



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: A New Green Line: Mainstreaming Biodiversity Conservation Objectives and Practices into China's Water Resources Management Policy and Planning			
Country(ies):	China	GEF Project ID: ¹	5665
GEF Agency(ies):	FAO (select) (select)	GEF Agency Project ID:	622963
Other Executing Partner(s):	International Economic and Technical Cooperation and Exchange Centre of the Ministry of Water Resources (MWR), The Nature Conservancy (TNC)	Submission Date: Resubmission Date:	21/09/2015 28/10/2015
GEF Focal Area (s):	BD	Project Duration(Months)	48
Name of Parent Program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>		Project Agency Fee (\$):	250,774

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
(select) BD-2	<p>Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation.</p> <p>Outcome 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks.</p>	<p>Output 2.1. Policies and regulatory frameworks for production sectors.</p> <p>Output 2.2. National and sub-national land-use plans that incorporate biodiversity and ecosystem services valuation.</p> <p>Output 2.3. Certified production landscapes and seascapes.</p>	GEF TF	2,639,726	25,975,000
Total project costs				2,639,726	25,975,000

B. PROJECT FRAMEWORK

Project Objective: To mainstream biodiversity conservation objectives and practices into China's water resources management policy and planning.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
Component I: "Changing the	TA	Outcome 1.1	O 1.1.1: Gap analysis conducted at national, provincial and municipal level	GEF TF	424,360	4,180,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

<p>framework” Institutional and planning framework for mainstreaming biodiversity into water re-sources management at national, provincial and local levels.</p>		<p>Mainstream biodiversity objectives and practices into key water resource management policies, planning, and legal stipulations at the national, provincial and prefecture level</p>	<p>to identify entry points and suitable targets for mainstreaming of biodiversity (policies, development plans, laws) including a regular review of new entry points throughout the project duration</p> <p><i>Indicators and Targets: Initial gap analysis conducted at national level, provincial level for two pilot provinces, and municipal level for four pilot municipalities; renewal of results at a 6-months interval.</i></p> <p>O 1.1.2: Biodiversity mainstreaming objectives and priorities incorporated into key water sector policies and plans at national level (including e.g. National Comprehensive Water Resources Plan; incl. Five Year Development Plan and Sectoral Development Plans)</p> <p><i>Indicators and Targets: Biodiversity mainstreamed into at least 3 important national level WRM policies, plans, or laws .</i></p> <p>O 1.1.3: Biodiversity mainstreaming objectives and priorities incorporated into key water sec-tor policies and plans at provincial level in Chongqing and Yunnan (including e.g. Provincial Water Resources Protection Plans).</p> <p><i>Indicators and Targets: Biodiversity mainstreamed into at least 3 provincial level WRM policies, plans or law for each of the two provinces (min. 6 provincial level improvements in total)</i></p> <p>O 1.1.4 Biodiversity mainstreaming objectives and priorities incorporated into the water sector development plan and the river management plan at prefecture level in all four pilot municipalities (including e.g. Prefecture level water resource management etc.; River Basin Master Plans for pilot rivers).</p> <p><i>Indicators and Targets: Biodiversity mainstreamed into water sector plan as well as river management plan for each of the four pilot sites (prefecture level)</i></p>				
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Outcome 1.2

Develop administrative regulations as well as technical guidelines for translating biodiversity objectives into concrete WRM practices (with special emphasis on e-flow implementation through corresponding adjustment of human-made flow alteration)

O 1.2.1 Biodiversity considerations, with specific focus on systematically establishing and implementing e-flows, mainstreamed into WRM regulations at national and provincial level (amendment of existing regulation or development of additional regulation).

Indicators and Targets: Biodiversity mainstreamed into at least 3 important national level regulations and 3 important provincial level regulations for each of the two pilot provinces

O 1.2.2 Technical guidelines formulated and implemented, providing advice to river managers on translating biodiversity objectives into concrete action at the local level.

Indicators and Targets: Technical guidelines drafted for the national, provincial and prefecture level policies (outcome 1.1) and regulations (outcome 1.2); other suitable policies and regulations will be included as far as possible

O 1.2.3 Regulations on dams and dam cascades expanded and improved to include considerations on the implementation of e-flow into both construction and operation of small and medium river dams.

Indicators and Targets: Regulations for dam construction and operation drafted or improved at national and provincial level (for both pilot provinces)

Outcome 1.3

Establish new institutional partnerships for WRM between government and CSOs

O 1.3.1 New partnerships among government and civil society organizations established to mainstream biodiversity into water resources management.

Indicators and Targets: New collaborative partnerships operational at national level, provincial level for 2 pilot provinces; Working group/Stakeholder network established and operational at prefecture level for 4 pilot areas.

Outcome 1.4

Develop system of

O 1.4.1 Create an official "Green Line Scorecard" system for measurement and certification of advanced

		<p>principles and corresponding standards to systematically measure and certify biodiversity conservation in China's water bodies</p> <p>Outcome 1.5</p> <p>Increase levels of government investments into biodiversity conservation for river eco-systems</p>	<p>ecosystem based river management and achievement of biodiversity conservation objectives</p> <p><i>Indicators and Targets: "Green Line Scorecard" developed and ready to be tested in the pi-lot sites (see component II).</i></p> <p>O 1.4.2 "Green Line Scorecard" widely discussed, amended and lastly agreed upon by relevant stakeholders at national (e.g. across MWR Departments), provincial and local levels in pilot provinces and sites</p> <p><i>Indicators and Targets: "Green Line Scorecard" created with input from and endorsed by all relevant stakeholders</i></p> <p>O 1.5.1 Expert assessments to identify suitable opportunities for river biodiversity investments maximizing effectiveness as well as efficiency of investments implemented</p> <p><i>Indicators and Targets: Investment opportunity assessments conducted at national level as well as for both pilot provinces</i></p> <p>O 1.5.2 Government investments in aquatic biodiversity related water management practices significantly and measurably increased</p> <p><i>Indicators and Targets: Increase in relevant government investment of at least US\$20 mil-lion) in value</i></p> <p>O 1.5.3 Expansion of number of water management programs and related budgets that include biodiversity conservation as an objective</p> <p><i>Indicators and Targets: At least 5 additional major water management programs (all government levels combined with at least one national level initiative) and related budgets include biodiversity conservation</i></p>			
Component II: "Enhancing Implementation" Demonstrate on-the-ground activities for	INV	<p>Outcome 2.1</p> <p>Broaden the alliance of stakeholders and clarify distribution</p>	<p>O 2.1.1 Pilot prefectures and provinces establish new partnerships among government and civil society organizations to mainstream biodiversity into water resources management; in-cludes corresponding</p>	GEF TF	1,430,670	13,970,000

<p>mainstreaming biodiversity in pilot rivers in Chongqing and Yunnan Provinces.</p>		<p>of responsibilities to strengthen the networks of partners involved in the implementation of biodiversity conservation measures</p>	<p>county/prefecture level stakeholder groups.</p> <p><i>Indicators and Targets: New collaborative partnership operational at provincial level for 2 pilot provinces (supporting mainstreaming under 1.1.3 as well as strengthening implementation capacity for pilot activities; Working Group and Stakeholder network established and operational at prefecture level for 4 pilot areas.</i></p> <p>O 2.1.2. Clarify responsibilities and tasks for all stakeholders involved in river biodiversity conservation (e.g. appointment of dedicated river managers) at provincial and prefecture level</p> <p><i>Indicators and Targets: Clear biodiversity-related responsibilities for stakeholders in river management established, effectively addressing fragmentation of competences and coordination of tasks across geographical borders as well as across institutions</i></p>			
		<p>Outcome 2.2</p> <p>Pilot prefectures in Yunnan demonstrate successful implementation of local-level biodiversity conservation activities, implementing e-flows</p>	<p>O 2.2.1 Ensure that pilot activities are included and embedded in the WRM planning processes at provincial and prefecture level under component I.</p> <p><i>Indicators and Targets: Biodiversity mainstreaming under component I explicitly mentions pilot activities.</i></p> <p>O 2.2.2 Support the decision-making process on how to best balance e-flow implementation with development objectives based on the information and recommendations provided by the e-flow analysis under component III.</p> <p><i>Indicators and Targets: E-flow implementation strategy determined and agreed upon by all relevant prefecture level government stakeholders (incorporating expertise and recommendations from the "new partnerships", see above).</i></p> <p>O 2.2.3 Review and adjustment of existing river flow alteration (especially dam structures,</p>			

embankments and abstraction pattern) along Buma and Enle River (Zhenyuan County) to establish e-flow, enhance habitats and increase connectivity (based on recommendations from e-flow analysis, river health assessment and water accounting.)

Indicators and Targets: E-flow successfully implemented within Buma/Enle river; habitat not blocked to upstream migration by inadequate culvert, small reservoir and other water infra-structure design, resulting in improved habitat connectivity

Area directly covered by BD mainstreaming: 14 400 ha

O 2.2.4 Habitat improvements along Buma and Enle River (Zhenyuan County) including swamp restoration and the creation of wetlands (along the Enle river banks).

Indicators and Targets: Increased ecosystem ability to sustain globally significant biodiversity (e.g. potamodromous fish species such as: Tor sinensis; Clupisoma sinense; Largemouth Bronze Gudgeon (Coreius guichenoti) & Royal Clown Loach (leptobotia elongate)

Area of improved habitats: 9.3 ha

O 2.2.5 Wetland rehabilitation and tree restoration along Chuan River (Jingdong County) to revive habitat for fish and especially aquatic bird species

Indicators and Targets: Enhanced habitat for and increasing population of aquatic birds as measured by bird monitoring system (monitoring stations in two towns); ca. 35 km of minimal disturbance of key habitats

Area of improved habitats and restored wetlands: 25 ha

O 2.2.6 Improvements to existing dam structures along Chuan River to a) implement e-flow (based on recommendations from e-flow assessment; see 2.2.3) and b) facilitate fish migration

Indicators and Targets: E-flow

successfully implemented within Buma/Enle river; Installation of fish migration channels and/or ladders or other suitable migration instruments

Area directly covered by BD mainstreaming: 7500 ha

O 2.2.7 Application of aquatic biodiversity monitoring system as well as “Green Line Scorecard” certification system in project area

Indicators and Targets: BD monitoring system established with two monitoring stations per river and used for improvement of BD conservation measures; ca. 80km of river with newly certified “Green Line” water management practices

Area covered by GLS in Yunnan: 21 900 ha

Outcome 2.3

Pilot prefectures in Chongqing demonstrate successful implementation of local-level biodiversity conservation activities, implementing e-flows

O 2.3.1 Ensure that pilot activities are included and embedded in the WRM planning process-es at provincial and prefecture level under component I.

Indicators and Targets: Biodiversity mainstreaming under component I explicitly mentions pilot activities.

O 2.3.2 Support the decision-making process on how to best balance e-flow implementation with development objectives based on the information and recommendations provided by the e-flow analysis under component III.

Indicators and Targets: E-flow implementation strategy determined and agreed upon by all relevant prefecture level government stakeholders (incorporating expertise and recommendations from the “new partnerships”, see above).

O 2.3.3 Review and adjustment of existing river flow alteration (especially dam structures, embankments and abstraction pattern) along Wubu River (Banan County) to establish e-flow, enhance habitats and increase connectivity (based on recommendations from e-flow analysis, river health assessment and water accounting.)

		<p><i>Indicators and Targets: E-flow successfully implemented within Wubu river; habitat not blocked to upstream migration (e.g. by inadequate culvert, small reservoir and other water infrastructure design) resulting in improved habitat connectivity</i></p> <p>Area directly covered by BD mainstreaming: 1043 ha</p> <p>Area of habitats improved and restored: 32 ha</p> <p>O 2.3.4 Implement strict biodiversity conservation measures along Tang River (Jiangjin County) to protect its still relatively pristine conditions.</p> <p><i>Indicators and Targets: Retain population of aquatic species through strict application of fish protection and fisheries regulation; assess biodiversity impact of several sewage water treatment options along the river; avoid unnecessary obstructions in the future and improve few existing obstructions through fish migration approaches (river length ca. 75 km)</i></p> <p>Area directly covered by BD mainstreaming: 30 000 ha</p> <p>Area of habitats improved and restored: 120 ha</p> <p>O 2.3.5 Application of aquatic biodiversity monitoring system as well as "Green Line Score-card" certification system in project area</p> <p><i>Indicators and Targets: BD monitoring system established with two monitoring stations per river and used for improvement of BD conservation measures; ca. 95km of river with newly certified "Green Line" water management practices</i></p> <p>Area covered by GLS in Chongqing: 31 043 ha</p> <p>O 2.4.1 Thorough documentation of information on project activities and results, experiences gathered, best practices identified</p> <p><i>Indicators and Targets: All relevant information documented; project</i></p>		
	<p><u>Outcome 2.4</u></p> <p>Compilation and internal as well as external dissemination of information and</p>			

		<p>best practices gained from the project</p>	<p><i>results reports syn-chronized with M&E reporting schedule (see section 4)</i></p> <p>O 2.4.2 Communication of this information within the project, ensuring the mutually reinforcing interaction between project components</p> <p><i>Indicators and Targets: Project results shared with project team and relevant stakeholders</i></p> <p>O 2.4.3 Dissemination of project information and examples of successful biodiversity conservation achieved by the project to decision-makers as well as the broader public</p> <p><i>Indicators and Targets: Project result briefings compiled and distributed to decision-makers; public dissemination campaign including project report, DVD</i></p> <p>O 2.4.4 Targeted provision of best practice information and lessons learned to potential replication and scaling-up areas</p> <p><i>Indicators and Targets: Best practices report compiled and distributed to other provinces and prefectures suitable for replication</i></p>			
<p>Component III: "Improving Information"</p> <p>Creation of improved information systems and capability to use these systems to inform better and continuously improving water management practices serving enhanced conservation of river biodiversity.</p>	TA	<p><u>Outcome 3.1</u></p> <p>Design and implement additional information systems to provide comprehensive river biodiversity analysis (including mappings, environmental flow analysis, river health assessments, and water accounting)</p>	<p>O 3.1.1 Mapping of critical river ecotopes including existing as well as planned obstruction and flow alterations as well as species' populations along life cycle and corresponding BD threat assessment/hotspot identification conducted in four pilot areas as well as at province level (with appropriate level of detail)</p> <p><i>Indicators and Targets: Mappings conducted in Chongqing and Yunnan with particularly detailed mappings in the four pilot sites</i></p> <p>O 3.1.2 E-flow analysis conducted in all four project areas and corresponding rivers to a) determine adequate quantity, timing, and quality of water flows to sustain BD; b) develop recommendations to achieve a corresponding flow regime (to be used</p>	GEF TF	658,995	6,625,000

			<p>as basis for pilot activities under component II)</p> <p><i>Indicators and Targets: E-flow analysis conducted; natural cycle as well as impact of flow alterations identified; recommendations for measures to achieve e-flow provided (implementation und component II)</i></p> <p>O 3.1.3 River health assessment, based on mapping results, conducted including water infra-structure assessment (small dam, culvert) for impacts on biodiversity and ecosystem vitality for all four project sites (see also outcome 3.2).</p> <p><i>Indicators and Targets: River health assessment conducted for all project counties</i></p> <p>O 3.1.4 Design and implementation of comprehensive water account system for pilot rivers including all natural and man-made factors for abstractions, discharges and consumption</p> <p><i>Indicators and Targets: Water accounting system operational, utilizing global scale public domain datasets (WA+)</i></p>			
		<p><u>Outcome 3.2</u></p> <p>Establish a comprehensive biodiversity monitoring system for aquatic biodiversity and piloting of the system in the project areas</p>	<p>O 3.2.1 Formulate a strategy for systematically feeding biodiversity information (combined from outcomes 3.1 and 3.2) into the mainstreaming activities under component I.</p> <p><i>Indicators and Targets: Strategy document formulated for both provinces and all four project sites after 6 months of project start date.</i></p> <p>O 3.2.2 Establish GIS-based aquatic biodiversity database linking species and ecosystem lists to rivers to enable robust biodiversity-oriented review of water development projects; partially using the information gathered under outcome 3.1.</p> <p><i>Indicators and Targets: GIS database designed and operational</i></p> <p>O 3.2.3 Design comprehensive aquatic biodiversity monitoring program in two pilot provinces using traditional</p>			

instruments as well as modern “environmental DNA” approaches where possible.

Indicators and Targets: Aquatic biodiversity monitoring system designed and operational

O 3.2.4 Pilot monitoring system in project areas: Aquatic biodiversity conservation targets (species number and condition; habitat condition; related amount of investment) established and monitored.

Indicators and Targets: Monitoring system successfully piloted in project areas

Outcome 3.3

Develop and implement system of multi-level and multifaceted biodiversity mainstreaming training program targeting government officials and water management partners from local communities and civil society organizations

O 3.3.1 Training for government officials and CSO stakeholders of the new partnerships for WRM on principles and policies related to biodiversity mainstreaming (incl. national and international workshops/symposia to bring together project stakeholders as well as national and international river ecosystem experts)

Indicators and Targets: At least 30 MWR officials as well as 60 officials at provincial level plus the same number of stakeholder from CSOs trained in the mainstreaming BD conservation objectives into water resources management planning and programming; at least four workshops/symposia organized.

O 3.3.2 Training for government officials and other relevant stakeholder at the national, provincial and prefecture level to improve capacity for the implementation and utilization of advanced BD information systems (river health assessment, e-flow analysis, advanced water accounting)

Indicators and Targets: At least 400 water management professionals trained in biodiversity mainstreaming practices relevant to their area of expertise.

O 3.3.3 Training for government

		<p>officials and other relevant stakeholder on the use of the aquatic biodiversity monitoring system, processing of data and translation into biodiversity conservation measures at all levels</p> <p><i>Indicators and Targets: At least 400 water management professionals trained in BD monitoring system implementation, processing and analysis.</i></p> <p>O 3.3.4 Training for government officials and other relevant stakeholder on the use of the "Green Line Scorecard" certification system</p> <p><i>Indicators and Targets: At least 400 water management professionals trained in "Green Line Scorecard" implementation</i></p> <p>O 3.3.5 Training for local community level to improve understanding of biodiversity conservation objectives and practices and strengthen capacity for implementation</p> <p><i>Indicators and Targets: Provision of training on river biodiversity to local population with a special focus on empowering and educating women and ethnic minorities.</i></p> <p>O 3.4.1 Implementation of project monitoring and evaluation</p>			
	Outcome 3.4				
	Project Monitoring and Evaluation				
		Subtotal		2,514,025	24,775,000
		Project management Cost (PMC) ³	GEF TF	125,701	1,200,000
		Total project costs		2,639,726	25,975,000

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 Cofinancing	Cofinancing Amount (\$)
National Government	Ministry of Water Resources	In-kind and cash	19,300,000
Provincial Government	Province Departments of Water Resources (Yunnan)	In-kind and cash	3,100,000
Provincial Government	Province Departments of Water Resources (Chongqing)	In-kind and cash	3,000,000

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

International NGO	The Nature Conservancy (TNC)	In-kind	500,000
GEF Agency	FAO	In-kind and cash	75,000
Total Co-financing			25,975,000

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
Total Grant Resources				n/a	n/a	n/a

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	60,000	0	60,000
National/Local Consultants	751,000	3,000,000	3,751,000

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 PIF⁴

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, etc. **NO CHANGE**

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities. **NO CHANGE**

A.3 The GEF Agency's comparative advantage: **NO CHANGE**

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

Project Summary

The project preparation grant phase allowed for a robust project preparation process that brought together senior FAO technical expertise in water management, Ministry of Water Resources expertise, senior project design expertise on at least three different occasions. Extensive stakeholder consultations were held with the government officials at national, provincial and local levels and civil society partners including the Nature Conservancy China and indigenous peoples groups. The outcome of the PPG process is this robust project design and most importantly, a shared common vision for the project, including the established coordination among actors at the various levels and risk mitigation measures to be taken during the project implementation.

The New Green Line (NGL) Project is designed to make a deep impact with a comparatively small investment. NGL will demonstrate how to implement innovative planning and management practices for improved biodiversity conservation in China's river ecosystems. It will show, how trade-offs between development objectives and biodiversity protection can be systematically assessed and an environmentally sustainable balance can be achieved. The project will combine these demonstration activities with a strong effort to mainstream corresponding stipulations

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question.

into the policy, legal and regulatory frameworks governing water resource management in China at national, provincial, and prefecture level. **In combination, the project's activities aim at catalyzing a profound change in China's approach to river biodiversity conservation.**

The enabling political context means that the NGL Project is well timed and strategically positioned to create high leverage with its GEF investment. As the 13th Five Year Plan (2016-2020) is being finalized, environmental protection in China has arrived at a critical juncture. The foundations of environmental protection have already been built. To move forward, a further leap is necessary: not primarily in the quantity, but in the quality of environmental protection. China's political leadership, for example by promoting the concept of eco-civilization, encourages stakeholders to explore ways of moving environmental protection in China to the next level. The NGL Project is designed to seize this opportunity: **NGL will provide an example of how China's next step towards advanced environmental protection in water resources management can be achieved.** Thereby, NGL can also provide further inspiration and best practices for China's efforts in environmental protection in other sectors.

Thinking ahead, NGL will provide information, experiences and best practices that in turn can help to inform future policies, laws and development plans that will shape the future path of environmental protection in China. For example, results and experiences from the NGL Project are well timed to be considered during the formulation phase for China's 14th Five Year Plan (to start in 2021). While a direct influence on the drafting of the 14th FYP is beyond the reach of the project itself, NGL aims at producing compelling test cases for river biodiversity conservation that are also relevant to the formulation of major national level development planning.

With its comparably small resources, the NGL Project follows a targeted "demonstrating and catalyzing" strategy. It concentrates on one particularly pressing environmental challenge: biodiversity conservation in China's rivers. The NGL Project strives to demonstrate how an integrated approach of WRM can balance development objectives and biodiversity conservation in a way that keeps river ecosystems functional and to mainstream this approach into WRM frameworks at all government levels.

In order to achieve this goal, **the project will implement three interrelated and mutually reinforcing project components:**

Component I: "Changing the framework" - Institutional and planning framework for mainstreaming biodiversity into water resources management at national, provincial and local levels.

Barrier #1 (see 1.1.1): Existing water resource management policies, plans, regulations and institutional structures do not systematically integrate biodiversity conservation in river ecosystems. While supportive of ecological priorities, the existing framework does not provide sufficient support for and guidance to the mainstreaming of biodiversity conservation objectives and practices into water resources management.

Based on an integrated perspective on river ecosystems, the NGL project will mainstream biodiversity conservation into policies, plans, laws and regulations for WRM. The mainstreaming efforts under component I will take place at the national, the provincial (Chongqing and Yunnan) and prefecture (four pilot sites) levels.

NGL will take into account the different ecosystem characteristics along the pilot rivers as well as the interactions of the river ecosystems with the broader landscape that surrounds them. It will stress the necessity to address the different pressures on the river ecosystem in an integrated way, taking the following into account:

- a. the downstream effects of flow alterations within the wider river system;
- b. the biodiversity situation in river adjacent and connected landscapes, for example floodplains and irrigated agricultural land that harbours its own ecosystem with special biodiversity;
- c. the interface between rivers and growing urban areas and the concepts for urban planning along the river;
- d. the interactions of river ecosystems with different economic sectors beyond fishery and agriculture (e.g. industry, energy, tourism, forestry etc.).

Building on existing policies, laws and regulatory stipulations for WRM, the project will facilitate a thorough review and gap analysis of the established basis. It will then support the targeted improvement of this basis by providing advice for systematically integrating river biodiversity concerns. The project will **identify concrete policies and plans to implement revisions to include biodiversity conservation** into every relevant aspect of the respective document. Under leadership of the MWR, the project will seek opportunities to do so, for example ongoing policy revision processes that NGL can then feed into, throughout the project duration.

A particular focus of these policy mainstreaming efforts is on improving the planning and management framework at the provincial level. Yunnan and Chongqing as pilot provinces of this project have signalled their willingness to conduct a thorough review of existing policies and regulations as well as upcoming policies currently under development. **The NGL project will use the information, experiences and knowledge generated at the four pilot sites to improve provincial level policies and regulations.** The drafting and testing of corresponding implementation guidelines will also aid these efforts. In addition, NGL will identify opportunities for significantly **increasing government investments** into biodiversity mainstreaming in water management at national and provincial level.

The entire NGL project will promote and rely on the **creation of new partnerships for biodiversity conservation**, establishing collaboration between government and civil society organizations. These new alliances, including NGOs and academic partners, will play an important role for the policy mainstreaming as well as the on-the-ground implementation aspects of the project. The establishment of these new partnerships at national, provincial and prefecture level is therefore included in all three components of NGL.

The close interrelation between the three components is a crucial aspect of NGL: the experiences gathered through the activities implemented under component II and 3 will directly feed-back into the policy work under component I. At the same time, the strengthening of the policy framework under component I will support the on-the-ground piloting (C-II) and establishment of information systems (C-III). In that way, **NGL will create a constant cycle of improvement throughout the project duration.**

Component II: "Enhancing Implementation" – Demonstrate on-the-ground activities for mainstreaming biodiversity in pilot rivers in Chongqing and Yunnan Provinces.

*Barrier #2 (see 1.1.1): The **experience and expertise among key water management stakeholders in practically implementing biodiversity conservation activities on-the-ground is insufficient and needs to be significantly improved by implementing pilot activities.***

NGL will pilot a number of innovative, concrete biodiversity conservation measures in four pilot sites located in Chongqing and Yunnan Province. These activities follow the principles of an ecosystem approach. Their impact on biodiversity will be closely monitored through the new and improved information systems to be set up under component III.

The information and experiences gathered through these pilot activities **will provide additional information to the mainstreaming efforts under component I**, especially with regards to improving the WRM planning framework at the provincial level in Yunnan and Chongqing.

The **establishment of e-flows** is the core of the NGL Project. Artificial river flow alterations (e.g. dams and embankments, water abstraction, etc.) change the natural cycle of the river ecosystem, threatening biodiversity. A spectrum of measures can be implemented to create a quantity and timing of water flows that resembles the original conditions as closely as possible. By "mimicking" the natural cycle, negative impacts on biodiversity can be minimized.

A systematic and comprehensive e-flow analysis for all project sites will be conducted under component III. On the basis of the acquired information, the analysis will provide corresponding **practical recommendations on establishing e-flow**. Under component II, the NGL project will support the **decision-making process on determining the appropriate e-flow implementation**, balancing development objectives and biodiversity considerations. On that basis, component II then supports the implementation of on-the-ground **pilot activities to support the establishment of e-flow**.

The establishment of e-flows will be accompanied by additional and interlinked biodiversity conservation measures such as swamp restoration and wetland rehabilitation in the pilot areas.

Based on the e-flow analysis and subsequent decision-making on e-flow implementation, the pilot activities **to be implemented in the four pilot sites** include:

- a. Adjustment of existing dam structures and other man-made river flow alterations to establish the determined e-flow (includes removal of dysfunctional hydropower dams);
- b. Application of strict specifications during the construction of new alterations (dams, reservoirs etc.) along the pilot rivers to be compatible with the established flow regime and maintain the e-flow;
- c. Implementation of complementing biodiversity conservation activities (e.g. swamp restoration, wetland rehabilitation).

Through the investments in concrete sustainable river management approaches and practices, enhancing biodiversity conservation in the project areas, the project will demonstrate the feasibility and effectiveness of a location-specific set of practices. Illustrating that a sustainable balance between development objectives and biodiversity conservation can be achieved and that there are effective tools to deal with corresponding trade-offs in an informed way is a central task for the NGL project.

Pilot activities will also create knowledge and ownership for these practices among local governments and communities. The activities under component II will be accompanied with the **corresponding trainings to increase water managers and government officials' capability to implement and maintain the measures in question**. In addition, implementation will be supported by the improvement of the **river management system**, establishing clear responsibilities for stakeholders, as well as by the creation of **new networks and partnerships**

among government and CSOs including academia (see also component I).

The interrelation between components is a key factor and strength of NGL. The pilot activities will be implemented in parallel to the policy framework improvements at national and provincial (component I), connecting both sets of activities and creating a mutually reinforcing interplay between mainstreaming efforts and the practices to be promoted by the framework:

- 1) In the one direction, experiences from pilot activities will feed into the continuous process of mainstreaming biodiversity conservation into the policy and planning framework (national, provincial). The demonstration of the effectiveness and feasibility of concrete activities will strengthen the efforts to adjust policies accordingly.
- 2) In the other direction, the emerging enhanced policies, plans and guidelines will serve to strengthen the implementation of corresponding activities, preparing the ground for broader adoption of biodiversity conservation measures beyond the confines of the baseline project.

For this mutually reinforcing cycle to work, the **pilots in Yunnan and Chongqing need to be of outstanding quality**, utilizing all the advanced instruments developed and promoted by the NGL project and beyond. The feedback loop between component I and component II makes not only the provincial governments, but also the **national level government, especially the different relevant departments at the Ministry of Water Resources, direct stakeholders of the pilots at local level**

In addition, component III and component II are closely connected. The success of the biodiversity conservation activities will be measured by the new information systems put into place under component III. This will help to adjust and improve the pilot activities throughout the project. At the same time, the pilot activities will provide an excellent test case to apply the improved information systems and train water managers in using them.

Component III: “Improving Information” – Creation of improved information systems and capability to use these systems to inform better and continuously improving water management practices serving enhanced conservation of river biodiversity.

Barrier #3 (see 1.1.1):

The reliable and continuously updated information on river ecosystems is not yet sufficient to serve as a solid basis for identifying, formulating, prioritizing, implementing and measuring the success of biodiversity conservation measures. In addition, the knowledge and capacity at different government levels to process advanced biodiversity information and translate it into appropriate action still needs to be increased.

In order to translate the change in the overarching approach to river ecosystems into tangible actions, NGL will **emphasize the necessary improvement of information as well as information processing capacity**. Importantly, this will include the gathering and analysis of river related data that will improve water managers understanding of the river ecosystems as a whole, especially the environmental impacts of man-made flow alterations. A comprehensive **e-flow analysis** is at the core of the activities under component III as it provides the most important basis for decision-making as well as on-the-ground activities under component II (see above). The e-flow analysis will be complemented and supported by a number of additional analyses.

The enhanced availability of data will help water managers to define appropriate and effective counter-measures that achieve maximum environmental benefits from a landscape/ecosystem perspective:

At the provincial level:

- a) Comprehensive **river mappings** including information on existing as well as planned man-made obstructions and flow alteration; BD distribution for species along their life cycle and corresponding BD threat assessment/hotspot identification;

At the pilot river level:

- b) **Environmental flow analysis** providing information on the natural flow cycle, the precise nature of the flow alterations by artificial obstructions, and a set of recommendations for establishing e-flow that mimics the natural cycle as closely as possible (basis for e-flow determination and implementation under component II);
- c) **River health assessments** providing an integrated and detailed understanding of all relevant environmental factors and their interactions along the river;
- d) Comprehensive **water accounting** utilizing global scale public domain datasets (*WA+*), going beyond the mere tracking of industrial and agricultural use by including a more detailed assessment of all abstraction and discharge through the natural hydrologic cycle (precipitation, evapotranspiration, surface water, groundwater, etc.) as well as the man-made alterations of water stock and flow (industrial and agricultural use, power generation, etc.) along the river and through time.

Given the limited resources of the project, NGL will rely on the catalytic effect of demonstration. NGL will **demonstrate the effectiveness and feasibility of these approaches in demonstration areas** (project sites, see below). Based on successful demonstration, NGL will support the **mainstreaming of these approaches, informed by the concrete pilots, into policies, regulations and water management plans.**

The project itself, within the scope of its duration and resources, will implement these activities in the pilot rivers and, as much as possible, within the larger watershed of these pilot rivers. The provincial level application is the ultimate goal and needs to be achieved through replication and scaling-up. Replication can already begin during the project duration, but will then be continued after the project end.

This piloting will be accompanied by comprehensive **trainings** of water managers and government officials in how

- to apply the new information systems;
- to process and interpret the improved information;
- to translate this into concrete activities for biodiversity conservation.

Trainings will target relevant stakeholder on-the-ground including partners from local communities or civil society organizations. In addition, they will also extend to government officials at national and provincial level. This will aid the feedback of information gathered at the project sites into the framework improvement activities conducted under component I. This underlines again the reciprocal and mutually reinforcing relationship between the components (see component I, above).

The three parts of the project are closely integrated and form one single coherent project strategy. **They enforce and inform each other and each component is set up to react flexibly to include results from the other components. In their combination, the three components will provide a powerful push for aquatic biodiversity mainstreaming in China, creating significant environmental benefits of global importance.**

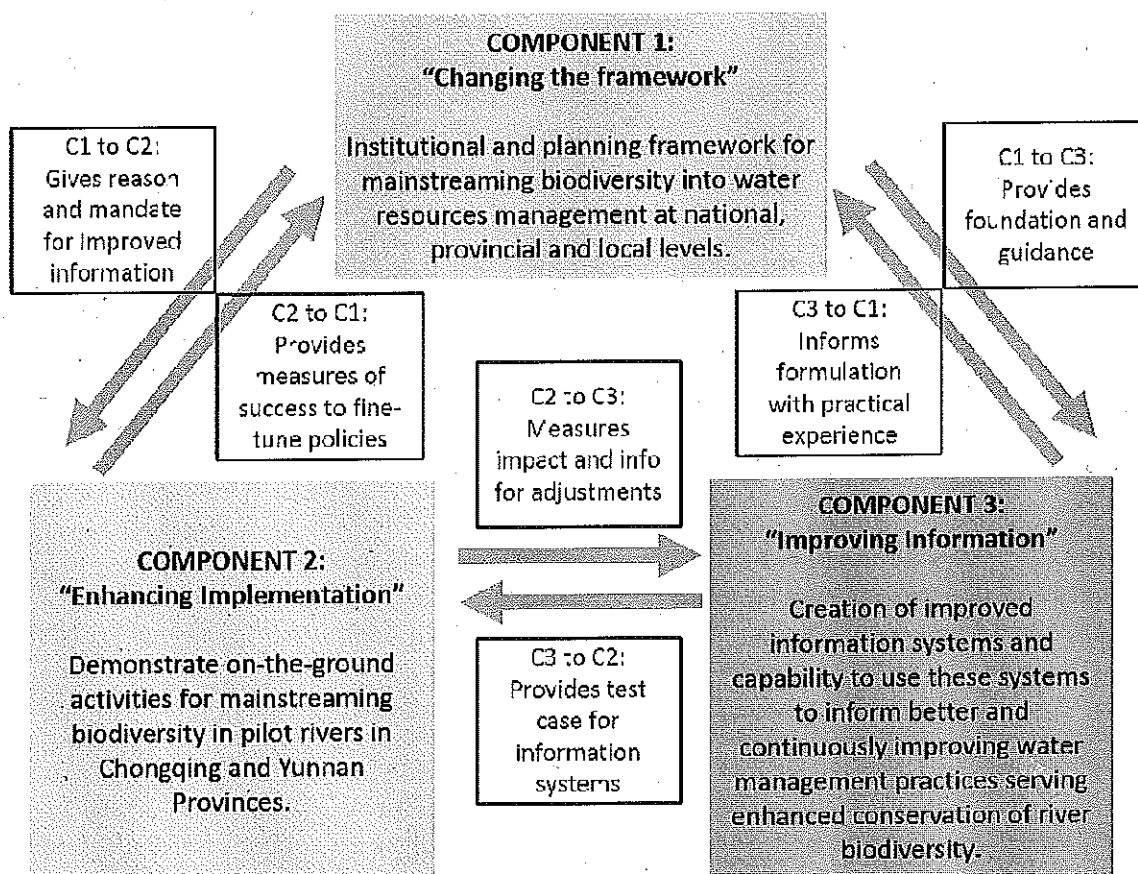


Figure: Mutually reinforcing relationships between components forming a "circle of continuous improvement"

Baseline Activities

Fifteen years ago, with the start of the 10th Five Year Plan in 2001, China experienced its first environmental revolution. Within a comparably short period of time, the country moved from the almost total absence of environmental protection to the comprehensive framework of environmental policies and instruments that is in place today. Most of the fundamental principles and standards, laws and regulations for environmental protection are already in effect. The environmental efforts China has undertaken since the beginning of the century are certainly impressive. They are, however, not sufficient yet.

The enormous pressures from China's slowing but still rapid economic growth continue to cause terrible ecological damage across the country. Polluted air, contaminated soil and poisonous water continue to be an everyday reality in China. When Prime Minister Li Keqiang declared the "War on Pollution" in his 2014 annual government report, he signalled the government's awareness that to **win the battle against environmental degradation, China needs a continuous effort on expanding and improving environmental protection**. After a successful phase of building the foundations of environmental protection China provides excellent conditions to move towards an **advanced paradigm of environmental protection, featuring a more integrated perspective, more sophisticated approaches and more state-of-the-art methods**. Building on past successes and achievements, China is willing and well-equipped to realize such a second transition. The window of opportunity is now:

As the 13th Five Year Plan (2016-2020) is being finalized, environmental protection in China has arrived at a critical juncture. The foundations for environmental protection have been built; many of the low hanging fruits have been picked. To move forward, a further leap is necessary: not in the quantity, but in the quality of environmental protection. China's political leadership, for example by promoting the concept of eco-civilization, encourages

stakeholders to explore ways of moving environmental protection in China to the next level. The NGL Project is designed to seize this opportunity: **NGL will provide an example of how China's next step towards advanced environmental approaches can be achieved, thereby making a contribution to China's way into the next phase of environmental protection.**

There are many signs of ongoing change, which is what makes this catalytic GEF investment so timely. The MWR's program to re-establish natural connections between rivers and lakes previously severed is one example, as manifested in the newly mandated provincial level water resources protection plans. A second example is the Water Resource Department of the Jilin Province intent to balance water resource needs for food security and electricity generation with rehabilitation of wetlands habitat for unique biodiversity in water diversion and control projects in the Western Jilin Province. Another example is a new pilot on "River Health Assessments", which NGL will directly draw from when conducting its river health assessments under component III. Also for setting up the envisioned "Green Line Scorecard" certification system (see outcome 1.4), experiences from this program will be of direct use to the NGL project. These illustrate the growing interest in ecosystem health and biodiversity in China's rivers as well as the willingness to explore and employ advanced approaches of environmental protection.

In recent years, **annual investment in water management sector at the national level in China (does not include urban water supply and wastewater treatment investment) amounts to over US\$50 billion. It is said that the total investment in water management will be up to US\$660 billion (RMB 4000 billion) for the period from 2012 to 2022.** Great benefit can be achieved if only a small percentage of this investment integrates biodiversity concerns. In a nutshell, this is the purpose of this strategic and incremental GEF investment.

Activities under the 13th Five-Year Plan

China 13th Five-Year Plan (2016-2020) is still under formulation. Early statements from the Premier Li Keqiang suggest that "China should continue to take development as the top priority, put emphasis on reform and innovation and seek greater progresses in promoting scientific development, transforming development pattern and resolving deep-seated problems". It stressed restructuring, streamlining administration and delegating power to lower levels, scientific innovation and opening up to the outside world to "make the economy more efficient, society more equitable and development more sustainable." On March 2015, China's top political body, the Political Bureau endorses the decision on speeding up the advancing of eco-civilization, reassuring China's commitment to green development and ecological rehabilitation.

In line with these general ideas, China Ministry of Water Resources and the provincial water departments will work hard to enhance water security while improving ecological water demands. Although relevant development plans are finalizing or to be prepared, areas of focus are expected to include:

- Construction of major water projects,
- Rural drinking water safety,
- Water conservancy construction,
- Water saving and protection,
- Water ecological environment.

The draft 13th Five Year for Water Conservancy in Chongqing indicates projects such as enhancing connectivity between rivers and lakes, aquatic environment rehabilitation and protection, water transfer for ecological purpose as well as water supply and flood defence. However, the list of projects is not finalized and not ready for publication. It is the same situation for Yunnan. Although these projects are supposed to mitigate ecological impacts, the knowledge barrier might fail the water professionals and managers to do so.

Baseline Activities in Chongqing Province

Chongqing Provincial Department of Water Resources: The 13th Five Year Plan calls for speeding up water infrastructure development in Chongqing. To do so, the following are examples of water management priorities that the Chongqing Department of Water Resources program will address during the next five year period, with a budget of approximately ¥50 billion:

- Flood control in urban and rural areas to meet standards set by national government through ecological embankment of the rivers and other means.
- Small-medium hydropower development is becoming more of a priority to reduce emissions and impact. In one dam, funds were invested in establishing a fish ladder.
- Improve water quality in Chongqing's rivers through erosion control, aquatic environmental protection and other measures.
- Irrigation and drainage – try to improve production conditions for agriculture.
- Strengthen endangered or degraded reservoirs.
- Emergency response capacity – Hydrology monitoring, drought prevention, flood warning system.
- Extension of water supply network;
- Consider ways to maintain harmony between upstream and downstream flows through new pumping capacity and other means.

Baseline Activities in Yunnan Province

Yunnan Provincial Water Resources Department. The 13th Five Year Plan also calls for significant water infrastructure development in many of the same priority areas listed above for Chongqing. Also in Yunnan, an emphasis is increasingly on improving the condition of rivers and river systems through water function zoning, as mandated in the State Council's *Decisions on Strict Water Resources Management*. This zoning covers 800 rivers in Yunnan province. Currently biodiversity is not mainstreamed into this water function zoning process.

To strengthen conservation of water resources in Yunnan Province, the provincial government promulgated the *Opinions on Implementing the Toughest System for Water Resources Management*, which specified “three red lines” for the control and administration of water resources, i.e. the red line for controlling the development and utilization of water resources, the red line for controlling water use efficiency and the red line for restricting the pollutant carrying capacity in water function areas. In 2013, Puer was listed among the first batch of pilot cities for construction of water ecological civilization in China, with the focus on improving the city's water resource carrying capacity, improving the quality of water ecology and building the safe barrier for water ecology. The purpose is to drive the development of local economy, create economic and social benefits, improve local ecological conditions and living environment and take the water ecological civilization to a higher level. In 2014, the formulation of the *Plan for Conservation of Water Resources in Puer City, Yunnan Province* was completed, which clearly specifies the master plan for the conservation of water resources as well as plans for the protection and recovery of basic ecological flows, ecological water demand for ecological sensitive areas and aquatic ecosystems, and provides powerful technical basis for the legal and scientific administration of water resources conservation in Puer.

Baseline Activities of the Nature Conservancy (TNC)

The Nature Conservancy (TNC), an international non-profit civil society organization (CSO), will be one of the **executing partners of this project**. For a **detailed account of TNC's work plan** in the context of this project please refer to section 4.2 “Implementation Arrangements”.

TNC's broad spectrum of water related work around the globe (see Annex 1), its expertise, experience and knowledge in many of the aspects the project wants to strengthen, will be a significant asset for project design, preparation and implementation. **The project will directly build on and link to TNC's numerous ongoing activities in China.**

The Nature Conservancy (TNC) commenced work in China in 1998. In succeeding years, China's leaders have recognized TNC's contribution to environmental protection in China. Much of TNC's work has been focused on protected areas and building up a PA network, development of an ecological blueprint identifying priority conservation areas, and working with traditional biodiversity conservation partners such as the Ministry of the Environment and with the State Forestry Administration within that agency's purview. At the same time, TNC has been active working with government partners and industry leaders to improve water management to conserve biodiversity while serving human needs. TNC has placed a special emphasis on the relationship between dams and hydropower operations and e-flows and biodiversity. The New Green Line Project will allow MWR and TNC to work together with other partners to deploy new tools for mainstreaming biodiversity into water resource management.

Most relevant aspects of TNC's program are the following:

- E-flow recommendations for dam flow management. TNC has been active in working to elaborate environmental flow (e-flow) recommendations for specific dams in the Yangtze basin. As dams alter the natural cycles of a river, TNC is working to determine flow amounts that will mimic natural water cycles, optimizing dam efficiency and minimizing the ecological impact on downstream habitats. The MWR, which is responsible for reviewing dam operations, will benefit from this experience as part of the project's baseline/incremental approach. **TNC's experience on e-flows is highly relevant to the NGL Project as the establishment and implementation of e-flow is one of the core objectives of the project.** For further information see the component description (Executive Summary and Section 2).
- TNC is assessing the impact of small hydropower stations in cooperation with local governments in China. The method of assessing the impact of small hydropower to aquatic ecosystem will be directly relevant for MWR to pilot and elaborate further under the GEF project. TNC has been working together with the MEP and the Ministry of Agriculture Bureau of Fisheries to inventory aquatic biodiversity and to better catalogue the information in a modern, accessible database at the national scale and to introduce new conservation planning tools. This is also relevant to helping to fill the information gap on biodiversity in water resources management. However, in the baseline situation, this kind of work will find it difficult to cross over the sectoral divide from the "environmental" sector to the water resources management sector. This GEF incremental investment will catalyze this process of mainstreaming.

The **China Three Gorges Dam Corporation (CTG)** has arguably the largest impact on river flows along the Yangtze. TNC and CTG have committed to work together to identify and develop opportunities for e-flows and biodiversity conservation both in China and globally. TNC and the Yangtze River Fisheries Bureau carry out the Mississippi-Yangtze EcoPartnership, drawing on the work of the TNC-led Great Rivers Partnership. In China, the highest priority of the EcoPartnership is the work of YFC and TNC for e-flows and biodiversity along the Yangtze (YFC has fisheries conservation responsibilities for all rivers south of the Yangtze as well). TNC is collaborating actively with both CTG and YFC on e-flows to increase spawning for desired fish populations.

TNC has refined its freshwater conservation priority areas assessment along the Yangtze River Basin, drawing on the recent conservation actions of TNC and other organizations. A commitment to pursue adaptation management of environmental flow recommendations from the Three Gorges Dam and Lower Jinsha Jiang Cascade based on fish monitoring data has been included in TNC's MOU with the Three Gorges Corporation. TNC will be providing assistance to both CTG and YFC to develop e-flow recommendations and related ecological and fish monitoring over the next four years. TNC will be following through in earlier e-flow recommendations for the Xiangjiaba Dam provided to the dam operation administration agency based on recent fish monitoring projects.

As environmental flow regimes are governed by Ministry of Water Resources and the Yangtze Fishery Bureau, and the institutes with the most important study capacity are the Yangtze Fishery Resources Institute and the Institute of Hydroecology of MWR, TNC's work to-date and its plans for future activities are ideally positioned to work with

MWR with NGL as a test case and TNC's work with other partners ready to bring to scale implementation of e-flows at multiple sites in collaboration with MWR.

Through other, additional activities, TNC plans to help strengthen China's system of freshwater conservation by supporting the present system of Freshwater Reserves. Working with the Yangtze Fisheries Bureau, TNC will identify a few high priority sites to be added to the reserve system for fisheries habitat purposes, and design necessary conservation measures including as appropriate buyouts of existing fishermen. This effort tracks closely with the NGL work plan.

TNC will also work with the Yangtze Fisheries Bureau, Three Gorges Corporation and related institutes to set up a regular adaptive management system with appropriate environmental flows recommendation plans for the Three Gorges Dam and the Lower Jinsha Cascade based on year to year monitoring results.

Additionally, TNC will support for the design and implementation of a whole river ecological monitoring system, initially focusing on fisheries and the reserve system. This effort will enhance the current capacity and effectiveness of environmental monitoring and management along the Yangtze River. TNC will work with partners to further develop a Yangtze Basin fish monitoring program to collect, manage and summarize data on priority fish conservation areas.

On a broader scale, TNC has launched the Beijing-based Sustainable Hydropower Centre to work with China's major dam builders and financing entities globally. While the work of the Centre will take place primarily outside China, the Centre aims to involve China's key hydro companies in projects focused on river basin-scale planning, enhancement of e-flows, and promotion of biodiversity. Some of the Centre's work may benefit rivers shared by China and its downstream neighbours. In any case, the work of the Centre will take place in parallel with TNC's participation in the New Green Line Project and to the extent possible people and knowledge exchanges of the Centre will be made available for NGL purposes.

TNC's core work for the NGL Project in collaboration with FAO and MWR will draw on the Conservancy's long-term and global commitment to e-flows and biodiversity. In like manner, the in-kind co-financing activities TNC will undertake with other key Chinese partners in support of NGL will supply a constant feedback loop to the NGL Project activities of TNC/FAO/MWR. Synergies are to be expected, i.e. from MWR in support of CTG and YFC even as those entities align their cooperation with TNC in support of NGL.

Because TNC will be moving forward on other nature-based solutions to China's water challenges, such as the Urban Water Blueprint and the Zhejiang Small Reservoir Basin Management Project, the efforts of the Ministry for biodiversity projection while addressing people's needs for water will be even further enhanced.

The in-kind value of TNC's e-flow and biodiversity activities over the four-year life of the NGL Project will total \$500,000. Figuring in other related activities such as UWB and the Reservoir Project should ensure that TNC's in-kind activities exceed its commitment. TNC also has the goal of introducing its Water Funds model in China during the timeframe of NGL, which would further extend TNC's in-kind contributions to the Project's objectives.

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

The NGL Project exemplifies the fundamental principle of a GEF investment: It is designed to make a deep impact with a comparatively small, incremental investment by **catalyzing a profound change in China's approach to river biodiversity conservation**. NGL will demonstrate how to implement innovative planning and management practices for improved biodiversity conservation in China's river ecosystems. It will show, how trade-offs between development objectives and biodiversity protection can be systematically assessed and an environmentally sustainable balance can be achieved. The project will combine these on-the-ground demonstration activities with a

strong effort to mainstream corresponding stipulations into the policy, legal and regulatory frameworks governing water resource management in China at national, provincial, and prefecture level.

Concretely, the NGL project activities described in detail above and in the project framework will remove the following crucial barriers, which would not be addressed without the project:

Addressed by Component I:

- Existing water resource management policies, plans, regulations and institutional structures **do not systematically integrate biodiversity conservation in river ecosystems**. While supportive of ecological priorities, the existing framework does not provide sufficient support for and guidance to the mainstreaming of biodiversity conservation objectives and practices into water resources management.
- Inclusion of CSOs including academic/research institutions underdeveloped.
- No certification system for river biodiversity protection in place.

Addressed by Component II:

- The experience and expertise among key water management stakeholders in practically implementing biodiversity conservation activities on-the-ground is insufficient and needs to be significantly improved by implementing pilot activities.
- There is a very low level of knowledge of China's aquatic biodiversity within the water management sector.
- The practical implementation of biodiversity conservation into concrete river management activities is a challenging task. It requires special expertise, experience, knowledge and skill, which needs to be built gradually. This implementation capacity for biodiversity protection is not yet existent among stakeholders, from government officials to local level river managers.
- As river ecosystems stretch across different administrative boundaries, coordination and cooperation is often highly difficult, river management responsibilities unclear.

Addressed by Component III:

- The reliable and continuously updated information on river ecosystems is not yet sufficient to serve as a solid basis for identifying, formulating, prioritizing, implementing and measuring the success of biodiversity conservation measures. In addition, the knowledge and capacity at different government levels to process advanced biodiversity information and translate it into appropriate action still needs to be increased.
- Lacking capacity to identify ways for achieving an ecologically and economically satisfactory balance based on a large set of targeted and advanced information. Information is the basis for balanced decision-making and successful identification of river management activities that minimize trade-offs.

Project activities will mainly create GEBs through the wider impact of BD mainstreaming into the regulatory, policy, and legal framework at national, provincial and local levels. Immediate GEBs will, in addition, be created through the **demonstration activities in the four pilot areas:**

GEBs	#1: Buma & Enle River, Zhenyuan County	#2: Chuan River, Jingdong County	#3: Wubu River, Banan District	#4: Tang River, Jiangjin District
Total number of hectares covered through mainstreaming BD	14,400 ha	7,500 ha	1,043 ha	30,000 ha

Total number of hectares of habitats improved and restored	9.3 ha	25 ha	31.8 ha	120 ha
<i>Specific habitats</i>	<p>0.5 ha: Improved habitats area of Buma River</p> <p>3.5 ha: Area of wetland restored, Buma River</p> <p>5.3 ha: Area of wetland restored, Enle River</p>	<p>9.3 ha: Improved habitats area of Chuan River</p> <p>8.4 ha: Restored habitats area of Chuan River</p> <p>7.3 ha: Area of Juhe wetland restored</p>	<p>10.8 ha: Improved habitats area between Yutan hydropower station to Yangjiadong hydropower station</p> <p>21 ha: Restored habitats area between Yangjiadong hydropower to river mouth of Wubu river</p>	<p>75ha: Improved habitats area between Xiaojiatan Retaining Dam to the junction of Chongqing and Sichuan Province</p> <p>45ha: Restored habitats area between Xiaojiatan Retaining dam to river mouth of Yangzi River</p>

The NGL Project comes exactly at the right time and is strategically positioned in the right place to **create high leverage**. It is designed to seamlessly fit in with and make full use of the larger trends characterizing environmental protection in China today. Within the larger strategic context, NGL's purpose is to illustrate how a transition towards a more advanced, more comprehensive and sophisticated paradigm of environmental protection can be achieved and realized in the area of river biodiversity. By doing so, NGL is also well positioned to inspire improvements in other sectors toward more advanced environmental protection methods.

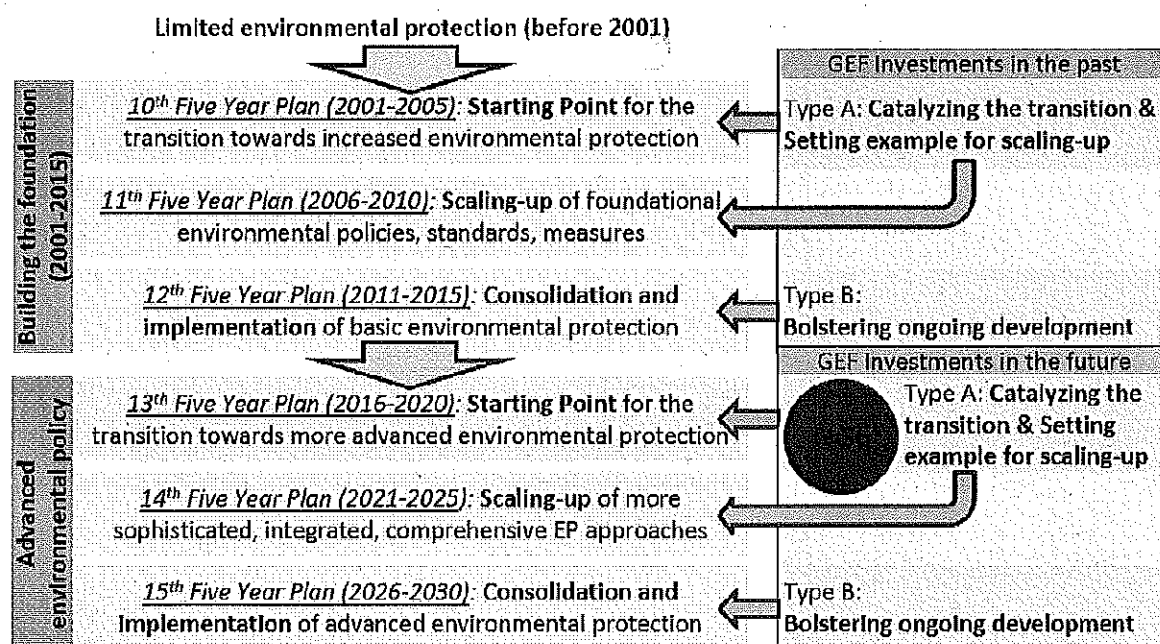


Figure: Overview of NGL's placement within the overarching context of China's environmental policy

As the 13th Five Year Plan (2016-2020) is being finalized, environmental protection in China has arrived at a critical juncture. The foundations of environmental protection have already been built. To move forward, a further leap is necessary: not primarily in the quantity, but in the quality of environmental protection. China's political leadership,

for example by promoting the concept of eco-civilization, encourages stakeholders to explore ways of moving environmental protection in China to the next level. The NGL Project is designed to seize this opportunity: **NGL will provide an example of how China's next step towards advanced environmental protection in water resources management can be achieved.** Thereby, NGL can also provide further inspiration and best practices for China's efforts in environmental protection in other sectors.

Thinking ahead, NGL will provide information, experiences and best practices that in turn can help to inform future laws and development plans that will shape future path of environmental protection in China. For example, results and experiences from the NGL Project are well timed to be considered during the formulation phase for China's 14th Five Year Plan (to start in 2021). While a direct influence on the drafting of the 14th FYP is beyond the reach of the project itself, NGL aims at producing compelling test cases for river biodiversity conservation that are also relevant to the formulation of major national level development planning.

With its comparably small resources, the NGL Project follows a targeted "demonstrating and catalyzing" strategy. It concentrates on one particularly pressing environmental challenge: biodiversity conservation in China's rivers. The NGL Project strives to demonstrate how an integrated approach of WRM can balance development objectives and biodiversity conservation in a way that keeps river ecosystems functional and to mainstream this approach into WRM frameworks at all government levels.

Innovative aspects, sustainability, and potential for scaling up

Innovativeness

The objective of the NGL project in itself represents a significant innovation: MWR has never before applied for GEF support to strengthen biodiversity conservation in river eco-systems. MWR is venturing into new territory by acknowledging that the established "Three red lines" are not sufficient for the protection of river ecosystems and need to be complemented by a systematic biodiversity mainstreaming effort.

Establishing e-flow, based on thorough analysis, informed decision-making and sustainable MRW practices, is a powerful and innovative instrument for balancing development objectives and biodiversity conservation. Demonstrating and mainstreaming this innovation in WRM in the Chinese context is at the core of the NGL project.

In addition, the project is innovative in that it is designed to work with non-traditional partners to achieve global biodiversity benefits and national water and ecosystem health benefits. At the project's core, it will help to establish and sustain strong networks of collaborating stakeholders including government entities at all levels, research and analysis institutions and non-governmental organizations, as well as water resource managers at the local communities.

Environmental sustainability

The project is geared towards the creation of long-term environmental benefits, aiming at sustainable impact that will improve environmental conditions well beyond the scope and duration of the project itself. The mitigation of environmental risk, especially climate change, is addressed by core activities of the project itself, safeguarding project results against changing natural conditions (see risk assessment above). Reducing the vulnerability of river ecosystems against threats at the same time increases the environmental sustainability of the project itself. As an initiative dedicated to the enhancement of environmental sustainability not only for the project, but for the project provinces and for China as a whole, its environmental sustainability has to be categorized as particularly high.

Financial and economic sustainability

The project's strong alignment with national and provincial level long-term interests and goals and its inseparable linkage with major WRM investments effectively insulate the project from most financial risks. In addition, the relatively small overall volume of the project further reduces the financial vulnerability of the project results. As most of the benefits to be created by the project are realized through BD policy mainstreaming and improvements of the regulatory and legal framework, the project's core results are not directly threatened by financial risks. Also, the Government of China has consistently demonstrated its ability and willingness to provide the necessary financial means to fulfil not only its co-financing obligations, but also fund the replication and scaling-up activities. In this light, the financial and economic sustainability of the project has to be seen as solid.

Sustainability of capacities developed

The project's significant capacity development efforts (under component III) are not stand-alone trainings that only produce an impact on the cohort of trainees reached by the project directly. On the contrary, the project's training activities go hand-in-hand with the practical demonstration of the WRM practices in question. Thereby, the developed capacity is applied immediately and concretely, passing knowledge and information to an ever-growing group of individuals well beyond the initial group of trainees.

In addition, knowledge exchange and dissemination mechanisms envisioned to be established by the project are designed as sustainable structures embedded into the local administrative system. Part of the replication and scaling-up activities is to ensure the existence of these knowledge mechanisms beyond project duration. Training structures will also include peer-to-peer learning, including knowledge and experience exchange between farmers and government staff of different project sites within one provinces as well as between different project provinces.

Replicability and scaling up

Its replicability and potential for scaling-up count among the biggest advantages of this project. Focussing on BD mainstreaming into the policy as well as regulatory framework on WRM in China, the project uses a strong "leveraging logic", attempting to affect fundamental improvements which will then find their way into many WRM practices in different part of China. By consciously leveraging current political trends in China's water sector in particular and in China's overall approach to environmental protection in general, the project is not only aligned, but closely embedded in the overarching political context, dynamic and fundamental interests in China. Accordingly, the Government of China is likely to become a strong partner in replication and scaling-up efforts, providing its support to the roll-out of project activities beyond their current scope.

Pilot activities have been selected for their replicability not only in the two pilot provinces, but also in other parts of the country. Project sites represent a spectrum of different conditions and challenges. Thereby the project will create a portfolio of solutions for a range of replication areas. The close linkage between the two pilot provinces created by the project will also serve as a template for inter-provincial exchange of knowledge and information further facilitating the replication and scaling-up process. In combination, these factors create a promising environment for expanding project activities after and even during project implementation.

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:

Risk	Rating	Mitigation measures
Economic pressure may increase, intensifying the inclination for infrastructure development in rivers, altering aquatic habitats at unsustainable rates.	Medium	<p>Addressing this risk through mainstreaming BD into long-term policies and plans is at the core of the project itself. The efforts of the project will ensure that river BD is protected against unsustainable WRM driven by economic interests by providing an alternative way to achieve a better balance between development and biodiversity objectives. The establishment of e-flows is the projects most powerful mitigation strategy in this regard (see section 2 for details)</p> <p>As described in the sections above, the political will and priorities are aligned with the projects efforts. The concept of "ecologic civilization" embodies this alignment. NGL project will provide specific and practical tools and approaches to the water resources management sector to reduce and minimize pressure on riverine biodiversity by better planning and improved understanding of river ecosystems and their biota and applying that understanding to improve related policies, regulations and plans.</p>

		As explained in the baseline section of this PIF, national and provincial political and institutional commitment will play a key role in mitigating this risk. This commitment is expressed in terms of the Number One Document on Accelerating Water Sector Reform and Development. It is also expressed in the fact that this project itself is being proposed by the Ministry of Water Resources.
The capacity at Provincial water department level to support main-streaming is just emerging and may be difficult to operationalize effectively.	Medium	The project is designed to strengthen capacity of water resources managers in two ways. First, it will help stakeholders create new partnerships among existing institutions. This will provide new capacity to MWR, provincial DWR as well as prefecture level governments almost immediately in the short term. Second, the project will enable stakeholders to begin a long-term process of strengthening their biodiversity mainstreaming capacity through the elaboration of new training modules and the design and implementation of new field demonstrations and pilots.
Increased frequency or regularity of temperature extremes caused by CC may alter the flow regimes of many of China's river systems.	Medium-Low	<p>The same knowledge and capacity that water management stakeholders will gain in refining and strengthening their e-flow river management prescriptions will aid their efforts in the future to understand impacts of climate change on river flow and river biota. The advanced information systems to be established through the project will be a valuable asset also with regards to ecosystem changes due to climate change.</p> <p>The project is designed to give water resource managers the tools needed to begin to understand the impact of climate change (e.g. e-flow analysis, water accounting) and people on freshwater biota and to proactively respond to minimize and reverse this impact by improving water management practices.</p>
Coordination between the national and provincial level actors is a potential risk, as it is not unusual for different interests and views to come to the surface.	Low	The project team has already begun to mitigate this risk by consulting with provincial stakeholders during the PIF and PPG process. This risk will be mitigated during project implementation in two ways. First, the project design aims to help mainstream biodiversity conservation priorities into national level water resource management planning. These priorities can then be addressed/adopted in different ways by provincial and prefecture level actors. This flexibility will be an important mitigator of this risk. Second, the project steering committee will have representatives from stakeholders at the national and provincial levels. There will be other advisory committees also organized in this way.

A.7. Coordination with other relevant GEF financed initiatives

This proposed project will be coordinated with a range of ongoing initiatives in China related to water resource management. Regular coordination and consultation mechanism will be incorporated into the project's knowledge exchange mechanisms to be established under project component II (see *Outcome 2.4: Compilation and internal as well as external dissemination of information and best practices gained from the project*) to maximize synergies and

avoid duplication with the work of relevant GEF financed and other initiatives. Experiences and best practices from these related project and programs will directly contribute to the mainstreaming efforts under component I. In addition, the project aims to learn from the experiences gained from related initiatives in order to ensure the use of best operational practices and their effective incorporation into the proposed GEF project's framework. In particular, FAO will ensure coordination among its rapidly growing portfolio of GEF projects in China, many of them being biodiversity conservation related projects.

This project will seek synergy with the GEF/UNDP financed project, "Payment for Watershed Services in the Chishui River Basin for the Conservation of Globally Significant Biodiversity," which focuses on mainstreaming biodiversity conservation and developing capacity among MEP and local governments across the watersheds of Chishui River (in Guizhou province). The project will also seek lessons learned from the GEF/ADB financed project, "CBPF Integrated Ecosystem and Water Resources Management in the Baiyangdian Basin", which is designed to introduce integrated ecosystem and water management to conserve biodiversity and improve environmental conditions in the Baiyangdian Basin, in particular in establishing viable mechanisms for integrated ecosystem management (IEM), including monitoring biodiversity conservation. The Terms of Reference for this FAO-GEF project's Project Management Office will include the proactive engagement of projects like Chishui to learn lessons and exchange experiences contributing to NGL efforts under all three components.

The project will also seek to share lessons learned and synergies with the GEF/FAO supported project "Conservation of biodiversity and sustainable land management in the soda saline-alkaline wetlands agro pastoral landscapes in the western area of the Jilin Province" currently under full project preparation. The Jilin project is led by the Water Resource Department of the Jilin Province and will provide an on-the-ground case for balancing biodiversity conservation with flood control, electricity production and irrigation and food security needs in a concrete water diversion and control investment. Lessons learned from coordination with the environmental sector and setting up criteria and practices for water quality and quantity management allowing for rehabilitation of wetlands and related biodiversity could be very useful for the proposed project. Further, synergies between the proposed project and the Jilin project, which is building up from a concrete on-the-ground challenge of setting the right balances in a particular challenging ecosystem with scares water resources and land and wetlands biodiversity degradation problems, could be very important for both projects. These synergies will be supported by FAO as the GEF Agency for both projects.

The project will also benefit from FAO's institutional capacity for carrying out GEF financed projects in the area of mainstreaming biodiversity conservation in freshwater and estuary areas in China, including "Demonstration of Estuarine Biodiversity Conservation, Restoration, and Protected Area Networking" and "Securing Biodiversity Conservation and Sustainable Use in China's Dongting Lake Protected Area". The Australian Government-MWR project entitled, "Australia-China Environment Development Partnership" conducted technical pilots for river health assessments that will serve as a good foundation and reference point to build upon and will be able to inform this project's more applied planning and management orientation. Coordination of these FAO GEF projects will include annual meeting of FAO-GEF project managers to discuss common areas of work and to share lessons learned.

This project is closely linked with the GEF supported "China Biodiversity Partnership and Framework (CBPF) for Action. In particular, this project will contribute to three of the five priority "Themes" of the CBPF: *Theme 1 - Improving Biodiversity Governance*, *Theme 2- Mainstreaming Biodiversity into Socio-Economic Sectors, Plans and Investment Decision-Making*; and *Theme 4- Reducing Biodiversity Loss Outside of Protected Areas*. The project will contribute to the achievement of specific results under each one of these Themes, including: Results 1 and 3 under Theme 1 related to strengthening institutions and policies for biodiversity conservation; Results 10 & 11 under Theme 2 related to mainstreaming biodiversity into relevant plan and laws of sectoral ministries and departments and into local plan; and finally Results under Theme 4 related to considering biodiversity in water use zoning plans and in restoring freshwater ecosystems in a way that incorporates biodiversity objectives. This project will seek to participate in the CBPF lessons learned and knowledge management activities.

In addition, the GEF supported CBPF initiative is supporting the MWR's Research and Development Centre (DRC) with a small grant to develop a strategy and action plan for mainstreaming biodiversity into China's Water Sector. This proposed project will coordinate closely with this effort to both inform its work and benefit from its work during the project development process. Potential specific coordination measures include side meetings organized as part of the MoF's annual meeting on GEF projects in China, where lessons learned can be exchanged and updates on progress provided. And finally, a useful potential coordination mechanism will also be semi-annual meetings with UNDP-China and other GEF Agency counterparts to update each other on project progress and to develop additional opportunities for achieving synergies.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

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

Stakeholder Institutions	Relevant Roles/Responsibilities
Ministry of Water Resources (MWR)	The project will be executed through the MWR. The MWR is the national level body responsible for water resource management in China. It provides financing and strategic direction and guidance to the nation's provincial Departments of Water Resources.
Department of Planning and Programming	Will be key actor in mainstreaming biodiversity into the overall planning process. Develops national strategies for water resources development; Formulates national comprehensive plans; Assesses flood impacts of & approves proposals and feasibility studies for key national water projects; Proposes water investment for Central Government.
Department of Water Resources	In its role to manage, allocate, conserve and protect water resources, the DoWR will be key to mainstreaming biodiversity into water resources planning and management through its work to oversee implementation functional zoning of water bodies and the use of EIA in water resources planning and water project construction.
Department of Construction and Management	Will be key stakeholder in applying biodiversity mainstreaming practices to reservoir planning and operations management and standards setting. Provides guidance on management of water infrastructures, sand mining and river channel planning; culverts and gates; Oversees construction of water projects and quality control.
Bureau of Rural Hydropower and Electrification Development	Provides guidance and planning to rural hydropower (RH) development. Formulates and implements strategies, policies, regulations, technical norms on RH. Surveys hydropower potential of rivers and manages information system. Directs formulation and implementation of RH plan, manages permits and approves RH projects subsidized by the Central Government. Provides guidance on construction/ rehabilitation of RH network.
River Basin Management Commissions (RBMC)	RBMCs are responsible for basin planning, unified water resources management, conservation, allocation, drought control and relief, river course management, infrastructure construction, sand mining management, soil conservation, collection of hydrological information. Changjiang (Yangtze) Water Resources Commission is one of 7 RBMCs.

Provincial Departments of Water Resources	Will be lead actors in demonstrating mainstreaming of biodiversity conservation objectives and practices into water management, through the Provincial water resources protection planning process and the demonstration or piloting of other key mainstreaming activities.
Ministry of Agriculture Fishery Bureau	The Aquatic Wild Animal Protection Agency of the Fishery Bureau is an important stakeholder when it comes to monitoring aquatic biodiversity, gathering information about aquatic diversity and enabling that information to be used for mainstreaming purposes.
Ministry of Environmental Protection	Guides, coordinates and supervises ecological and biodiversity conservation. Develops ecological conservation plan, organizes the assessment of water quality. Coordinates environment protection in rural areas; Manages the China Biodiversity Information System.
State Forestry Administration	Plays a role in aquatic biodiversity conservation through its management of wetland protected areas. Organizes and guides the protection and use of the wild land based animals and plants. Manages the China Biodiversity Information Management System.
Chinese Academy of Sciences (CAS)- China Species Information Service (CSIS)	CAS initiated CSIS in 1996. The CSIS is managed jointly by Wildlife Conservation Society (WCS) and CAS. Currently working on Biodiversity Atlas of China aims at producing set of maps for the protection and management of the biodiversity.
Yunnan University; Asian International Rivers Centre	An important regional centre of knowledge and expertise on hydro-ecological processes and aquatic biodiversity and ecosystem health. Could play an important role in strengthening capacity for mainstreaming in Yunnan Province. Specific roles and responsibilities will be elaborated during the project preparatory process.
The Nature Conservancy (TNC) China	TNC is an international environmental civil society organization (CSO). It commenced its work in China in 1998, focusing on biodiversity conservation, often in partnership with the government. TNC is an important civil society partner in the conceptualization of this project and will play an important role in implementation. This role will be determined during project preparation.
Prefecture level government and civil society	Prefecture level stakeholders will play a key role in piloting mainstreaming activities at the local level. This will be particularly the case in Pu'er Prefecture, which is tentatively targeted for demonstration level activities to be elaborated further during the project preparatory phase. A local prefecture level steering committee will be established to guide project preparation and implementation at this level and to ensure fair and equitable participation by relevant ethnic minorities and civil society.

Ethnic minorities	Mainstreaming biodiversity into water management must include a social component since people will do this mainstreaming work and since knowledge and local knowledge will be critical to its success. For example, more than 33 different ethnic groups live in Pu'er Prefecture; six of these have officially designated ethnic administrative units in Pu'er, including the ethnic groups: Dai, Yi, Hani, Meglian, Mojiang and Wa. More than 50 ethnic groups inhabit Chongqing, including the two largest groups the Tujia and the Miao.
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Table: Roles and responsibilities of stakeholder institutions

One specific feature of the NGL project is the establishment of **broadened alliances for WRM**. These networks of collaboration and coordination between government and civil society stakeholders, already signified by the partnership of Chinese government and the **international NGO The Nature Conservancy** will entail a broad spectrum of different expert groups ranging from NGOs to academic institutions. **The new partnerships for MRW will play a role in all parts of the project:** they will

- improve the mainstreaming of BD into policies and plans;
- assist in formulating effective and efficient regulations and technical guidance;
- strengthen the implementation of on-the-ground activities;
- help the gathering and processing of advanced BD information and monitoring.

All of the stakeholders described in this section are part of and organized in these collaborative networks.

National level government

The International Economic and Technical Cooperation and Exchange Centre, Ministry of Water Resources, will be the project Executing Partner directly responsible for technical implementation of project activities, day-to-day monitoring as well as financial management and purchase of goods, minor works, and services (procurement) in accordance with rules and procedures as established in the Project's Operational Manual. MWR will enter into an Execution Agreement with FAO allowing for the purchase of goods, minor works, and services needed to execute the project. FAO will ensure that the rules and procedures set out in the Project's Operational Manual are acceptable in accordance with FAO rules and regulations and GEF minimum fiduciary standards, and MWR will follow in particular rules defined in the Execution Agreement. The Execution Agreement will outline in details the roles and responsibilities of MWR and procedures with respect to financial management, procurement, recruitment, project progress reporting, financial reporting and audit, copyright, and other legal aspects of collaboration.

MWR will submit four-monthly statements of expenditures, procurement and contract documentation for prior clearance, and cash transfer requests based on the updated AWP/B including a detailed budget for the following four month period, and annual audited financial statements to the FAO Representation in China. Further, MWR will prepare and submit to the FAO Representation Project Progress Reports, annual Work Plans and budgets, and all documentation needed for the preparation of the annual PIR.

Provincial level government

The Province Departments of Water Resources (DWRs) will play a prominent role in the coordination of activities at the province level, taking an intermediary function. On the one hand, the DWRs will collect and provide the necessary information from the project site level and transmit this information to the MWR, supporting MWR's

project management and reporting responsibilities and enabling MWR and FAO to react swiftly to changes in project conditions through adaptive project management. The DWRs will use their regular existing reporting procedures with MWR, established in the context of previous internationally funded projects. Existing reporting and information sharing structures are fully sufficient for the purposes of the GEF project.

On the other hand, the DWRs will serve as the transmitter of information and guidance from the national level to the county level project management units. In terms of regular supervision of activities at the county level, DWRs will play a central role in ensuring smooth project implementation. DWRs are in an excellent position to fulfil this role: throughout the entire project preparation process, the DWRs have proven not only their undivided support for the project, but also the implementation capacity necessary to efficiently and effectively guide and manage the project implementation at the provincial level.

Prefecture level government

The project management units at the prefecture level, i.e. selected staff of the prefecture level water bureaus, will supervise and support the actual and concrete implementation of project activities at the project site level. Using their close relationship with local communities, county governments will be in day-to-day interaction with the individuals that will practically apply the activities and practices to be supported by the project.

The Nature Conservancy

The expertise and experience of TNC in biodiversity related river management is described in detail in section 1. Within the context of this project, TNC's main responsibility will be to provide in-depth analysis assisting activities in all three project components. TNC will aid the gap analysis, identification of entry points and advice for improvements in the context of NGL policy mainstreaming efforts. Most importantly, TNC will provide cutting-edge methodologies and research that will represent the backbone of the improvement of information systems under component III. It will also play a crucial role in facilitating the training program, the dissemination and exchange of information and the distillation of best practice drawn from project experiences and results.

CSO organizations

Other stakeholders, including NGOs and academic institutions, will not be official executing partners of the NGL project, but will be directly involved in the project implementation at all levels and through all components as active participants in the new partnerships for WRM (see above).

Consultations with ethnic minorities

Especially the project areas in Yunnan Provinces have a high proportion of ethnic minority population. The Water Bureaus in Pu'er Prefecture as well as at county level in Zhenyuan and Jingdong county organized meetings with local ethnic groups. The NGL project is highly appreciated by these groups as living in harmony with nature is deeply embedded in their culture, signified for instance by the fact that the fish is the totem of the Yi People. Ethnic minorities in the project regions have been concerned about the ecological health of the pilot rivers as well as about sustainable water supply for their agricultural production and daily life. Balancing ecological and economic concerns is therefore a goal shared by the NGL project and the local ethnic communities. Ethnic minorities' knowledge on local fishes and birds will be solicited to guide the implementation of on the ground activities of the NGL project.

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):

Balancing the multiple river-related development objectives like food security, flood control, electricity production, industrial use and many more with biodiversity conservation is an exceedingly difficult task. The NGL Project strives to demonstrate how an integrated approach of WRM can **balance development objectives and biodiversity conservation in a way that keeps river ecosystems functional** and to mainstream this approach into WRM frameworks at all government levels. NGL will show that different ways of balancing socio-economic goals and environmental objectives are feasible and will lead to an overall more beneficial result, meaning safeguarding ecosystems while still achieving development objectives.

Specifically, the socioeconomic benefits at the project site level are:

- **long-term sustainability of fishery resources**, safeguarding the livelihood of local communities dependent on fishery along the pilot rivers as well as in the wider river ecosystem; in all pilot rivers, the reproduction cycle of a multitude of fish species is threatened by flow alterations (especially dams); the establishment of e-flow through the project will revitalize fish populations and contribute to a long-term balance between socioeconomic benefits from fishery and ecosystem health
- establishment of e-flow will provide a **sustainable regime for water abstraction for agricultural as well as industrial purposes**; the sustainable flow regime to be established through the project will serve to avoid excessive water abstraction for economic purposes, thereby providing sustainable levels of water for agricultural and industrial purposes along the river and safeguarding the long-term availability of water to create socio-economic benefits; while there is of course a **short-term trade-off** of between ecological sustainability and agricultural/industrial use, switching to a sustainable water use regime will also be **beneficial from a socioeconomic perspective in the long-term**.
- **increase in tourism and recreational value**; all pilot sites include specific measures to safeguard or restore natural wetlands, pristine stretches of river, etc. (incl. habitats for water birds, etc.); corresponding measures will increase the attractiveness for tourism/eco-tourism, creating additional socioeconomic benefits for local communities.

The NGL project is firmly embedded into the social structures in the pilot provinces and project sites. Prefecture and county/district level governments and local communities will play a crucial role in implementing the project activities giving them ownership over the NGL project. During project preparation, a series of preparatory missions were conducted to the project provinces and sites. Part of these missions was the engagement of local stake-holders at the government as well as community side.

Especially in Yunnan, where ethnic minorities make up a large portion of the population, minority communities have been included in stakeholder consultations during project preparation. The indigenous people of local communities along the pilot rivers in Yunnan will be the primary beneficiaries of the socioeconomic benefits described above.

In addition, local communities will be an active participant in the project related decision-making processes ensuring local ownership. Participatory practices will place strong emphasis on the realization of gender equality throughout the project implementation process. Women are main beneficiaries of project measures especially with regard to socioeconomic benefits from fishery and tourism. Furthermore, the training and capacity development mechanisms that are envisioned to operate well beyond the project duration will be designed with a special focus on and conscious inclusion of women and indigenous people, further strengthen the minority as well as gender equality aspects of the project.

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

The project aims at creating long-lasting and significant GEBs while employing a very small overall GEF investment. This will be made possible through a particularly strong leverage effect of the NGL project. As the project strategy (see 2.1) explains in great detail, the mainstreaming work of the NGL project NGL is designed and timed to make a contribution to the broader trend towards a more advanced approach to environmental protection in China. By facilitating this transition, the small NGL investment can make an important contribution to environmental protection in China's water sector and, through its demonstration effect, even beyond the water sector.

C. DESCRIBE THE BUDGETED M & E PLAN:

Oversight and monitoring responsibilities

Monitoring and evaluation of progress in achieving project results and objectives will be conducted based on the targets and the corresponding output and outcome indicators established in the Project Results Framework (Annex 1). The project's M&E system will be put in place during the first 6 months of project implementation and will feed back into project implementation. This system will be housed within MWR as described in the previous sections. Technical assistance for the design and administration of the project M&E system, training, and procurement of equipment to administrate the information system will be provided by FAO.

The M&E system will be structured in a way that combines traditional on-going monitoring of project activities, external/participatory impact evaluations and social accountability mechanisms. The monitoring and evaluation system will also facilitate learning and generation of knowledge necessary for the subsequent replication and scaling up of project activities. Thereby, the M&E system becomes an integral part of the project and a continuously used tool for realizing adaptive project management.

M&E reporting schedule

Specific reports that will be prepared under the M&E program are:

- i. project inception report;
- ii. Annual Work Plan and Budget (AWP/B);
- iii. Project Progress Reports (PPRs);
- iv. annual project implementation review (PIR);
- v. technical reports;
- vi. co-financing reports; and
- vii. terminal report.

Project Inception Report:

After FAO approval of the project and signature of the Execution Agreement an inception workshop will be held. Immediately after the workshop, MWR will prepare a project inception report in consultation with the FAO Project Task Manager and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed First Year Annual Work Plan and Budget (AWP/B) and a plan with all monitoring and supervision requirements. The draft report will be circulated to FAO for review and comments before its finalization.

Annual Work Plan and Budget (AWP/B):

MWR will submit to the FAO Representation in China an Annual Work Plan and Budget which will be divided into monthly timeframes detailing the activities and progress indicators that would guide implementation during the year of the Project. As part of the AWP/B, a detailed project budget for the activities to be implemented during the year should be included together with all monitoring and supervision activities required during the year. With the support from the PTM the FAO Representative will give no-objection to the AWP/B in consultation with the LTU and the GEF Coordination Unit.

Project Progress Reports (PPR)

MWR will submit to the FAO Representation in China six-monthly project progress reports. The 3rd report should accompany the following year's draft Annual Work Plan and Budget (AWP/B) and the 1st and the 2nd reports should be accompanied by the updated AWP/B, for review and no-objection by FAO. The PPR are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the project Results Framework. The FAO Project Task Manager will review the progress reports and submit them to the Lead Technical Unit (LTU) for approval and subsequently to the GEF Coordination Unit for final approval and uploading on FPMIS.

Project Implementation Review (PIR)

The LTU, supported by the FAO Project Task Manager, with inputs from MWR, will prepare an annual Project Implementation Review (PIR). The PIR will be submitted to the GEF Coordination in TCI for review and approval. The GEF Coordination will submit the final report to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio.

Technical Reports

Technical reports will be prepared to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by MWR to the FAO Representation in China who will share it with the LTU and the GEF Coordination Unit for review and clearance, prior to finalization and publication. Copies of the technical reports will be distributed to the Project Directive Committee and other project partners as appropriate. These will also be posted on the FAO FPMIS.

Co-financing Reports

MWR will be responsible for collecting the required information and reporting on in-kind co-financing. MWR will provide the information in a timely manner and will transmit such information to FAO.

Terminal Report

Within two months of the project completion date MWR will submit to FAO a draft Terminal Report, including a list of outputs detailing the activities taken under the Project, "lessons learned" and any recommendations to improve the efficiency of similar activities in the future. This report will specifically include the findings of the final evaluation as described above.

Monitoring and evaluation plan summary

Type of M&E activity	Responsible Parties	Time-frame	Costs
Inception Workshop (as part of annual project management workshop including M&E system application)	MWR, DWRs (consultation: FAO BH, LTO, PTM, LTU)	Within two months of project start up	USD 40 000 (annual project management workshop & M&E system application)

Type of M&E activity	Responsible Parties	Time-frame	Costs
Project Inception Report	MWR (consultation: FAO BH, LTO, PTM, LTU)	Immediately after workshop	None (in-kind co-financing)
Design and set-up of project monitoring system including training of staff and equipment	MWR, FAO LTO/PTM, LTU	As early as possible after project start up	USD 40 000 (system design and set-up) + USD 40 000 (training and capacity development incl. stakeholder travel)
Field based impact monitoring including M&E system operating expenses	MWR, DWRs, Prefecture level project units	Continually	USD 52 800 (operating expenses + consultant support)
Project Progress Reports - PPRs	MWR	four-monthly	None (in-kind co-financing)
Project Implementation Review - PIR	LTU, FAO LTO/PTM; FAO FLO (Funding Liaison Officer - TCI).	Annually	Paid by GEF Agency
Co-financing Reports	MWR	Annually	None (in-kind co-financing)
Technical reports	MWR, FAO LTO/PTM, LTU	as appropriate	None (in-kind co-financing)
Supervisory visits to project and field sites	FAO LTO/PTM, LTU	Yearly or as required	Paid by GEF Agency
Mid-term evaluation	External Consultant, FAO-C, TCI-GEF Unit with the project team and stakeholders	At mid-point of project implementation	USD 42500
Final evaluation	External Consultant, FAO independent evaluation unit in consultation with the project team and stakeholders	At the end of project implementation	USD 42500
Terminal Report	MWR, LTU, FAO LTO/PTM	At least one month before end of project	None (in-kind co-financing)
Total amount			257800


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 OFF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Ms. Jiandi Ye	Deputy Director, IFI Division III, International Department	Ministry of Finance	12/07/2013

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
Gustavo Merino Director, Investment Centre Division, Technical Cooperation Department FAO Viale delle Terme di Caracalla 00153 Rome, Italy		October 28, 2015	Percy Misika, FAO Representative in China Jianwai Diplomatic Compound 4-2- 151/152, Jianguomenwai, 100600 Beijing China	(+86) 10 6532 1345	Percy.Misika@fao.org FAO-CN@fao.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Objective/Impact	Baseline	Outcomes & Outputs	Assumptions
<p><u>Global Environmental Objective:</u></p> <p>To mainstream biodiversity conservation objectives and practices into China's water resources management policy and planning.</p> <p><u>Project Development Objective:</u>⁵</p> <p>To enable an improved balance between development goals and environmental goals, making it possible for rivers to provide their economic services (energy, industrial and agricultural uses, etc.) in a way that maintains or restores a functioning river ecosystem and conserves river biodiversity.</p>	<p><u>Component I:</u></p> <p>"Changing the framework"</p> <p>Institutional and planning framework for mainstreaming biodiversity into water resources management at national, provincial and local levels.</p> <p>BARRIERS:</p> <ul style="list-style-type: none"> Existing water resource management policies, plans, regulations and institutional structures do not systematically integrate biodiversity conservation in river ecosystems. While supportive of ecological priorities, the existing framework does not provide sufficient support for and guidance to the mainstreaming of biodiversity conservation objectives and practices into water resources management. Inclusion of CSOs including academic/research institutions underdeveloped. No certification system for river biodiversity protection in place. 	<p><u>Component I:</u></p> <p>Outcome 1.1</p> <p>Mainstream biodiversity objectives and practices into key water resource management policies, planning, and legal stipulations at the national, provincial and prefecture level</p> <p>O 1.1.1: Gap analysis conducted at national, provincial and municipal level to identify entry points and suitable targets for mainstreaming of biodiversity (policies, development plans, laws) including a regular review of new entry points throughout the project duration</p> <p><i>Indicators and Targets: Initial gap analysis conducted at national level, provincial level for two pilot provinces, and municipal level for four pilot municipalities; renewal of results at a 6-months interval.</i></p> <p>O 1.1.2: Biodiversity mainstreaming objectives and priorities incorporated into key water sector policies and plans at national level (including e.g. National Comprehensive Water Resources Plan; incl. Five Year Development Plan and Sectoral Development Plans)</p> <p><i>Indicators and Targets: Biodiversity</i></p>	<p><u>Component I:</u></p> <p>(1) The existing policy and legal framework on WRM and environmental protection in China's waterbodies is a sound starting point for introducing systematic consideration on BD conservation</p> <p>(2) Through gap analysis and comparison with domestic and international best practices, the most promising entry points for BD mainstreaming can be identified</p> <p>(3) A particular focus of these policy mainstreaming efforts has to be on improving the planning and management framework at the provincial level which is crucial for actual implementation of BD conservation in river ecosystems</p> <p>(4) The information, experiences and knowledge generated at the four pilot sites will serve to improve national, provincial and prefecture level policies and regulations.</p> <p>(5) New alliances between government and CSO (NGOs and academic partners) will play an</p>

⁵ In line with FAO SOs

	<p>BASELINE:</p> <ul style="list-style-type: none"> Existing policy framework provides a solid basis for sound water management with regards to absolute water use, water use efficiency and water quality from a pollutant perspective ("The three red lines") Overall political context strongly supportive of improvements of environmental protection in general and for river ecosystems in particular. Corresponding government investments are increasing. 	<p><i>mainstreamed into at least 3 important national level WRM policies, plans, or laws</i></p> <p>O 1.1.3: Biodiversity mainstreaming objectives and priorities incorporated into key water sec-for policies and plans at provincial level/in Chongqing and Yunnan (including e.g. Provincial Water Resources Protection Plans).</p> <p><i>Indicators and Targets: Biodiversity mainstreamed into at least 3 provincial level WRM policies, plans or law for each of the two provinces (min. 6 provincial level improvements in total)</i></p> <p>O 1.1.4 Biodiversity mainstreaming objectives and priorities incorporated into the water sector development plan and the river management plan at prefecture level in all four pilot municipalities (including e.g. Prefecture level water resource management etc.; River Basin Master Plans for pilot rivers).</p> <p><i>Indicators and Targets: Biodiversity mainstreamed into water sector plan as well as river management plan for each of the four pilot sites (prefecture level)</i></p> <p><u>Outcome 1.2</u></p> <p>Develop administrative regulations as well as technical guidelines for translating biodiversity objectives into concrete WRM practices (with special emphasis on e-flow implementation through corresponding adjustment of human-made flow alteration)</p>	<p>important role for the policy mainstreaming as well as the on-the-ground implementation aspects of the project.</p> <p>(6) The close interrelation between the three components is crucial: the experiences gathered through the activities implemented under component II and 3 will directly feed-back into the policy work under component I. At the same time, the strengthening of the policy framework under component I will support the on-the-ground piloting (C-II) and establishment of information systems (C-III). In that way, NGL will create a constant cycle of improvement throughout the project duration.</p>
		<p>O 1.2.1 Biodiversity considerations, with</p>	

		<p>specific focus on systematically establishing and implementing e-flows, mainstreamed into WRM regulations at national and provincial level (amendment of existing regulation or development of additional regulation).</p> <p><i>Indicators and Targets: Biodiversity mainstreamed into at least 3 important national level regulations and 3 important provincial level regulations for each of the two pilot provinces</i></p> <p>O 1.2.2 Technical guidelines formulated and implemented, providing advice to river managers on translating biodiversity objectives into concrete action at the local level.</p> <p><i>Indicators and Targets: Technical guidelines drafted for the national, provincial and prefecture level policies (outcome 1.1) and regulations (outcome 1.2); other suitable policies and regulations will be included as far as possible</i></p> <p>O 1.2.3 Regulations on dams and dam cascades expanded and improved to include considerations on the implementation of e-flow into both construction and operation of small and medium river dams.</p> <p><i>Indicators and Targets: Regulations for dam construction and operation drafted or improved at national and provincial level (for both pilot provinces)</i></p> <p><u>Outcome 1.3</u></p>	<p>Establish new institutional partnerships</p>
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		<p>for WRM between government and CSOs</p> <p>O 1.3.1 New partnerships among government and civil society organizations established to mainstream biodiversity into water resources management.</p> <p><i>Indicators and Targets: New collaborative partnerships operational at national level, provincial level for 2 pilot provinces; Working group/Stakeholder network established and operational at prefecture level for 4 pilot areas.</i></p> <p><u>Outcome 1.4</u></p> <p>Develop system of principles and corresponding standards to systematically measure and certify biodiversity conservation in China's water bodies</p> <p>O 1.4.1 Create an official "Green Line Scorecard" system for measurement and certification of advanced ecosystem based river management and achievement of biodiversity conservation objectives</p> <p><i>Indicators and Targets: "Green Line Scorecard" developed and ready to be tested in the pi-lot sites (see component II).</i></p> <p>O 1.4.2 "Green Line Scorecard" widely discussed, amended and lastly agreed upon by relevant stakeholders at national (e.g. across MWR Departments), provincial and local levels in pilot provinces and sites</p> <p><i>Indicators and Targets: "Green Line Scorecard" created with input from and</i></p>
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		<p><i>endorsed by all relevant stakeholders</i></p> <p><u>Outcome 1.5</u></p> <p>Increase levels of government investments into biodiversity conservation for river eco-systems</p> <p>O 1.5.1 Expert assessments to identify suitable opportunities for river biodiversity investments maximizing effectiveness as well as efficiency of investments implemented</p> <p><i>Indicators and Targets: Investment opportunity assessments conducted at national level as well as for both pilot provinces</i></p> <p>O 1.5.2 Government investments in aquatic biodiversity related water management practices significantly and measurably increased</p> <p><i>Indicators and Targets: Increase in relevant government investment of at least US\$20 mil-lion) in value</i></p> <p>O 1.5.3 Expansion of number of water management programs and related budgets that include biodiversity conservation as an objective</p> <p><i>Indicators and Targets: At least 5 additional major water management programs (all government levels combined with at least one national level initiative) and related budgets include biodiversity conservation</i></p>
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Component II:	Component II:	Component II:	Component II:
<p>“Enhancing Implementation”</p> <p>Demonstrate on-the-ground activities for mainstreaming biodiversity in pilot rivers in Chongqing and Yunnan Provinces.</p> <p>BARRIERS:</p> <ul style="list-style-type: none"> ➤ The experience and expertise among key water management stakeholders in practically implementing biodiversity conservation activities on-the-ground is insufficient and needs to be significantly improved by implementing pilot activities. ➤ There is a very low level of knowledge of China’s aquatic biodiversity within the water management sector. ➤ The practical implementation of biodiversity conservation into concrete river management activities is a challenging task. It requires special expertise, experience, knowledge and skill, which needs to be built gradually. This implementation capacity for biodiversity protection is not yet existent among stakeholders, from government officials to local level river managers. • As river ecosystems stretch 	<p>Outcome 2.1</p> <p>Broaden the alliance of stakeholders and clarify distribution of responsibilities to strengthen the networks of partners involved in the implementation of biodiversity conservation measures</p> <p>O 2.1.1 Pilot prefectures and provinces establish new partnerships among government and civil society organizations to mainstream biodiversity into water resources management; in-cludes corresponding county/prefecture level stakeholder groups.</p> <p><i>Indicators and Targets: New collaborative partnership operational at provincial level for 2 pilot provinces (supporting mainstreaming under 1.1.3 as well as strengthening implementation capacity for pilot activities; Working Group and Stakeholder network established and operational at prefecture level for 4 pilot areas.</i></p> <p>O 2.1.2. Clarify responsibilities and tasks for all stakeholders involved in river biodiversity conservation (e.g. appointment of dedicated river managers) at provincial and prefecture level</p> <p><i>Indicators and Targets: Clear biodiversity-related responsibilities for stakeholders in river management established, effectively addressing fragmentation of competences and coordination of tasks across geographical borders as well as across</i></p>	<p>(1) Establishment of e-flows is a very powerful instrument for achieving the project’s objectives. Artificial river flow alterations (e.g. dams and embankments, water abstraction, etc.) change the natural cycle of the river ecosystem, threatening biodiversity. A spectrum of measures can be implemented to create a quantity and timing of water flows that resembles the original conditions as closely as possible. By “mimicking” the natural cycle, negative impacts on biodiversity can be minimized.</p> <p>(2) E-flows is an effective tool to achieve a different, more beneficial and more sustainable balance between development objectives and BD conservation.</p> <p>(3) A comprehensive e-flow analysis can yield recommendations on effective e-flow implementation. This will support an informed decision-making process as well as guide on-the-ground pilot activities to support the establishment of e-flow.</p> <p>(4) Concrete sustainable river management approaches and practices, enhancing biodiversity conservation in the project areas, will demonstrate the feasibility and effectiveness of a location-specific set of practices. Pilots will illustrate that a sustainable</p>	

	<p>across different administrative boundaries, coordination and cooperation is often highly difficult, river management responsibilities unclear.</p> <p>BASELINE:</p> <ul style="list-style-type: none"> • Clear political will to overcome the misperception that traditional water resources management concerns such as flood control, hydropower, and irrigation systems are in essence always contradictory to the ecological concerns of improving ecosystem vitality and sustaining biodiversity. • Extensive work by TNC and other CSOs demonstrating a higher level of compatibility between development goals and environmental concerns • Initial work at MWR and DWRs at provincial level to introduce a different balance into river management 	<p><i>institutions</i></p> <p>Outcome 2.2</p> <p>Pilot prefectures in Yunnan demonstrate successful implementation of local-level biodiversity conservation activities, implementing e-flows</p> <p>O 2.2.1 Ensure that pilot activities are included and embedded in the WRM planning processes at provincial and prefecture level under component I.</p> <p><i>Indicators and Targets: Biodiversity mainstreaming under component I explicitly mentions pilot activities.</i></p> <p>O 2.2.2 Support the decision-making process on how to best balance e-flow implementation with development objectives based on the information and recommendations provided by the e-flow analysis under component III.</p> <p><i>Indicators and Targets: E-flow implementation strategy determined and agreed upon by all relevant prefecture level government stakeholders (incorporating expertise and recommendations from the "new partnerships", see above).</i></p> <p>O 2.2.3 Review and adjustment of existing river flow alteration (especially dam structures, embankments and abstraction pattern) along Buma and Enle River (Zhenyuan County) to establish e-flow, enhance habitats and increase connectivity (based on recommendations from e-flow analysis, river health assessment and water</p>	<p>balance between development objectives and biodiversity conservation can be achieved and that there are effective tools to deal with corresponding trade-offs in an informed way.</p> <p>(5) Pilot activities will also create knowledge and ownership for these practices among local governments and communities.</p> <p>(6) The feedback loop between component I and component II makes not only the provincial governments, but also the national level government, especially the different relevant departments at the Ministry of Water Resources, direct stakeholders of the pilots at local level</p>
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		accounting.)	<p><i>Indicators and Targets: E-flow successfully implemented within Buma/Enle river; habitat not blocked to upstream migration by inadequate culvert, small reservoir and other water infrastructure design, resulting in improved habitat connectivity</i></p> <p>Area directly covered by BD mainstreaming: 14 400 ha</p> <p>O 2.2.4 Habitat improvements along Buma and Enle River (Zhenyuan County) including swamp restoration and the creation of wetlands (along the Enle river banks).</p> <p><i>Indicators and Targets: Increased ecosystem ability to sustain globally significant biodiversity (e.g. potamodromous fish species such as: Tor sinensis; Clupisoma sinense; Largemouth Bronze Gudgeon (Coreius guichenoti) & Royal Clown Loach (Leptobotia elongate)</i></p> <p>Area of improved habitats: 9.3 ha</p> <p>O 2.2.5 Wetland rehabilitation and tree restoration along Chuan River (Jingdong County) to revive habitat for fish and especially aquatic bird species</p> <p><i>Indicators and Targets: Enhanced habitat for and increasing population of aquatic birds as measured by bird monitoring system (monitoring stations in two towns); ca. 35 km of minimal disturbance of key habitats</i></p> <p>Area of improved habitats and restored</p>
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	<p>wetlands: 25 ha</p> <p>O 2.2.6 Improvements to existing dam structures along Chuan River to a) implement e-flow (based on recommendations from e-flow assessment; see 2.2.3) and b) facilitate fish migration</p> <p><i>Indicators and Targets: E-flow successfully implemented within Buma/Enle river; Installation of fish migration channels and/or ladders or other suitable migration instruments</i></p> <p>Area directly covered by BD mainstreaming: 7500 ha</p> <p>O 2.2.7 Application of aquatic biodiversity monitoring system as well as "Green Line Score-card" certification system in project area</p> <p><i>Indicators and Targets: BD monitoring system established with two monitoring stations per river and used for improvement of BD conservation measures; ca. 80km of river with newly certified "Green Line" water management practices</i></p> <p>Area covered by GLS in Yunnan: 21 900 ha</p> <p><u>Outcome 2.3</u></p> <p>Pilot prefectures in Chongqing demonstrate successful implementation of local-level biodiversity conservation activities, implementing e-flows</p> <p>O 2.3.1 Ensure that pilot activities are included and embedded in the WRM planning processes at provincial and</p>
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		<p>prefecture level under component I.</p> <p><i>Indicators and Targets: Biodiversity mainstreaming under component I explicitly mentions pilot activities.</i></p> <p>O 2.3.2 Support the decision-making process on how to best balance e-flow implementation with development objectives based on the information and recommendations provided by the e-flow analysis under component III.</p> <p><i>Indicators and Targets: E-flow implementation strategy determined and agreed upon by all relevant prefecture level government stakeholders (incorporating expertise and recommendations from the "new partnerships", see above).</i></p> <p>O 2.3.3 Review and adjustment of existing river flow alteration (especially dam structures, embankments and abstraction pattern) along Wubu River (Banana County) to establish e-flow, enhance habitats and increase connectivity (based on recommendations from e-flow analysis, river health assessment and water accounting.)</p> <p><i>Indicators and Targets: E-flow successfully implemented within Wubu river; habitat not blocked to upstream migration (e.g. by inadequate culvert, small reservoir and other water infrastructure design) resulting in improved habitat connectivity</i></p> <p>Area directly covered by BD mainstreaming: 1043 ha</p>
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	<p>Area of habitats improved and restored: 32 ha</p> <p>O 2.3.4 Implement strict biodiversity conservation measures along Tang River (Jiangjin County) to protect its still relatively pristine conditions.</p> <p><i>Indicators and Targets: Retain population of aquatic species through strict application of fish protection and fisheries regulation; assess biodiversity impact of several sewage water treatment options along the river; avoid unnecessary obstructions in the future and improve few existing obstructions through fish migration approaches (river length ca. 75 km)</i></p> <p>Area directly covered by BD mainstreaming: 30 000 ha</p> <p>Area of habitats improved and restored: 120 ha</p> <p>O 2.3.5 Application of aquatic biodiversity monitoring system as well as "Green Line Score-card" certification system in project area</p> <p><i>Indicators and Targets: BD monitoring system established with two monitoring stations per river and used for improvement of BD conservation measures; ca. 95km of river with newly certified "Green Line" water management practices</i></p> <p>Area covered by GLS in Chongqing: 31 043 ha</p> <p><u>Outcome 2.4</u></p>	
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		<p>Compilation and internal as well as external dissemination of information and best practices gained from the project</p> <p>O 2.4.1 Thorough documentation of information on project activities and results, experiences gathered, best practices identified</p> <p><i>Indicators and Targets: All relevant information documented; project results reports syn-chronized with M&E reporting schedule (see section 4)</i></p> <p>O 2.4.2 Communication of this information within the project, ensuring the mutually reinforcing interaction between project components</p> <p><i>Indicators and Targets: Project results shared with project team and relevant stakeholders</i></p> <p>O 2.4.3 Dissemination of project information and examples of successful biodiversity conservation achieved by the project to decision-makers as well as the broader public</p> <p><i>Indicators and Targets: Project result briefings compiled and distributed to decision-makers; public dissemination campaign including project report, DVD</i></p> <p>O 2.4.4 Targeted provision of best practice information and lessons learned to potential replication and scaling-up areas</p> <p><i>Indicators and Targets: Best practices report compiled and distributed to other provinces and prefectures suitable for</i></p>	
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		replication	
<p><u>Component III:</u></p> <p>"Improving Information"</p> <p>Creation of improved information systems and capability to use these systems to in-form better and continuously improving water management practices serving enhanced conservation of river biodiversity.</p> <p>BARRIERS:</p> <ul style="list-style-type: none"> • <i>The reliable and continuously updated information on river ecosystems is not yet sufficient to serve as a solid basis for identifying, formulating, prioritizing, implementing and measuring the success of biodiversity conservation measures. In addition, the knowledge and capacity at different government levels to process advanced biodiversity information and translate it into appropriate action still needs to</i> 	<p><u>Component III:</u></p> <p>Outcome 3.1</p> <p>Design and implement additional information systems to provide comprehensive river biodiversity analysis (including mappings, environmental flow analysis, river health assessments, and water accounting)</p> <p>O 3.1.1 Mapping of critical river ecotopes including existing as well as planned obstruction and flow alterations as well as species' populations along life cycle and corresponding BD threat assessment/hotspot identification conducted in four pilot areas as well as at province level (with appropriate level of detail)</p> <p><i>Indicators and Targets: Mappings conducted in Chongqing and Yunnan with particularly detailed mappings in the four pilot sites</i></p> <p>O 3.1.2 E-flow analysis conducted in all four project areas and corresponding rivers</p>	<p><u>Component III:</u></p> <p>(1) In order to translate the change in approach into tangible actions, an improvement of information as well as information processing capacity is necessary. The enhanced availability of data will help water managers to define appropriate and effective counter-measures that achieve maximum environmental benefits.</p> <p>(2) A comprehensive e-flow analysis is at the core of the activities under component III as it provides the most important basis for decision-making as well as on-the-ground activities under component II (see above).</p> <p>(3) Piloting will be accompanied by comprehensive trainings of water managers and government officials in how a) to apply the new information systems; b) to process and interpret the improved information; c) to translate this into concrete</p>	

	<p><i>be increased.</i></p> <ul style="list-style-type: none"> • Lacking capacity to identify ways for achieving an ecologically and economically satisfactory balance based on a large set of targeted and advanced information. Information is the basis for balanced decision-making and successful identification of river management activities that minimize trade-offs. <p>BASELINE:</p> <ul style="list-style-type: none"> • Extensive TNC work on provision of advanced information as basis for decision-making and on-the ground action (e.g. e-flow analysis and recommendations) • Existing monitoring systems for water use, pollution etc. Structures can be used as starting point for a more advanced BD monitoring system. 	<p>to a) determine adequate quantity, timing, and quality of water flows to sustain BD; b) develop recommendations to achieve a corresponding flow regime (to be used as basis for pilot activities under component II)</p> <p><i>Indicators and Targets: E-flow analysis conducted; natural cycle as well as impact of flow alterations identified; recommendations for measures to achieve e-flow provided (implementation and component II)</i></p> <p>O 3.1.3 River health assessment, based on mapping results, conducted including water infra-structure assessment (small dam, culvert) for impacts on biodiversity and ecosystem vitality for all four project sites (see also outcome 3.2).</p> <p><i>Indicators and Targets: River health assessment conducted for all project counties</i></p> <p>O 3.1.4 Design and implementation of comprehensive water account system for pilot rivers including all natural and man-made factors for abstractions, discharges and consumption</p> <p><i>Indicators and Targets: Water accounting system operational, utilizing global scale public domain datasets (WA+)</i></p> <p><u>Outcome 3.2</u></p> <p>Establish a comprehensive biodiversity monitoring system for aquatic biodiversity and piloting of the system in the project areas</p>	activities for biodiversity conservation.
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	<p>O 3.2.1 Formulate a strategy for systematically feeding biodiversity information (combined from outcomes 3.1 and 3.2) into the mainstreaming activities under component I.</p> <p><i>Indicators and Targets: Strategy document formulated for both provinces and all four project sites after 6 months of project start date.</i></p> <p>O 3.2.2 Establish GIS-based aquatic biodiversity database linking species and ecosystem lists to rivers to enable robust biodiversity-oriented review of water development projects; partially using the information gathered under outcome 3.1.</p> <p><i>Indicators and Targets: GIS database designed and operational</i></p> <p>O 3.2.3 Design comprehensive aquatic biodiversity monitoring program in two pilot provinces using traditional instruments as well as modern “environmental DNA” approaches where possible.</p> <p><i>Indicators and Targets: Aquatic biodiversity monitoring system designed and operational</i></p> <p>O 3.2.4 Pilot monitoring system in project areas: Aquatic biodiversity conservation targets (species number and condition; habitat condition; related amount of investment) established and monitored.</p> <p><i>Indicators and Targets: Monitoring system successfully piloted in project areas</i></p>	
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		<p>Outcome 3.3 Develop and implement system of multi-level and multifaceted biodiversity main-streaming training program targeting government officials and water management partners from local communities and civil society organizations</p> <p>O 3.3.1 Training for government officials and CSO stakeholders of the new partnerships for WRM on principles and policies related to biodiversity mainstreaming (incl. national and international workshops/symposia to bring together project stakeholders as well as national and international river ecosystem experts)</p> <p><i>Indicators and Targets: At least 30 MWR officials as well as 60 officials at provincial level plus the same number of stakeholder from CSOs trained in the mainstreaming BD conservation objectives into water resources management planning and programming; at least four workshops/symposia organized.</i></p> <p>O 3.3.2 Training for government officials and other relevant stakeholder at the national, provincial and prefecture level to improve capacity for the implementation and utilization of advanced BD information systems (river health assessment, e-flow analysis, advanced water accounting)</p> <p><i>Indicators and Targets: At least 400 water management professionals trained in biodiversity mainstreaming practices</i></p>
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		<p><i>relevant to their area of expertise.</i></p> <p>O 3.3.3 Training for government officials and other relevant stakeholder on the use of the aquatic biodiversity monitoring system, processing of data and translation into biodiversity conservation measures at all levels</p> <p><i>Indicators and Targets: At least 400 water management professionals trained in BD monitoring system implementation, processing and analysis</i></p> <p>O 3.3.4 Training for government officials and other relevant stakeholder on the use of the "Green Line Scorecard" certification system</p> <p><i>Indicators and Targets: At least 400 water management professionals trained in "Green Line Scorecard" implementation</i></p> <p>O 3.3.5 Training for local community level to improve understanding of biodiversity conservation objectives and practices and strengthen capacity for implementation</p> <p><i>Indicators and Targets: Provision of training on river biodiversity to local population with a special focus on empowering and educating women and ethnic minorities.</i></p>
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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).

Most comments from project reviews have been answered during the PIF stage and appropriate changes have already been included in PIF as well as the overall project design as described in the Project Document.

Remaining recommended actions at CEO Endorsement from GEFSEC project review are addressed as below.

(i) Responses provided at the first submission on September 21, 2015:

GEF Review Sheet	FAO Responses
25: 1) The innovative element of this project is its focus on biodiversity mainstreaming at the national policy and planning level that would have scaling up and replication effects nationwide. The CEO endorsement should provide substantive information on these policy/strategy changes as well as concrete plan on how it would be implemented beyond the pilot sites (i.e. concrete action and implementation plan with budget).	Comprehensive strategy described under Component I of the Project Strategy → please see ProDoc 2.4.1
25: 2) The pilot initiatives at the provincial level should be an on-the-ground implementation activities to make the e-low actually happen, i.e. not only assessment and planning, but also actual implementation through the project. Please clarify the detail implementation plan.	Substantial on-the-ground activities to implement e-flow are part of the project strategy under Component II → please see ProDoc 2.4.2
25: 3) Under the PPG, appropriate consultation and consent should be received from the ethnic minorities and local communities that are involved in the project activities. Appropriate social and gender analysis should be conducted through the PPG to come up with an appropriate project design with relevant indicators.	Appropriate consultations conducted during PPG and incorporated into project design → please see for example p. 15, p. 66, outcome 3.3, section 5.1, etc.
25: 4) Further details on the threats and baseline initiatives.	Further details provided → please see ProDoc p. 31 and following "GEB status, threats, causes; problems the project will address"
25: 5) Private sector and NGOs involvement in the project	The broadened alliances and networks for improved WRM, complementing government efforts, incl. NGO and private sector, are a core building-block of the project and can be found throughout the project design and as an explicit part of several outcomes/outputs → e.g. outcome 1.3, outcome 2.1 ("Broaden the alliance of stakeholders and clarify distribution of responsibilities to strengthen the networks of partners involved in the implementation of biodiversity conservation measures"), etc.
25: 6) Further details and tangible/measurable GEBs.	Indicators and measurable targets for all outputs provided → please see project framework above and in ProDoc
25: 7) Concrete coordination mechanism with related GEF and other initiatives that are focused on water resource and river-basin/watershed management.	Provided → please see ProDoc, p. 132 and following
25: 8) Concrete commitment from the national and provincial governments to work on the project initiative, in the form of co-financing letters with substantial cash co-financing as identified.	Provided → please see co-financing letters

(ii) Responses provided at the resubmission on October 28, 2015:

GEF Review Sheet	FAO Responses
<p>8 (a): Please identify the significant tangible GEBs and quantify them under section A5, including: (a) the total number of has covered through mainstreaming BD; (b) the total number of has of habitats improved and restored as well as the number of has for each habitat improved and restored; and (c) total number of has for areas where strict BD conservation measures are implemented as well as the number of has for each area under strict BD conservation. Please reflect all these numbers accordingly in framework and tracking tools.</p>	<p>Please see the updated/expanded description (highlighted) under section A5.</p> <p>Please see the updated Tracking Tool separately attached, which includes the areas covered, habitats improved and etc. as requested.</p>
<p>9: In section B2, please:</p> <ol style="list-style-type: none"> 1. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels. 2. include concrete measures and expected results related to gender and indigenous people. 	<p>Please see the updated/expanded description (highlighted) under section B2.</p>
<p>13: Please provide concrete innovative, sustainable, and scaling up aspects in section A5.</p>	<p>Please see the updated/expanded description (highlighted) under section A5.</p>
<p>15: Has the cost-effectiveness of the project been sufficiently demonstrated, including the cost-effectiveness of the project design as compared to alternative approaches to achieve similar benefits?</p> <p>Please be more concrete in the overall A5 section. What will be delivered that would not be without the project?</p>	<p>Please see the updated/expanded description (highlighted) under section A5.</p>
<p>19: Please summarize salient outcomes of PPG in the project summary section.</p>	<p>Please find a summary of outcomes of the PPG phase, included in the first paragraph of the Project Summary section (highlighted).</p>
<p>26: Please address the comments above and the following errors in the tables:</p> <p>FASF and Project Framework GEF Project Grants differ</p> <p>FASF and Project Framework total cofinance amounts differ</p> <p>FASF and Project Objective Cofin Amounts by Trust Funds Differ.</p> <p>The sum of the cofinance as given per source differs from PF's total cofinance.</p>	<p>Please see the corrected amounts (highlighted) in Table B: Project Framework, consistent with Table A: Focal Area Strategy Framework (FASF).</p> <p>Please note that the amount and the funding sources remain the same as the PIF. Type of co-financing (in-kind or cash) is updated (highlighted) in Table C, in accordance with the eventually obtained co-financing letters.</p>

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁶

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

PPG Grant Approved at PIF: USD 100,000			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Stakeholder consultations, coordination and mechanism for local stakeholder participation	10,000	10,050	
Elaborate Component 1 – Institutional and planning framework for mainstreaming biodiversity conservation into water resources management at national and provincial levels	20,000	20,000	
Elaborate Component 2 - Pilot mainstreaming into key water sector development programs at the provincial level in Chongqing and Yunnan provinces	50,000	41,526	8,424
Elaborate Component 3 – Monitoring, knowledge management, training & scaling up of biodiversity conservation mainstreaming practices	5,000	5,000	
Elaborate Component 4 – Project progress monitoring and information dissemination	5,000	5,000	
Information Synthesis, Project Design & Budgeting	10,000	10,000	
Total	100,000	91,576	8,424

⁶ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.