,000
4. Monitoring and evaluation.	TA	4.1 A monitoring and evaluation plan will be prepared and carried out.	GEFTF	150,000	750,000
		Subtotal		8,500,000	57,400,000
		Project Management Cost (PMC)[4]	(select)	425,000	2,600,000
		Total Project Cost		8,925,000	60,000,000

[3] Financing type can be either investment or technical assistance.

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

If Multi-Trust Fund project :PMC in this table should be the total and enter trust fund PMC breakdown here ( )

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

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
Recipient Government	Ministry of Water Resources	Grants	30,000,000
Private Sector	SHP owners, local Governments	Grants	29,775,000
GEF Agency	UNIDO	In-kind	150,000
GEF Agency	UNIDO	Grants	75,000
Total Co-financing			60,000,000

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b)[b)]	Total (c)=a+b
(select)	(select)	☐	(select)	(select as applicable)			0
(select)	(select)	☐	(select)	(select as applicable)			0
Total GEF Resources					0	0	0

a) No need to fill this table if it is a single Agency, single Trust Fund, single focal area and single country project.
b) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT PREPARATION GRANT (PPG)[5]

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

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

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in $)		
					PPG (a)	Agency Fee[6] (b)	Total c = a + b
UNIDO	GEF TF	China ☐	Climate Change	(select as applicable)	200,000	19,000	219,000
Total PPG Amount					200,000	19,000	**219,000**

[5] PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to $50k for PF upto $1 mil; $100k for PF up to $3 mil; $150k for PF up to $6 mil; $200k for PF up to $10 mil; and $300k for PF above $10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

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

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[7]

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	*N/A*
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	*N/A*
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	*N/A*
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	*N/A*
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO_{2e} mitigated (include both direct and indirect)	6,455.750tCO_2e (see A.1.5)
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	*N/A*
	Reduction of 1000 tons of Mercury	*N/A*
	Phase-out of 303.44 tons of ODP (HCFC)	*N/A*
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	*N/A*
	Functional environmental information systems are established to support decision-making in at least 10 countries	*N/A*

PART II: PROJECT JUSTIFICATION

A PROJECT OVERVIEW

A.1 PROJECT DESCRIPTION

1) THE GLOBAL ENVIRONMENTAL PROBLEMS, ROOT CAUSES AND BARRIERS THAT NEED TO BE ADDRESSED

According to the Fourth Assessment of the International Panel for Climate Change (IPCC AR4), global greenhouse gas (GHG) emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004. These emissions will continue to grow over the next few decades if current climate change mitigation policies and related sustainable development practices are kept up. China, as most countries, tries to contribute to climate change mitigation by increasing the use of renewable energies. Under the 12th Five-Year-Plan (FYP) there are aims to achieve an 11.4% share in non-fossil fuel consumption and a 30 % share in non-fossil fuel installed capacity by 2015.

2) THE BASELINE SCENARIO AND ANY ASSOCIATED BASELINE PROJECTS

China has made great achievements in hydropower development, which contributed to the socio-economic development in rural areas, particularly in providing clean and affordable electricity. Because of the development of small hydropower (SHP) more than 300 million people, one third of all the counties covering half of all the territories in China, have access to low carbon electricity. With a total SHP potential of 128 GW (using the country's definition of 50 MW), China is ranked as the first in the world's SHP

[7] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

potential.[8] To date about 40 per cent of China's SHP resources have been developed. By 2013, the country had approximately 46,000SHP stations with a total installed capacity of about 71 GW and an annual output of over 220,000 GWh.[9]

A preliminary survey showed that SHP stations, built before or during the 1980s, operate below the average efficiency (82-88%) of those stations built after the year 2000. A total of 22,000 rural SHP plants (18,000 MW) were commissioned before 1995. In addition, after many years of operation, several SHP plants can no longer guarantee full operational security; flood protection, drought prevention infrastructure, irrigation and water supply functions are not always fully operational. The old equipment not only severely impacts the environment but also causes safety risks. Furthermore, because of the low wholesale electrify tariff for rural hydropower installed before the 1990s (about 0.04 USD/kWh, varying from province to province), many SHP stations cannot sustain their own operation and maintenance, yet alone refurbishment or additional environmental functions. This hinders SHP owners to retrofit their power plants. GEF funding is needed to cover the incremental costs related to the greening of the SHPs to ensure additional environmental and social benefits such as flood control, irrigation, water quality, and increase the financial viability of the plants. Furthermore, the knowledge base on environmentally sound SHP retrofitting needs to be built in China. Awareness and understanding as well as a long term vision with regards to the necessity and benefits of green hydro refurbishment are lacking in the sector, as well as relevant expertise and necessary skills, both at policy level as well as at plant owner and project developer level.

During 2011-2012, the SHP capacity expansion pilot project had a remarkable effect on the improvement of the plant's performance. The first refurbishment of 733 SHPs (867 MW) led to efficiency increases of 32% of installed capacity and 51% of generation, improving the ecological conditions of 383 rivers. The total investment amounted to RMB 3.534 billion (around USD 600 million), among which RMB 1.233 billion (around USD 200 million) were a subsidy from the Central Government.[10]

Since July 2013, based on the experiences from the pilot phase, the Ministry of Water Resources (MRW) and Ministry of Finance (MOF) have been carrying out the SHP capacity expansion programme nationwide, aiming to support the capacity expansion for about 4,000 SHP plants constructed before the end of 1995, increasing the overall installed capacity from 6.62 GW to 7.9 GW, and generation from 21.3 billion kWh to 30.9 billion kWh. The first stage (2013-2015) involves 3,500 SHPs in 21 provinces and regions, aiming at an increased capacity of 1219.3 MW and electricity output of 9,085,900 MWh. The second stage will involve 177 SHPs in 5 provinces and regions, with an increased capacity of 70 MW.

The proposed Project will be based on relevant national programmes, initiatives, laws and regulations as set forth under sections B.1 and A.5.

3) THE PROPOSED ALTERNATIVE SCENARIO, WITH A BRIEF DESCRIPTION OF EXPECTED OUTCOMES AND COMPONENTS OF THE PROJECT

The proposed Project aims at supporting MWR in broadening its scope of current upgrading activities to reduce impacts, while gaining additional environmental co-benefits from the existing SHP refurbishment projects. The greening of SHPs project will improve the rivers' ecological condition, increase SHP efficiency and, outputs, enhance management and safety practices, introduce green standards and increase the local capacities among other issues.

The project aims at introducing innovative policy packages with the aim of reducing GHG while at the same time delivering multiple environmental benefits. The project works on incentives for economically sound mitigation actions. Various support mechanisms such as subsidy schemes, regulatory standards and market mechanisms for green SHP plants will be tested in order to create the necessary competitive level the for low GHG electricity generation in China. The project will aim at setting up a business model for the up-scaling, in large numbers, of the deployment of green SHP refurbishment.

By implementing green hydropower standards, updating equipment, increasing the local capacities, establishing the right policy framework and improving safety management, SHP plants deliver multiple co-

[8]World Small Hydropower Development Report 2013 - China Country Report: http://www.smallhydroworld.org/index.php?id=244
[9]Small Hydropower Yearbook 2013 from Rural Hydropower Bureau, Ministry of Water Resources, P.R.China
[10]According to exchange rates from 06/2014.

benefits. On top of contributing to climate mitigation through GHG reductions, they also contribute to climate adaptation by contributing to flood control and management, the conservation of water bodies, improved water quality, sustainability of water supply to the local population, biodiversity conservation and local economic development.

The Project is situated at the heart of the water-energy nexus and aims at promoting innovation, technology transfer, and supportive policies and strategies. The proposed project objective is to remove barriers to the ecological refurbishment of existing rural SHPs mainly through pilot demonstrations in technology and management applications, policy advice as well as capacity building. The enabling policy framework, investment from different channels and benefit/cost sharing will be studied carefully to provide adequate models for replication.

Within this purpose, UNIDO will collaborate with the International Centre on Small Hydro Power (ICSHP) throughout the whole project cycle. As an international Centre, ICSHP can execute the ecological upgrading of the pilot SHP stations in line with rules and procedures as mandated by UNIDO, and will ensure quality and timely execution of the activities:

Component 1: Policy and institutional framework promoting green SHP plants. While China has made significant advances with respect to energy policy development and SHP refurbishment concentrating on equipment, focus on ecological and environmental aspects and improved management practices has been lacking. MRW has been working on a concept for green SHP criteria and methodology which will be further developed through the project. Proposals for guidelines, green SHP standards, supportive policies and strategies, promotional instruments and incentive measures, such as green hydropower feed-in tariff (FIT) and ecological compensation systems will thus be prepared alongside policy suggestions such as financing supporting and credit supporting policies and submitted to the Government for approval in order to facilitate implementation and up-scaling of green SHPs. Experiences and practices on environmental regulations (ecological flow maintenance, river environment recovery and subsidies for green power) will also be studied.

The most common examples of subsidy schemes for green hydropower are investment grants for retrofitting activities (procurement, construction, feasibility and design stage), higher electricity tariffs, quota systems, preferential access to the grid, or certification schemes.

Selected EU member states with a high share of SHP such as Austria, and Norway, Switzerland and the U.S.A. have been leading in the field of green hydropower initiatives. The following initiatives will be considered in the design of the Chinese initiative because they are relevant to specific areas of the greening of SHPs:

- EU directives on habitat[11] and water framework,[12] these directives are particularly important for setting standards in nature protection, which are the most relevant in terms of environmental policies for SHP development in the EU;
- Low Impact Hydropower Certification Programme, this certification scheme sets standards for eight relevant criteria: 1) river flows, 2) water quality, 3) fish passage and protection, 4) watershed protection, 5) threatened and endangered species protection, 6) cultural resource protection, 7) recreation, and 8) facilities recommended for removal.[13]
- Hydropower Sustainable Assessment Protocol[14] launched in 2011, the protocol is the result of a large consultative process with the participation of civil society Governments, Banks and Industry. It offers a way of assessing more than 20 sustainability topics.
- Greenhydro Standard (Switzerland) which developed the fundamental principles required for a standardized and scientifically proven certification of “Green Hydropower Plants” and ensures environmentally

[11] EU Habitats Directive at :http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm
[12] EU Water Framework Directive at : http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm
[13] Low Impact Hydropower Institute LIHI at: http://www.lowimpacthydro.org/about.html - a precondition for the Green-e Standard which markets sustainable renewable energy on the retail market: http://www.green-e.org
[14] International Hydropower Association (IHA) at: http://www.hydrosustainability.org/

responsible management and plant layout.[15] The procedure contains both general concepts for the certification of hydropower plants and also the special criteria required in valuing a green hydropower plant.

All these initiatives focus on guaranteeing the environment-friendly operation or construction of hydropower stations. These topics could also be incorporated in an environmental impact assessment process or the establishment of a standard or criteria set.

Component 2: Greening and improving the management and safety standards of existing SHP plants. This component encompasses technical assistance, technology transfer and investment activities. About 15 stations from the refurbished SHP plants will be selected to develop Green Small Hydropower Demonstration Plants.[16] The selection of the plants will consider various criteria such as plant size, geographical distribution, ownership, development method (diversion station mainly) and construction ages of the stations. The following aspects will be looked into in great detail in this component:

- Environmental improvements such as environmental remediation for dehydration sections between the dam and powerhouse of diversion SHP stations, ecological flow discharging and supervision, animal life protection;
- Improved management such as management regulation of the optimization and electricity dispatching, safety and standardized operation to improve the efficiency;
- Improved technology application and equipment such as innovative energy saving transformer, monitoring equipment, sensors and measurement control equipment.

The 15 selected SHP plants will be used as examples for Grade A stations showcasing: a) safety production standards; b) intelligent monitoring systems including sensors and advanced measurement control equipment; c) establishing a connection between the key equipment operation and the measuring point to realize real time monitoring of the equipment operation status and; d) a dynamic management. Accordingly, the management of the SHP stations including automation, information exchange and standardization will be improved. Automated SHP stations will be promoted through this effort and plant performance will be increased significantly.

The GEF contribution of USD 5.5 million will be used mainly to cover for the incremental costs associated to improving the environmental performance of SHPs; such as purchase and installation of special equipment required to improve the ecological condition and safety management e.g. innovative energy saving transformers, monitoring equipment, sensors, and measurement control systems. As the number of pilot SHP stations has been increased to 15 plants, each station will receive on average USD 360,000. For the pilot plants, the latest technology and equipment available will be installed. The GEF grant will be mainly used to improve the ecological conditions and safety management of the plants to achieve the green hydro criteria, while the funding/subsidy from the Chinese Government will be used for the general refurbishment itself.

Component 3: Knowledge base and capacities in the fields of green SHPs and improved and safe SHP management. This component encompasses technical assistance to strengthen the knowledge base and capacities of relevant stakeholders in China. This will happen through workshops, seminar, meetings and trainings on best practices in ecological SHP refurbishment and operation, management procedures, technology and equipment. Relevant officials, SHP project owners and industry actors will participate in the appropriate design and planning of upgrades and refurbishments and will learn through dissemination of experiences and lessons learnt of case studies. A qualification system and regulations for accrediting agencies for small hydro safety standards will be established to train experts and qualified agencies in supporting the construction of green SHP refurbishments according to the safety standards. Women will be especially targeted as recipients of trainings under this component. In order to guarantee sustainability of and ownership for the capacity building activities, MWR together with ICSHP will take over these activities in the long-term.

Component 4: Monitoring and Evaluation. This project component covers project monitoring and oversight by UNIDO in close coordination with country counterparts and project partners, as well as mid-term review and

15Greenhydro Standard at: http://www.greenhydro.ch/level0/greenhydro.html

[16]**Green Small Hydropower Plants** will be subject to a set of criteria (to be established) which will set benchmark levels for SHP plants with significantly decreased environmental impacts.

terminal evaluation of the Project. A monitoring plan will be established at the onset to assure compliance with UNIDO and GEF guidelines.

4) INCREMENTAL ADDITIONAL COST REASONING AND EXPECTED CONTRIBUTIONS FROM THE BASELINE, THE GEFTF, LDC/SCCF AND CO-FINANCING

The proposed UNIDO/GEF Project aims at supporting the SHP capacity expansion programme of the MWR, by reducing the environmental impact of SHP plants to better meet the challenges imposed by climate change. The objective of this project is to reduce GHG emissions and dependence on fossil fuels through the promotion of upgrading, greening and improving the management of existing SHP stations, contributing to the competitiveness of China's industries. It is envisaged that through the assistance received from the GEF Trust Fund and the National Government SHP upgrading can be successfully done.

5) GLOBAL ENVIRONMENTAL BENEFITS (GEFTF, NPIF) AND/OR ADAPTATION BENEFITS (LDC/SCCF)

The project aims at achieving global environmental benefits by reducing greenhouse gas emissions and improving the environmental impacts of existing SHP stations in China. Alongside important social and economic benefits, the project will generate substantial reductions of GHG emissions and improve local river ecology, hence contributing to adaptation of SHP plants to climate change. It is estimated that additional electricity of about 425,000MWh per year will be obtained through the project activities, resulting in emission reductions of 6,455.750tCO2e.[17] Although there are about 22,000 SHP stations in China with the potential for replication, the indirect impact of the project will be calculated during PPG phase.

6) INNOVATIVENESS, SUSTAINABILITY AND POTENTIAL FOR SCALING UP

Innovation: The project's approach is deemed to be innovative as it strongly builds upon existing initiatives to assure larger-scale impacts and long term sustainability of both energy and water availability contributing to a number of co-benefits that increase climate resilience of the local population. The project will transfer knowledge and technology in the field of green hydropower technology and policy to China. Through its multi-purpose approach, the project leads to multiple co-benefits, besides GHG reductions, and positive environmental impacts: it increases climate resilience and safety of SHP plants through reducing pressure on water bodies and improving water quality. Leading experts in the field of green small hydropower development will be engaged to support China in its SHP policy development to become a pioneer in Asia in this field.

Sustainability: The project follows a multi-purpose approach and provides SHP stations with reliable business models and additional environmental and sustainability co-benefits. Furthermore, green SHP stations will be more economically attractive for operators. By setting up the right policy framework and incentive mechanisms, creating local capacities and demonstrating new technologies and their benefits, the project ensures the long term replication of the initiative. Local beneficiaries will be trained to sustain the capacity building activities after project completion.

Potential for up-scaling: The GEF support of USD 8.9 million would not only trigger around USD 60 million in direct investment but also have longer-term indirect investment impacts that could be substantially higher. With 22,000 SHP stations in China with the potential for replication, the up-scaling potential for the project activities is immense.

A.2 STAKEHOLDERS

Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes x /no☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:

The project will engage with a broad range of stakeholders on a national as well as regional level, incl.:

[17] China's Regional Grid Baseline Emission Factors 2013 issued by the China National Development and Reform Commission (NDRC) 2013 average is at 0.7595 tCO_2/MWh http://www.ccchina.gov.cn/archiver/cdmcn/UpFile/Files/Default/20130917081426863466.pdf. The emission reduction calculation is based on the GEF calculation manual and assumes an average SHP life time of 20 years, and direct installed capacity of the project of around 50 MW.

- Academic and research institutions: National and regional universities, institutes and research laboratories such as the International Center on Small Hydro Power (ICSHP) – are envisaged to become involved by contributing to the generation of knowledge as well as the research, development and training activities and partly project implementation on the ground.
- Trade associations and chambers of commerce: These associations gather companies in the manufacturing and export sector and are an important channel to disseminate knowledge and valuable information among the different members. The most relevant of these associations for the project will be identified during project preparation and closely cooperated with.
- NGOs and social organizations: Organizations related to renewable energy, technology innovation and environmental aspects are particularly relevant. Moreover, specialized civil associations shall be engaged to assure that local as well as international standards are met.
- Small hydropower sector: Companies from the small hydropower sector form the main beneficiaries of the project, including SMEs in the SHP sector as well as engineering consultancies. Special attention will be given to the training and employment of women.
- Indigenous peoples: in the selection of pilot sites special consideration will be given to avoid negative impacts on indigenous populations. The rural population and well as indigenous people, who most commonly live in remote rural areas with low electricity access rates and low grid reliability, will benefit from improved renewable electricity generation, both in terms of quality and quantity in electricity supply. Through improved electricity access, electric appliances can be used on a regular basis to increase industrial activities. The project also increases climate resilience of SHP plants by reducing pressure of water bodies and other environmental co-benefits. Indigenous people will benefit from this technology transfer as they are often most severely affected by climate change. Furthermore, quality of drinking water will be maintained or improved and water for irrigation will be available for productive uses.

A.3 GENDER CONSIDERATIONS

Are gender considerations taken into account? (yes x /no☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The UNIDO Policy on Gender Equality and the Empowerment of Women outlines UNIDO's commitment to and recognition of the positive impact of women's empowerment on inclusive and sustainable industrial development. The present Project will already apply UNIDO's Action Plan and will support women in the field of green small hydropower. Women will especially be targeted as recipients in capacity building activities, while rural women will benefit from increased and improved power production in remote areas. Furthermore disaggregated indicators will be introduced during the PPG phase to assess the impact of the project by gender.

A.4 RISK

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

Risk	Rating	Mitigation
1. Lack of business case for green SHP	Low	Various alternative settings of SHP stations will be analyzed to cover all kinds of possibilities. It might be that some cases do not provide an attractive business case yet, due to the great range of variables (location, technology, size, ownership/ operator) and the large potential for up-scaling, it is believed that this is a minor risk.
2. Lack of trust or interest in green SHP technology	Low	China has a very active national SHP industry which in part is already active in exporting equipment and knowledge. The Project will further strengthen industry actors across the value chain in extending their product and service portfolio towards more ecological sound solutions. Furthermore, renewable electricity for rural areas and productive use is definitely sought after in China and SHP is strongly promoted by MRW.

3. Lack of human capacity to guarantee operation of green pilot projects and up scaling.	Low	Capacity building is an essential part of the Project. Knowledge and skills on SHP upgrading and operation and maintenance is already strongly established in the country. The pilot projects will be located at already existing sites with qualified staff that will be further trained in environmental and management aspects.
4. Climate Change, social and environmental risks	Low	The project itself concentrates on improving the environmental impacts of already existing SHP projects. Social and environmental risks will be negligible. Water flow variability induced by climate change could pose a long-term risk towards hydropower generation in general, but actions taken by the program will also adapt SHPs to possible climatic changes.

A.5. COORDINATION

Coordination will happen with the following GEF financed initiatives:

- UNIDO Promoting Energy Efficiency in Industrial Heat Systems and High Energy-consuming Equipment (IA approved stage).

The project will also work closely with MRW's other ongoing initiatives in the SHP field:

- New Hydropower Rural Electrification Counties Program - completing the National Planning of New Rural Electrification during the 12thFYP, i.e. to invest RMB 43.52 billion (around USD 7 billion) to build SHPs (5,516MW) in 300 new rural electrification counties.
- Substituting SHP for Fuel Program (2009-2015): The program's aim is to replace traditional (wood) fuels for cooking and heating through the provision of electricity from newly installed SHPs, thus protection forest resources. A total of 1,022 SHPs (1,700MW) will be constructed to reach a rural population of 6.77 million (1.7 million households), with 271 SHPs (722 MW) already constructed.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS

For the first time, the Outline of 12th FYP for National Economic and Social Development has taken the reduction of CO_2 emission intensity per unit of GDP by 17% as a binding target, and further specified the key tasks for GHG emission control among other aspects.[18] Since 2004, the central Chinese Government has listed rural hydro power development in its rural infrastructure construction tasks to further increase investments and loan input to support rural hydropower development.

Renewable energy policy- The Renewable Energy (RE) Law emphasizes that all of the RE shall be guaranteed to be purchased by grid enterprises without quantity limitations. Under the 12thFYP there are aims to achieve an 11.4 % share in non-fossil fuel consumption and a 30% share in non-fossil fuel installed capacity by 2015, the hydropower installed capacity will reach 290GW.[19]

The Medium- and Long-term Development Plan for Renewable Energies has explicitly put forward, inter alia, that the overall goals of renewable energy development in China in the next 15 years are to increase the proportion of renewable energy in its total energy consumption, to address the problems for people living without electricity in remote areas and fuel shortage in rural areas, and to promote industrialized development of renewable energy technologies.[20]

Legislation on small hydropower: The Chinese Government has passed a series of policies to support the development of SHP resources since the early 1970s. As for the taxation policy, value added tax for SHP has, since 1994, stood at 6 % (compared to 17 % tax on large hydropower stations). Presently the Chinese Government circulates a "notice on simplifying and incorporating VAT rate" fixing the VAT on SHP at 3%. The relevant authority is working to promulgate a regulation on rural hydropower development.

[18] The People's Republic of China (2012). 2nd National Communication: available from: http://unfccc.int/essential_background/library/items/3599.php?rec=j&priref=7666#beg

[19] The People's Republic of China (2012). The 12th FYP for China's Energy Development, State Council. [Original document in Chinese]. Available from www.gov.cn/zwgk/2013-01/23/content_2318554.htm

[20] The People's Republic of China (2012). 2nd National Communication: available from: http://unfccc.int/essential_background/library/items/3599.php?rec=j&priref=7666#beg

The Chinese Government continues to support the SHP sector in its 12th FYP (2011-2015). The first objective is to fully complete the National Planning of New Rural Electrification.[21]The second objective is the wider implementation of the tasks covered by the Hydropower for Fossil Fuel Power Plan 2009–2015.[22]The third objective is to carry out SHP efficiency and capacity expansion projects According to the Efficiency Improvement and Capacity Expansion Planning carried out in July 2011, the objective is to refurbish 4,500 existing SHPs with a total installed capacity of 7,487 MW reaching a total installed capacity of 9,050 MW (see Part II 2. above).[23]

[21]Xinhua News Agency (2011). China started the construction of the 12th FYP-hydro Rural Electrification County Programme. Available from www.gov.cn/jrzg/2011-05/07/content_1859532.htm [Original document available in Chinese].
[22]China Ministry of Agriculture (2012). Excerpt of China's 12th Five-Year Plan, Agriculture Part. Available from http://english.agri.gov.cn/Topics/12th/201204/t20120428_4365.htm Accessed December 2012.
[23]Chen Lei (2011).Synergistic expansion of a rural hydropower pilot project. Speech in Chinese by Minister of Water Resources on 19 October 2011. Available from www.shp.com.cn/shp/zt/zxkr/xw/webinfo/2011/10/1318573423144361.htm.

AGENCY(IES)

A. Record of Endorsement[24] of GEF Operational Focal Point (S) on Behalf of the Government(s):
(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Mr. GUO Wensong	Operational Focal Point Director, IFI Division III, International Department	Ministry of Finance	**08/06/2014**

B. GEF Agency(ies) Certification

This request has been prepared in accordance with GEF policies[25] and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date *(MM/dd/yyyy)*	Project Contact Person	Telephone	Email
Philippe R. Scholtès, Managing Director, Programme Development and Technical Cooperation Division, UNIDO-GEF Focal Point		22/08/2014	Diego Masera, Unit Chief, Rural and Renewable Energy Unit, Energy and Climate Change Branch	+43 1 260 26 - 3879	D.Masera@unido.org 

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

[24] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required
even though there may not be a STAR allocation associated with the project.
[25] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF