

**NATIONAL GANGA RIVER BASIN AUTHORITY
(NGRBA)**

(Ministry of Environment and Forests, Government of India)

**Environmental and Social Analysis and Management
Framework (ESMF)**

Executive Summary

March 2011

1. INTRODUCTION

1. The river Ganga has significant economic, environmental and cultural value in south Asia. Rising in the Himalayas and flowing in to the Bay of Bengal, the river traverses a course of more than 2,500 km through the plains of north and eastern India. The Ganga basin – which also extends into parts of Nepal, China and Bangladesh – accounts for 26 per cent of India’s landmass, 30 per cent of its water resources and more than 40 per cent of its population.
2. Despite its importance, extreme pollution pressures pose a great threat to the biodiversity and environmental sustainability of the Ganga, with detrimental effects on both the quantity and quality of its flows. Untreated sewage and industrial wastewater represent the primary sources of pollution, with only one-third of the sewage generated in the main-stem towns and cities receiving treatment before being discharged in the river.
3. The Government of India (GoI) has undertaken clean-up initiatives in the past. The most prominent of such efforts was the Ganga Action Plan, launched in 1985. These programs have faced significant public scrutiny and, despite some gains made in slowing the rate of water quality degradation, they have been widely perceived as failure, due to (i) inadequate attention to institutional dimensions, (ii) little efforts in addressing systemic weakness in the critical sectors (iii) inadequate prioritization of investments, with little emphasis on sustainability and (iv) lack of community consultation and participation.
4. Realizing the above deficiencies, the Government of India has constituted the National Ganga River Basin Authority (NGRBA), on 20th February 2009, for comprehensive management of the river through a multi-sector, river-basin approach. The NGRBA has declared that by the year 2020 no untreated municipal sewage or industrial effluents will be discharged into the Ganga and an investment of US\$ 3.2 billion is currently planned to meet this objective.

2. THE NATIONAL GANGA RIVER BASIN PROJECT

5. Building on the high-level dialogue with GOI on Ganga, The World Bank has been formally requested to provide a long-term support to NGRBA, through several phases of substantive financing and knowledge support. The proposed National Ganga River Basin Project (NGRBP) is first project of such several phases of support.

6. The objectives of the proposed National Ganga River Basin Project are project are NGRBA builds capacity of its nascent operational-level institutions for managing a comprehensive Ganga clean-up and conservation program; and (b) reduces point-source pollution loads through sustainable interventions at selected locations on the Ganga. The project will closely support the NGRBA's immediate objective of ensuring that no untreated wastewater is discharged in the main stem of the Ganga by 2020.
7. The project will have two components relating to institutional development and priority infrastructure investments. The first component would seek to build the institutional capacity to effectively implement the overall NGRBA program, including infrastructure investments funded by the second component.
8. The first component on Institutional Development will (i) build functional capacity of the NGRBA's operational institutions at both the central and state levels; and (ii) provide support to associated institutions for implementing the NGRBA program.
9. The second component proposes to finance demonstrative infrastructure investments to reduce pollution loads in priority locations on the river. These investments will be made in four key sectors (wastewater, industrial pollution control and prevention, solid waste management, river front management) contributing pollution of Ganga.
10. In lieu of defining and appraising specific investments, the project has focused on developing investments framework covering all four key sectors of intervention under the NGRBA program. These frameworks prescribes the criteria and quality assurance standards covering various aspects including eligibility, prioritization, planning, technical preparation, financial and economic analyses, environmental and social management, long term O&M sustainability, community participation, and local institutional capacity. These frameworks will allow infrastructure investments to be selected on a dynamic and ongoing basis.

3. ENVIRONMENTAL AND SOCIAL ANALYSIS AND MANAGEMENT FRAMEWORK

11. To help understand, environmental and social issues associated with NGRBA program and potential infrastructure investments to be financed through NGRBP, an Environmental and Social Analysis (ESA) of the project activities was carried out, through available secondary information. Based on this

analysis an Environmental and Social Management Framework (ESMF), that ensures compliance of all project activities with the environmental regulations of GOI and the safeguard policies of The World Bank, was prepared.

12. The purpose of the Environmental and Social Management Frame Work (ESMF) is to facilitate the management of environmental and social issues of all investment projects proposed by the NGRBA. Considering the overall framework approach adopted by the project, the ESMF only addresses the broader portfolio of projects to be implemented in NGRBP, as relevant information for specific projects (i.e. their size, type and location) are not yet available, as investments are being finalised.
13. The ESMF is organized in two distinct sections comprising (i) base line environmental and social profile of Ganga Basin prepared through available secondary information (volume 1) and (ii) detailed environmental and social management framework (volume 2) that provides policies and procedures to be adopted while preparing and implementing various sub-projects in NGRBP. Sections below provide a summary of these components of ESMF.

4.0 ENVIRONMENTAL AND SOCIAL ANALYSIS OF GANGA

14. The Ganga river (with a length of 2525 km) is fed by runoff from a vast area bounded by the snow peaks of the Himalaya in the north and the Peninsular highlands and Vindhya range in the south. The basin encompasses an area of more than a million square kilometers (1,186,000 km²) spread over four countries: India, Nepal, Bangladesh and China. With 861,404 square kilometers within India itself, the Ganga basin is the largest river basin in India that covers 25.22 per cent of India's total geographical area.
14. In India, the Ganga flows through eleven states (Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Delhi, Haryana, Himachal Pradesh, Madhya Pradesh, Chattisgarh, Rajasthan and West Bengal) and 1949 cities / towns, with an estimated population of 125 million. The average population density in the Ganga basin is 520 persons per square km as compared to 312 for India (2001 census). The major cities of Delhi, Kolkata, Kanpur, Lucknow, Patna, Agra, Meerut, Varanasi and Allahabad are situated in the basin. Among these 10 states, Uttar Pradesh accounts for 80 million population (64% if the basin), spread over 17 districts.

4.1 Course of Ganga

15. The Ganga rises as Bhagirathi, in the Garhwal Himalaya from the ice-cave of Gaumukh at the snout of the Gangotri glacier. The river cuts through the Himalayas until another head stream, the Alaknanda, joins at Devaprayag. It is below this confluence that the united stream of Bhagirathi and Alaknanda is known as the River Ganga.
16. Ganga water is widely used for domestic, industrial and irrigation on its course. The other major use of Ganga water is for irrigation. The irrigation water is channeled through upper gangetic canal network, located near Hardiwar, for irrigating a major portion of the Ganga-Yamuna plains in Uttar Pradesh, and the lower gangetic canal, located near Narora.
17. The Ganga does not receive any major tributary until the Ramganga joins at Kannauj. At Allahabad (1020 km from the source), the Ganga is joined on the right by the River Yamuna and several major tributaries after that, such as Tons, Son, Gomati, Ghaghara, Gandak, Burhi Gandak and Kosi. The Ganga eventually reaches the head of its delta at Farakka, beyond Rajmahal.

4.2 Basin Characteristics

18. The Ganga basin can be divided into the eight physiographic divisions, comprising and is characterized by a wide variety of soils. The soils of the high Himalayas in the north are subject to continued erosion and the Gangetic trough provides a huge receptacle into which thousands of meters of thick sediment layers are deposited to form a wide valley plain. The plateau on the south has a mantle of residual soils of varying thickness arising due to the weathering of the ancient rocks of the peninsular shield.

4.3 Land Use

19. The states falling under Ganga basin are extensively cultivated, constituting approximately about 40 per cent of the total area of the India. About 14 per cent of land is not available for cultivation and put to various non-agricultural uses. Although the net sown area constitutes 50 per cent of the Ganga basin states area, the total cropped area & cultivable land constitutes 73 per cent & 65 percent of the basin states area, respectively. The states falling under Ganga basin have only 16.6% of their land areas covered by forest, as compared to India as a whole which has 21.2% of land under forest cover. In some states, especially Haryana, Delhi, Bihar, Uttar Pradesh, Rajasthan and

West Bengal, the forest cover is as low as 0.1 to 13.2 per cent of the geographical area. Most of forest tracts within the Ganga basin are severely degraded on account of over exploitation. As a result, the forest ecosystem in the Ganga basin is under severe stress due to extensive clear felling of trees carried out in recent decades.

4.4 Vegetation

20. The Ganga Basin is characterized by the tropical and subtropical temperature zones and presents the following types of vegetation categories.

- Tropical Moist Deciduous Vegetation comprising saal, teak, sandal wood, arjun, jarul, ebony mulberry, kusum siris, palas, mahua, simul and dhup.
- Tropical Dry Deciduous Vegetation bijasal, laurel, palas, khair and kendu.
- Sub-Tropical Coniferous Vegetation association of chir pine without underwood and a few shrubs.
- Himalayan Dry Temperature Vegetation comprising chilgoza, deodar, oak, maple, ash, celtis, parrotia, olive, etc.
- Himalayan Moist Temperate comprising deodar, spruce, maple, walnut, poplar, cedar, chestnut, birch, oak etc. occur.

4.5 Environmentally Sensitive Areas

21. Though not in the project cities, number of environmentally sensitive areas (Table 1) such as Biosphere Reserves, Wildlife Sanctuaries, National Parks and Tiger Reserves are located in the Basin.

Table 1 Environmentally Sensitive Areas in Ganga Basin

Name	Location	State	Remarks
Biosphere Reserve			
1.Nandadevi Reserve	Chamoli, Pithorgarh and Almora Districts	Uttarakhand	
2.Sundarbans	North and South 24 Paraganas District	West Bengal	Tiger Reserve
National Parks			
1.Valmiki National Park		Bihar	Tiger Reserve
2.Betla National Park		Jharkhand	
3.Dudhwa National Park		Uttar Pradesh	Tiger Reserve
4.Rajaji National Park	Haridwar, Dehradun and Pauri Garhwal Districts	Uttara Khand	Tiger Reserve

5. Corbet National Park	Nainital and Pauri Garhwal districts	Uttra Khand	Tiger Reserve
6. Gangotri National Park	Gangotri	Uttra Khand	
7. Govind Pashu Vihar		Uttara Khand	
8. Valley Flowers National Park		Uttara Khand	
9. Buxa National Park	Alipurduar	West Bengal	Tiger Reserve
10. Neora Valley National Park	Lava Town	West Bengal	
11. Gorumura National Park	Jalpaiguri	West Bengal	
12. Hiral National Park	Darjeeling	West Bengal	

22. In addition to the above, the project includes 134 wildlife sanctuaries in 11 states of Ganga Basin (50 in the five states of NGRBP) and Mangrove forests in the Sunderbans of West Bengal

4.7 Land Degradation

23. Ganga basin experiences land degradation problems such as water erosion, chemical deterioration due to salinization and physical deterioration due to water logging. While soil erosion is most dominant in Madhya Pradesh, water logging is most dominant in Bihar, Jharkhand and West Bengal. The salinity problems are dominant in intensely cultivated Uttar Pradesh.

4.8 Demographic Characteristics

24. The Ganga basin is one of the most densely populated and fertile river basins in the world. The basin supports about 300 million people over an area of approximately 800, 00 sq. km of which some 100 million are directly dependent on the river and its tributaries. The Ganges basin supports one of the world's highest densities of humans. The state of the river Ganga is significantly affected by the population living within the basin. The Ganga basin has 1949 cities and towns, with an estimated population of 125 million. Average population density in the Ganga basin is 520 persons per square km as compared to 312 for India (2001 census).

Table 2: Distribution of Population by Location and Caste

	Uttarakhand	Uttar Pradesh	Bihar	Jharkhand	West Bengal	India
Total Population	8,489,349	166,197,921	82,998,509	26,945,829	80,176,197	1,028,610,328
% urban population	25.67	20.78	10.46	22.24	27.97	27.82
% rural	74.33	79.21	89.54	77.76	72.03	72.18

population						
Number of households	2,566,282	34,301,455	16,316,527	5,838,522	20,140,157	193,579,954
Household size	5.3	6.5	6.1	5.6	5.1	5.3
% SC Population	17.87	21.15	15.72	11.84	23.02	16.2
% ST Population	3.02	0.01	0.91	26.30	5.50	8.2
% Population below poverty line	NA	31.15	42.6	NA	27.02	

(Source: Census of India 2001)

25. The gender composition in the population, that is, the sex ratio defined as the number of women per 1000 men, though has increased as compared to 1991 is not favourable to women in any of the five states. However, the ratio is higher than the national figure in Uttarakhand and Jharkhand. Uttar Pradesh has the lowest sex ratio followed by Bihar and West Bengal. Till 1981, undivided Bihar had the sex ratio higher than the all India gender balance, but its sex ratio declined to 911 in 1991. This drastic fall from a ratio of 946 in 1981 reflects the deteriorating situation of women in the state. In addition to the worsening mortality conditions, some of the reasons for this decline lie in increasing economic pressure for survival and sex selective migration. On the other hand, Uttar Pradesh and West Bengal have always recorded sex ratios below the all-India levels. Male migration from these states is part of the explanation.

4.9 Economic Profile

26. The census data shows that over one third of the total population in the five states is falls in category of main or marginal workers out of which U.P is at 32 % and Jharkhand at 38%. The project states have had a disproportionately high incidence of income poverty for decades and their efforts to increase the income their residents have shown mixed results. In most cases, they have lagged the average for the country as a whole. These numbers can be put into perspective by noting that India's population rose from 528 million in 1971 to 1027 million in 2001. In the same period, total population of the project states increased from 189 million to just over 329 million. Slightly under half (~45%) of all poor people in India lived in these states at the beginning of the current millennium. Though the proportion of poor people continued to decline in these states, the rate of reduction had not been able to keep pace with the overall rate for India, except for West Bengal, where again it seemed to have slowed down towards the end of 1990s. Another significant feature of income

poverty that period, not reflected in Table 3.16, pointed out in Mehta and Shah (2003), is that its incidence in the low income states (then 51 – Bihar, MP, Orissa, Rajasthan, and UP), which include 4 project states except West Bengal was over 50% higher than poverty in other large states. Poverty gets reflected even in the fuel used for cooking in a household where fire wood, crop residue and cow dung are the major fuel used in all the five states.

4.10 Sanitation

27. Majority of the households in all the states have no access to the toilets. The figures presents that rural areas in the states have lack of basic amenities and infrastructure related to sanitation. States of Bihar and Jharkhand are the worst in terms of the household coverage. Less than 50 % of households in all the states have bathrooms in their households; especially the scenario is very poor in rural areas. Majority of the households in all the states have no access to the toilets. The figures presents that rural areas in the states have lack of basic amenities and infrastructure related to sanitation. Poor sanitation, open defecation is important factors contributing to the pollution of water. Some of the cultural beliefs in people don't permit them to use toilet, they prefer going out for defecation generally near the drains. Poor sanitation facilities impact the socio-economic life of the residents and it also impacts the water quality. Poor sanitation coverage is a cause of serious concern for the quality of River Ganga. High numbers of households are without any drainage system, which is another indicative of poor sanitation coverage in all the states, which show that all the waste water is drained into open areas, which may run into nearby water bodies, and ground water causing pollution and inviting serious health implications.

4.11 Cultural Practices of Communities

28. The river Ganga is also mentioned in the Rig-Veda, the earliest of the Hindu scriptures. Hindus treat Ganga like a Goddess rather than a river and it is considered highly sacred. It is worshipped in India and holds an important place in the Hindu religion. Hindu belief holds that bathing in the river on certain occasions causes the forgiveness of sins and helps attain salvation. People travel from distant places to immerse the ashes of their kin in the waters of the Ganga; this immersion also is believed to send the ashes to heaven. Several places which lie along the banks of the river Ganga are considered sacred for Hindus, including Haridwar and Kashi. The religious

¹ In end-2000 Uttarakhand was created out of UP, Jharkhand out of Bihar, and Chhattisgarh out of MP.

importance of the Ganges may exceed that of any other river in the world. It has been revered from the earliest times and today is regarded as the holiest of rivers by Hindus. While places of Hindu pilgrimage, called tirthas, are located throughout the subcontinent, those that are situated on the Ganges have particular significance.

4.12 Major Sources of Pollution

29. The Ganga is facing extreme pollution pressures and associated threats to its biodiversity and environmental sustainability. Due to increasing population in the basin and poor management of urbanization and industrial growth, river water quality has significantly deteriorated in recent decades, particularly in the dry season when low flows result in very poor water quality in the critical middle stretch of the river that runs from Kannauj to Varanasi in UP. In addition to these pressures, the problem is also linked to the poor state of environmental monitoring and regulation of point source pollution. These problems have been further exacerbated by high levels of abstraction for irrigation limiting the assimilative capacity of the river for polluted discharge and leaving little water in the lean season for environmental benefits. A brief on the major sources of pollution in the river is presented below.
30. **Point Source Pollution:** The primary sources of pollution are untreated sewage and industrial wastewater. At present, only one-third of the approximately 12,000 MLD of sewage generated in the main-stem towns and cities is treated before being discharged into the river. According to CPCB, treatment capacity in Class 1 cities along the main stem of the Ganga is only 1,174 MLD in comparison to 2,637 MLD of sewage generated (i.e. 44% treatment capacity). In Class 1 cities that dispose into tributaries of the basin, the shortfall is worse with only 146 MLD in treatment capacity as compared to 907 MLD generated (i.e. only 16%). In Class 2 cities (population 50,000 - 100,000), treatment capacity often does not even exist, although absolute volumes of waste are low.
31. **Industrial Pollution:** The contribution of industrial pollution to the total volume of wastewater inflows to Ganga is estimated at about 20 percent; however, its contribution in terms of pollutant loading is expected to be higher. The critically polluted stretch in UP suffers from untreated or poorly treated wastewater discharges from specific industrial clusters, mostly comprising of leather, pulp and paper, sugar, distilleries, and brass industries. Among the many tributaries of the Ganga, the Ramganga and the Kali rivers are most polluted, becoming themselves a major source of main stem pollution at the

beginning of the critically polluted stretch. Estimates from Central Pollution Control Board (CPCB) indicate that significant volumes of industrial effluent are discharged into the Ganga, with about 50% of the total industrial pollution load attributed to industries in UP alone. The status paper of MoEF on Ganga indicates that there are about 478 grossly polluting industries (discharging a BOD load of more than 100 kg/day) in the basin and about 155 industries in the main stem of Ganga. While a majority of them have effluent treatment plants (70 percent), the performance of these plants is not satisfactory, and about 20 percent of the plants have been forced to close down. The Common Effluent Treatment Plants (CETPs) constructed for treating industrial wastewater of small and medium industries are also not able to meet discharge standards, and many of the tanneries in the Kanpur area have already been closed for non-compliance, under judicial orders.

32. ***Non Point Source Pollution:*** Non-point sources could be a very significant source of water pollution in the Ganga – particularly from poor solid waste management in urban stretches and from agro-chemical and livestock waste runoff in rural areas. However, not much of information / data is available about the loading, timing, or trends of pollutants from such non-point sources.

5.0 ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK FOR NGRBP

33. Given the distributed nature of the proposed interventions and the overall frame work approach being followed for the project, an Environmental and Social Management Framework (ESMF), has been developed to ensure management of environmental and social issues in the project. The ESMF supports the three important goals of the project: (a) to ensure the social and environmental sustainability of the subprojects, (b) to comply with the national environmental and social legislation, and (c) to comply with the World Bank Environmental and Social Safeguards Policies. The ESMF details out the policies, procedures and institutional responsibilities for assessing and managing the potential environmental and social risks and impacts that may come up throughout the project cycle of NGRBP subprojects, and is intended for use and application by the agencies responsible for the execution of the investment subprojects under each component.
34. The ESMF has been prepared based on: (a) an assessment of the existing environmental and social features of Ganga Basin in all the five project states and potential subproject cities; (b) careful examination of a sample of interventions previously executed under the Ganga Action Plan; (c) review of

possible subprojects; and (c) detailed consultations with key stakeholders in what are expected to be the key cities.

35. The framework, based on the above activities, categorizes the potential sub-projects into (i) projects requiring detailed Environmental and Social Assessment (ESA) and (ii) projects requiring implementation of generic safeguard management plans. In addition to the above, the ESMF provides (a) an assessment of likely environmental and social impacts of potential sub-projects (b) a description of applicable legal and institutional framework, (c) screening and categorization of sub-projects based on environmental and social impacts (d) guidance on carrying out ESA studies for sub-projects (e) Resettlement Policy and Land Acquisition Framework (RPLAF) (f) Indigenous Peoples Management Framework (IPMF) and Gender Development Framework (GDF), (g) Grievance Redress Mechanism; and (h) specific guidance on public consultation and disclosure procedures and (i) implementation and monitoring arrangements to ensure satisfactory implementation of the safeguard measures in the project. The ESMF will be applied by NGRBA for all its interventions in Ganga Basin.

36. The objective of the ESMF is to provide a management instrument that provides technical guidance on applicable legal and regulatory requirements, institutional responsibilities, methodologies, instruments, and procedures in order to ensure adequate analysis, mitigation, and management of socio-environmental risks and impacts during the entire project cycle. The ESMF essentially comprises of (i) project description; (ii) a description of an easy and efficient methodology to categorize subprojects according to the level of socio-environmental risk, to identify the assessments required to comply with national environmental legislation, and with the Bank Safeguard Policies;(iii) key social and environmental impacts; (iv) environmental and social regulatory framework; (v) environment and social management framework including tribal, gender and consultation framework; (vi) project appraisal, implementation, institutional; monitoring and reporting arrangements; and (vii) a plan to strengthen environmental and social institutional capacity, identifying a series of activities leading to benefiting the sector and enhancing the quality of the subprojects.

5.1 Environmental Impacts

37. All interventions proposed under the project share the long term objective of improving the water quality of Ganga. By virtue of this objective, the environmental impacts of the project are expected to be positive. However,

interventions that are not designed, executed or operated appropriately could lead to significant environmental impacts. These impacts could be due to a variety of reasons, such as

- (a) potential siting of subprojects such as sewage treatment facilities, common effluent treatment plants, solid waste disposal facilities in environmentally sensitive locations such as flood plains, drainage paths, natural water bodies or close to wildlife sanctuaries or other natural habitats, leading to long-term impacts; to be addressed through careful screening and analysis of alternatives sites early during the feasibility study;
 - (b) potential absence of sludge/waste disposal and management and leachate facilities in the proposed subprojects, particularly in the industrial pollution control and solid waste management subprojects wherein the treatment methods use various chemicals and polyelectrolytes, and consequent disposal of untreated sludge and other organic waste into the Ganga and other nearby sensitive habitats in the basin; to be carefully considered during selection of appropriate treatment technologies and design of these various facilities;
 - (c) inadequate management of environmental issues such as disposal of construction wastes during the construction of the subprojects, including inadequate precautions to avoid contamination of the Ganga and all nearby water bodies; air pollution, excessive noise and other nuisance to the nearby communities; vibration and pollution impacts on nearby physical cultural resources; inadequate attention to the occupational health and workers' safety issues; all of such issues to be addressed by specific provision of generic environmental, health and safety provisions in all work contracts;
 - (d) inadequate maintenance of the facilities created by subprojects, depending on their locations, leading to continuation and or further deterioration of river water quality, deterioration of ambient environmental quality, negative impacts on the aquatic and other habitats, and possible degradation soil or contamination of groundwater, and associated health impacts on the communities in the subproject surrounding; all of which would need to be addressed in subproject level environmental and social assessments and mitigation measures to be included in the operation and maintenance management plans of the subprojects.
38. In most cases direct environmental impacts will be negligible, but preparation and implementation of the subprojects may overlook the indirect impacts on-site and at the periphery of the construction sites. In cases where the possibilities of indirect impacts cannot be fully discounted (e.g., as related to sourcing of construction materials), management actions are proposed in the

ESMF and as part of the preparation and implementation requirements of the subprojects which include specific environmental and social examination of options and due diligence.

5.2 Potential Social Impacts of the Project

39. While the Project is expected to benefit the Ganga basin communities, the inadequate or inappropriate implementation of the proposed subprojects might lead to adverse impacts on people and local land resources. Such potential social impacts during the construction phase of subprojects include loss of land or structures, loss of access to areas for livelihood support, deteriorated public safety, noise and other disruptions at sensitive receptors such as schools and health facilities. Site selection for major facilities such as the wastewater treatment plant could become locally controversial among people if land acquisition process is unacceptable, or if neighboring communities are adversely affected by stench from inappropriately maintained sewage treatment plants. These potential social impacts can be grouped into three categories: (i) direct loss of properties, income or livelihood; (ii) indirect loss of access and disruption to life during construction; and (iii) perceived losses related to decline in property values adjacent to sewage treatment or landfill sites. Based on examination of a sample of possible subproject areas and discussion with the potential executing agencies, the typical adverse impacts associated with the project would include:
- (i) potential loss of land due to acquisition of private holdings;
 - (ii) full or partial loss of residential/commercial/mixed use buildings associated with potential land acquisition;
 - (iii) possible displacement of encroachers and/or squatters living on the road edges and on sewer alignments areas;
 - (iv) potential loss of livelihood or distancing from sources of livelihood if displacement takes place; and
 - (v) temporary loss of access to private and common properties or public infrastructure during construction.
40. Avoidance and minimization of each of these potential direct and indirect impacts is the basis on which the ESMF and the program guidelines had been prepared. At a cumulative level, the impacts are beneficial, and the NGRBA program guidelines and the regular monitoring processes will ensure that these beneficial impacts are enhanced.

5.3 Safeguard Categorization of Sub-Projects

41. The potential subprojects will have varying impacts on environment depending on its location, size and nature of interventions. The extent of environmental and social assessment required to identify and mitigate the impacts, largely depends upon the complexities of subproject activities. To facilitate this, the portfolio of projects to be implemented under NGRBP, ESMF categorizes the subprojects into the two categories, based on the severity of its potential impacts, regulatory requirements of GoI as well as the state governments, and the safeguards policy requirements of the World Bank. Overall, the two categories are: (i) projects requiring detailed Environmental and Social Assessment (ESA) and (ii) projects requiring implementation of generic safeguard management plans.
42. **Category I subprojects:** A proposed subproject will be classified as 'Category I' if it is likely to impact (adversely or moderately) the environmental and social aspects of the project influence area, and if it includes land acquisition. These will also include all those projects which require the mandatory environmental clearance as per the EIA notification published by MoEF. The subprojects categorized as Category I will require preparation a detailed Environmental and Social Assessment (Detailed Subproject ESA) by an independent consultant (other than the consultants involved in preparation of either feasibility study or detailed project reports for the subproject). Scope of the assessment will be decided based on the nature of the project and the environmental sensitivity of the project area. This ESA shall examine all the potential negative and positive environmental and social impacts of the project, compare them with those of feasible alternatives (including the "without project" scenario), and recommend all measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. The ESA shall include all the suggested mitigation measures in the form of a project specific environmental management plan (EMP), Rehabilitation Action Plan (RAP) and Social Management Plan (SMP) along with bill of quantities and cost estimates. The bill of quantities shall be included in the bid/contract document, as relevant, and shall be implemented accordingly.
43. **Category II subprojects:** Category II subprojects are those, which are likely to cause minimal or no adverse environmental and social impacts on human populations. The impacts, if at all, are likely to be localized and temporary in nature. In most of these cases mitigation measures are readily available from the ESMF and the program guidelines. These subprojects will require

preparation of an environmental and social analysis as part of the Detailed Project Report, and implementation of relevant portions of the Generic Environmental Management Plan. Wherever applicable the generic management measures shall be included in the bid/contract documents, and the executing agency will ensure that these measures are duly implemented.

44. Based based on examination of a sample of past interventions in similar projects and programs, the ESMF had categorized all expected type of subprojects. The categorization is based on the perceived sensitivity and precautionary principles, and the applicable regulatory requirements. However, subproject specific scoping of the environmental and social issues will determine the exact extent of analyses needed during ESA of Category I subprojects.
45. While the PMG and SPMGs will be free to undertake detailed ESA for Category II projects (such as if and when demanded by local communities, or if a site specific sensitive issue comes to light), none of the subprojects categorized as Category I can be re-categorized as category II. For each subproject identified below as Category I, detailed ESA by independent consultants will be undertaken even if initial scoping in the feasibility report suggests that the nature of environmental and social impacts are trivial. In extreme cases, where investing in a detailed ESA is obviously unnecessary, such detailed ESA can be avoided only in agreement with NGRBA and the World Bank.

Table 3: Safeguard Categorization of NGRBP Sub-Projects

Sub-Project	Safeguard Category
A. Sewerage/Sanitation	
1. Extension of existing or new sewer net work (without sewage pumping stations and/or sewage treatment facility)	II
2. Extension of existing or new sewer net work with sewage pumping stations and/or sewage treatment plants, involving fresh land acquisition	I
3. Low cost sanitation Programs	II
B. Sewage Pumping Stations and Sewage Treatment Plant/Facility	
1. New sewage pumping station/facility involving fresh land acquisition	I
2. New Sewage Treatment Plant/Facility involving fresh land acquisition	I
3. Capacity augmentation of existing sewage pumping station/facility but not involving fresh land acquisition	II

4. Capacity augmentation of existing Sewage Treatment Plants, but not involving fresh land acquisition	II
C. Industrial Pollution Control	
1. New Common Effluent Treatment Plant/facility	I
2. New hazardous waste receiving, treatment storage and disposal facility	I
3. Pilot Projects on IPC technologies	I
4. Waste Minimization and clean technology programs	II
D. Solid Waste Management	
1. Sanitary Landfill Sites with leachate collection and disposal arrangements with or without fresh land acquisition	I
2. Solid waste Segregation and composting facilities with or without fresh land acquisition	I
3. Solid Waste collection & transportation Projects	II
E. River Front Management	
1. River Front Management projects without land acquisition and without potential to interfere with waterway hydrology	II
2. River Front Management Projects with land acquisition and / or with potential to interfere with waterway hydrology	I
3. Redevelopment of cremation grounds situated on river banks	II
4. Electric and or CNG crematoriums along river banks	II

46. The ESMF includes (i) a sample terms of reference for carrying out detailed ESA for Category I subprojects, which could be customized specific to the subproject requirements; and (ii) the Generic Environmental Management Plan (GEMP) for category II subprojects.
47. The ESMF, overall complements the Project Guidelines, and includes the following specific frameworks and processes. The entire ESMF, including the following specific frameworks and processes will be applicable to the entire NGRBA program, irrespective of the source of financing.
- Resettlement Policy and Land Acquisition Framework (RPLAF);
 - Indigenous Peoples Management Framework (IPMF);
 - Gender Development Framework (GDF);
 - Grievance Redress Mechanism;
 - Specific procedures on public consultation and disclosure;
 - Environmental and Social Monitoring Arrangements covering selection, appraisal and implementation of subprojects;
 - A plan to augment institutional capacity to manage environmental and social issues in the project.
48. A screening mechanism has been developed for evaluating the potential social impacts of proposed subprojects. The ESMF describes the detailed methodology that will be applied for the screening and scoping process and

identifies the type of projects that will require a more thorough social assessment and resettlement instruments as subprojects are identified during implementation.

5.4 Resettlement and Land Acquisition

49. According to the assessment of the preliminary list of prioritized works, there will be need for private land acquisition which will result in involuntary displacement and loss of livelihood in both urban and rural areas and therefore OP 4.12 has been triggered. However, involuntary resettlement is likely be of small scale and would not trigger the need for a full resettlement action plan. Nevertheless, as a precaution, the classification of subprojects of the ESMF describes actions and procedures to be followed in case any involuntary displacement does occur. In the event that involuntary displacement as defined in the Bank’s policy 4.12 takes place, the principles and procedures defined in the project’s RPLAF will apply.
50. As part of the ESMF, the project counterparts have developed a Resettlement Policy and Land Acquisition Framework (RPLAF), which specifies the procedures, eligibility, grievance redressal and other measures to be followed in the event that resettlement or land acquisition is required for any subproject (refer table 3 below). Once the location of the works is known during project implementation, individual resettlement or land acquisition plans will be prepared for each subproject as necessary. The Resettlement Action Plans will be reviewed and approved by the Bank before being implemented. The RPLAF will also apply to other components of the project that in the judgment of the Bank, are (a) directly and significantly related to the Bank-assisted project, (b) necessary to achieve its objectives as set forth in the project documents; and (c) carried out, or planned to be carried out, contemporaneously with the project.

Table 4: Entitlement Matrix

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
Loss of Land and structures - (Titleholder/customary/usufruct right holders)			
1 Loss of agricultural land	Titleholders/Household	Compensation at replacement cost Special provisions for vulnerable	<ul style="list-style-type: none"> • Direct purchase at negotiated price (or) compensation for land at replacement value • If PAP is from vulnerable group, compensation for the land by means of land for land will be provided if PAP wishes so, provided that government land of equal productive value is

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
			<p>available. If allotted land is waste land/degraded land, one time assistance of Rs 15,000 per hectare will be provided towards land development charges.</p> <ul style="list-style-type: none"> • If the residual plot (s) is (are) not viable, the affected person becomes a marginal farmer any of the following two options are to be given to PAP, subject to his/her acceptance: <ul style="list-style-type: none"> (a) The PAP remains on the plot, and the compensation and assistance paid to the tune of required amount of land to be acquired (b) Compensation and assistance are to be provided for the entire plot including residual part, if the owner of such land wishes that his/her residual plot should also be acquired by the NGRBP. The NGRBP will acquire the residual plot and pay the compensation for it. • Reimbursement of registration and stamp duty charges
2 Total loss of homestead/commercial land and structure	Titleholders/Household	Compensation at replacement cost Special provisions for vulnerable	<ul style="list-style-type: none"> • Direct purchase at negotiated price (or) compensation for land at replacement value • Compensation for loss of affected structural area will be paid at the replacement cost to be calculated as per latest prevailing basic schedules of rates (BSR) without depreciation. • Shifting assistance of Rs 10000 • Right to salvage material from the demolished structure and frontage, etc • Rental assistance as per the prevalent rate in the form of grant to cover maximum three/Six months rentals • Reimbursement of registration and stamp duty charges • For vulnerable groups losing residential/commercial structures and do not have any other housing units within limit of the local bodies, shall be given preference to allot a house under any housing scheme at cost.
3 Partial loss of homestead/commercial land and structure	Titleholders/Household	Compensation at replacement cost	<ul style="list-style-type: none"> • Direct purchase at negotiated price (or) compensation for land at replacement value • Compensation for loss of affected structural area will be paid at the replacement cost to be calculated as per latest prevailing basic schedules of rates (BSR) without depreciation.

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
			<ul style="list-style-type: none"> Right to salvage material from the demolished structure and frontage, etc
Loss of Structure by Non Titleholder			
4 Loss of structure (immovable assets constructed by squatters and encroachers)	Household	Compensation at replacement cost Special provisions for vulnerable	<ul style="list-style-type: none"> Non vulnerable squatters and encroachers will be notified and given one month time to remove their assets. Vulnerable squatters and encroachers <ul style="list-style-type: none"> No compensation for land Compensation for loss of affected structural area will be paid at the replacement cost to be calculated as per latest prevailing basic schedules of rates (BSR) without depreciation. Shifting assistance of Rs. 10000/- for squatters. Right to salvage material from the demolished structure for both squatters and encroachers.
Livelihood losses			
5 Income/livelihood losses	Titleholders losing income through business	Rehabilitation Assistance	<ul style="list-style-type: none"> Title holders losing their business establishment due to displacement will be provided as per the prevailing MAWs for 200 days./ Income from Unit for 3 months
	Titleholders losing income through agriculture	Rehabilitation Assistance	<ul style="list-style-type: none"> Title holders losing their primary source of income due to displacement will be provided with as per the prevailing MAWs for 200 days. Training Assistance will be provided for income generating vocational training and skill upgradation options as per APs choice Employment opportunity for PAPs in the sub project works, if available and if so desired by them.
	Squatters (NTH)/Agricultural laborer/sharecropper losing primary source of income	Rehabilitation assistance	<ul style="list-style-type: none"> Assistance to be paid as per the prevailing MAWs for 180 days Training would be provided for upgradation of skills to the PAPs. Employment opportunity for PAPs in the sub project works, if available and if so desired by them. Or <ul style="list-style-type: none"> National/State level job card under National Rural Employment Guarantee Program.
	Licensed mobile vendors and kiosk operators	Rehabilitation Assistance	<ul style="list-style-type: none"> Those mobile vendors in possession of a permit from local authorities to operate in the affected area will be treated as kiosks operators. Kiosk operators and vendors licensed to operate from affected locations will be entitled to a one

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
			time lump sum assistance of Rs. 4000/-.
Loss of Trees and Crops			
6 Loss of Trees	a) Land holders b) Sharecropper c) Lease holders	Compensation at Market value to be computed with assistance of horticulture department	<ul style="list-style-type: none"> Advance notice to PAPs to harvest fruits and remove trees For fruit bearing trees compensation at average fruit production for next 15 years to be computed at current market value For timber trees compensation at market cost based on kind of trees
7 Loss of Standing Crops at the time of acquisition, if any	a) Land holders b) Sharecropper c) Lease holders	Compensation at Market value to be computed with assistance of agriculture department	<ul style="list-style-type: none"> Advance notice to PAPs to harvest crops In case of damage to standing crops, cash compensation at current market cost to be calculated of mature crops based on the current production.
Other Impacts			
8 Additional Assistance to vulnerable groups	Vulnerable households including BPL, SC, ST, WHH, disabled and handicapped	Special Assistance	<ul style="list-style-type: none"> One time lump sum assistance of Rs. 10000/ to vulnerable households. (This will be paid above and over the other assistance(s) as per this framework)
9 Adverse indirect impacts on neighborhood and drop in land values due to location of landfill and/or STP	Community/ Titleholder	Special assistance	<ul style="list-style-type: none"> Allocation of one percent of capital cost of the sub project cost as Neighborhood Development Fund One time financial assistance to the immediate private land owners adjacent to the project site @ Rs 15000 per hectare to each person in the records of rights Green belt around the landfill site and / or STP site.
10 Loss of community infrastructure/ amenities	Community	Special assistance	<ul style="list-style-type: none"> The common property resources and the community infrastructure shall be relocated in consultation with the community
11 Loss of access to private and / or common resource property	Community/households	Special assistance	<ul style="list-style-type: none"> Provide alternative access
12 Temporary impact during construction like disruption of	Community / Individual	Compensation	<ul style="list-style-type: none"> The contractor shall bear the cost of any impact on structure or land due to movement of machinery during construction or establishment of construction plant

Type of Impact/Loss	Unit of Entitlement	Entitlement	Entitlements as per Policy
normal traffic, damage to adjacent parcel of land / assets due to movement of heavy machinery and plant site			<ul style="list-style-type: none"> • All temporary use of land to be through written approval of the landowner and contractor. • Location of Construction camps by contractors in consultation with PEA • The Project authority will ensure security and access to households in close proximity of the construction camps and that camps must be located at least 500 m from the habitation.
13 Any other impact not yet identified, whether loss of asset or livelihood			<ul style="list-style-type: none"> • Unforeseen impacts shall be documented and mitigated based on the principles agreed upon in this policy framework.

51. The subprojects will have two stages of clearances – first for the feasibility study and thereafter for the detailed project report. The candidate sites for any subproject will be identified, and an analysis of alternatives will be carried out by the feasibility study to avoid or minimize involuntary resettlement, as far as possible without impacting the subproject objectives. This process of the feasibility study will be supported by ESA of the Category I subprojects. Once the best suitable site is finalized (incorporating the need to avoid or minimize involuntary resettlement), and all requirements of land acquisition are identified, a detailed plan and schedule for land acquisition will be prepared. The process of land acquisition will be initiated as soon as the feasibility report is cleared by SPMG and PMG, so that the initial processes for land acquisition (called “notification under section 6” under the country land acquisition laws) could be completed before finalization and clearance of the detailed project report or financial closure wherever DBO contracts are used.
52. Once the feasibility report is cleared, each subproject will complete the land acquisition process (“notifications under 6, 9 and 11” will be issued) so that so that entire land required for the sub project is acquired before the mobilization of contractors. In parallel a subproject resettlement action plan will be prepared, and will be reviewed and cleared as part of the process of clearance of the detailed project report and sanction for the work to commence. The resettlement action plan will include detailed description of the compensation if any and resettlement assistance to be paid to each entitled person, family or community, with special additional provision for persons and families belonging to vulnerable communities. In Jharkhand

private land acquisition owned by a tribal family will additionally comply with the Santhal Pargana Tenancy Act of 1949.

5.5 Indigenous Peoples

53. As part of ESMF, an Indigenous Peoples Management Framework (IPMF) is being prepared. The IPMF aims at effectively promoting IP participation throughout the project cycle. The general objective of the IPMF is the inclusion of the IP communities in the project in order to achieve the highest possible positive impact of the interventions to improve their quality of life, through strengthening of their organization, self-management, and integral capacity of their members. The specific objectives of the IPMF are to ensure that: (a) works are culturally appropriate, (b) works and services provided do not inadvertently induce inequality by limiting project benefits to the elite elements of the community, (c) the project engages with communities through a consultation process appropriate to the local cultural context and local decision-making processes; and (d) establish appropriate information-, communication-, and diversity-training strategies with the different IPs and communities in all stages of the project.

5.6 Gender Assessment and Development Framework

54. Mainstreaming gender equity and empowerment is already a focus area in the project. In the sub projects, activities related to livelihood restoration will address women's needs. A Gender Development Framework has been designed under the project as part of ESMF which will help analyze gender issues during the preparation stage of sub project and design interventions. At the sub project level, gender analysis will be part of the social assessment and the analysis will be based on findings from gender specific queries during primary data collection process and available secondary data. The quantitative and qualitative analysis will bring out sex disaggregated data and issues related to gender disparity, needs, constraints, and priorities; as well as understanding whether there is a potential for gender based inequitable risks, benefits and opportunities. Based on the specific interventions will be designed and if required gender action plan will be prepared. The overall monitoring framework of the project will include sex disaggregated indicator and gender relevant indicator.

5.7 Poverty Analysis

55. As part of the project preparation an analysis of the poverty situation in the five Project states and in the districts along the mainstem of the Ganga was undertaken based mainly on available secondary information and current literature. The project states have had a disproportionately high incidence of income poverty for decades. Their efforts to increase the income their residents have shown mixed results. In most cases, they have lagged the average for the country as a whole. The lowest average Monthly Per Capita Expenditure (MPCE) in the rural areas is for Bihar while the highest is in Uttarakhand. Uttarakhand is also the most unequal and Bihar has the lowest Lorenz ratio highlighting a more equitable society (or more uniformly poor), at least in terms of expenses incurred. In urban areas, West Bengal has the highest MPCE and highest inequality as measured by the Lorenz Ratio (LR). Improved provision of drainage from houses and uniform urban sanitation can have beneficial impacts for the households and also help to achieving the project goal of reduction/elimination of untreated waste going into the river. This analysis points to the relative advantage the districts directly abutting the main Ganga river have compared to others in the respective states. For the project, three distinct situations (and many in the continuum that connects these), each requiring a different approach to handle the potential impacts can be: (a) where the objectives of project activity yield direct benefits to the poor and/or vulnerable communities, such as enhancing farm produce and farmers' benefits in urban fringes; (b) some adjustment in the design of the project activity would lead to direct benefit/ positive impact for the vulnerable section, for instance engaging marginalized fisherpersons in conservation of flagship species such as the Gangetic Dolphin; and (c) where the project activities, if implemented without any regard for the local and current vulnerabilities could result in negative impacts and would therefore require planning for specific mitigation measures in advance; these situations might include cases of reduction/elimination of open burning of human bodies, which is the source of livelihood of 'Doms' one of the most vulnerable and disadvantaged social groups along the mainstem of the Ganga.
56. During the first year of implementation of the Project, a basin wide poverty and social impact assessment (PSIA) will be carried out, the terms of reference for which was prepared during the process of preparation of the ESMF. The objectives of the PSIA will be to (a) optimize benefits of the Project, as far as practicable, for the poor and the other socially disadvantaged groups, such as migrant workers; and (b) enhance the contribution of the project to poverty reduction effort of the governments in general.

5.8 Social Accountability and Grievance Redressal Mechanism

57. The social accountability mechanisms will be established for all sub projects. The key approaches that would be adopted for ensuring social accountability would be any or a combination of participatory processes guiding social audit, citizen score card and report card to acquire feedback on performance of the sub projects and record citizens' recommendations for improvement. The social accountability mandate will be further strengthened through a strong grievance redress mechanism.
58. An Integrated Grievance Redress Mechanism (IGRM) will be established both at the PEA and SPPMU level that will register user complaints using various mediums (e.g. a dedicated, toll free phone line, web based complaints, written complaints and open public days) and address them in a time bound system. The project will abide by the RTI Act of 2005 and under provisions of Section 4 of the Act, it will commit itself for proactive disclosure and sharing of information with the key stakeholders, including the communities/beneficiaries. The project will have a communication strategy focusing on efficient and effective usage of print and electronic media, bill boards, posters, wall writing, and adoption of any other method suiting local context, logistics, human and financial resources.
59. As part of IGRM, a Grievance Redress Cell (GRC) will be set up at the district level wherever sub-projects have been or will be planned. Since each project town / city will have Citizen's Monitoring Committee (CMC), the GRC will be a subcommittee of the citizen's monitoring committee. The staffing of GRC will include two representatives from CMC and the concerned executive engineer of PEA. The head of the cell will be a person of repute but not continuing in the government service. The GRC will have its own bye laws. The functions of the GRC will include: (i) to redress grievances of project affected persons (PAPs) in all respects; (ii) rehabilitation and resettlement assistance and related activities; (iii) GRC will only deal/hear the issues related to R&R and individual grievances; (iv) GRC will give its decision/verdict within 15 days after hearing the aggrieved PAPs; (v) final verdict of the GRC will be given by the Chairman/Head of GRC in consultation with other members of the GRC and will be binding to all other members.

5.9 Monitoring and Reporting Mechanism

60. The PMG through the respective SPPMUs will monitor all the approved projects under the NGRBP to ensure conformity to the requirements of the ESMF. The monitoring will cover all stages of construction, operation and maintenance. The monitoring will be carried out through the environmental and social safeguard compliance reports that form a part of Quarterly Progress Reports for all projects and regular visits by the environmental and social specialists of PMG and SPPMU. In addition to the above, PMG will undertake an annual ESMF audit of all sub-projects in implementation and will review the status of ESMF compliance. The audit will include at least 50% of the category I sub-projects and 20% of the category 2 projects.
61. The PMG will review these audit reports and identify technical, managerial, policy or regulatory issues with regards to the compliance of the EA or SA reports. The identified technical issues will be duly incorporated in the subsequent projects. Policy and regulatory issues will be debated internally by the NGRBA's internal review committee and determine the need for appropriate interventions. These interventions could include appropriate revision of ESMF document or suitable analytical studies to influence policy of programs of the state, if found necessary / warranted.
62. An external evaluation of the RAP implementation prepared under NGRBP will also be undertaken twice during the implementation of the project – midterm and at the end of the implementation.

5.10 ESMF Consultation and Disclosure

63. The development of the ESMF is based on a consultative process that sought feedback from key stakeholders. Disclosure and consultation of the ESMF, including a Resettlement and Land Acquisition Policy Framework, Gender Development Framework and the Indigenous Peoples Management Framework has been made at National and State level.
64. To initiate the process, first level of consultations were held with the state level stakeholders in September / October 2010. The objective was to obtain consent from the states on ESMF in general and specifically on land acquisition process and resettlement framework. The state level consultations were held during the months of December 2010 and January 2011 in all the five participating states to get feedback and suggestions from the affected community on the ESMF and specifically on resettlement policy and gender

framework. Specific consultations were held in Jharkhand to discuss the tribal management framework. The dates of district level consultations were published in local newspapers so that all those interested can participate and provide suggestions. The summary of ESMF has been translated in local language and disclosed on the websites of MoEF (both at central and state level).

65. Consultation being a continuous process, the ESMF's disclosure on the websites of the SPPMU and PMG will continue during project implementation. The Environmental Management Plan (EMP) and Resettlement Action Plans (RAPs) will also be disclosed in line with the general principles and procedures of the ESMF disclosure and consultation plan. The draft EMP and RAP will be discussed with the affected community and final EMP and RAP will be disclosed on the website of state and national PPMU. The copies of EMP and RAP will be placed at the offices of executing agencies, district magistrate and contractor's office. The executive summary of EIA and RAP will also be translated in local language and will be placed in the office of Gram Panchayat of the affected villages. The list of affected persons will be pasted on the conspicuous place in all the affected villages. The ESMF and its specific instruments provide guidelines and procedures for further consultations during project implementation, in particular in defining and designing subprojects and specific works. The consultation frameworks provide systematic guidance to address potential risks and to enhance quality, targeting, and benefits to the population. Dialogue and disclosure actions during the assessment and execution process of a subproject are designed to ensure that those stakeholders involved, whether they benefit from or are affected by the impacts of works, are well informed and participate in the decision-making process. The ESMF procedures consider the level of environmental and social risk of each work to allocate time and effort to consultation.

5.11 Strengthening Environmental and Social Management Capacity

66. The institutional capacity-building plan in the ESMF proposes specific activities aiming to enhance environmental and social management skills, training, and equipment. These measures comply with the functions expected from the Environmental and Social Unit such as (a) supervision of compliance with environmental and social laws and procedures (b) preparation of TORs and budgets for the execution of the environmental and social studies, tools, and works; (c) support of the Procurement Unit and others as needed to

ensure compliance on environmental and social issues; (d) coordination with the Communication Unit or whatever instance the issues relating to the Communication Plans of the ESMF, including the Plans arising from it; (e) monitoring of the activities results according to specific indicators to compare with preestablished standards, and if necessary; (f) the proposal of corrective measures. A specific budget has been allocated for capacity building and will be executed during project implementation.