The NGRBA[1] Programme: an introduction

The Context:

India has emerged as one of the world's fastest growing economies over the past few years. Since 1990, its economic growth rate has more than doubled, rising from 1.9 percent during 1961-1990 to 4.6 percent in 1991-2008. Sustained economic growth, exceeding 7-8 percent a year over the last five years, has catapulted India onto the global stage projecting it to become the world's third largest economy by 2030.

India's growth story is fueled by a strong momentum in investments, reflecting rising productivity, robust exports, and high business confidence. However, it is also accompanied by a growing population (1.21 billion in 2011), extensive and unplanned urbanization and industrialization, expansion and intensification of agriculture, and the destruction of forests. A State of the Environment Report for India (2009) identify the major concerns and costs associated with serious land degradation, loss of biodiversity, deteriorating air quality in cities, increasing water scarcity, and generation of large quantities of hazardous waste from industries. The environmental sustainability of growth and the impact of ecosystem degradation have, therefore, emerged as serious issues.

The Ganga basin:

The Ganga basin accounts for over a quarter of India's land and water resources, 37% of human resources (more than 400 million people) and nearly half of its irrigated area. The five states on its mainstem (Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal) are home to more than half of the poor people in the country.

In addition to its physical resource value, the Ganga is culturally very significant for India. On important Hindu holidays, millions of people converge on the river in select cities to pray and bathe in the waters, and for them a clean Ganga holds great value. More than 60 million people came to the city of Allahabad for pilgrimage in January 2007, making it the largest gathering in the world.

Analysis of the pollution problem

Despite being highly revered and the primary water resource for the heartland of India, the Ganga river is today seriously polluted and under extreme environmental stress. The river suffers from high levels of organic and bacterial pollution, especially in its critical middle stretch, primarily as a result of:

- Inadequate municipal wastewater infrastructure and services, compounded by an increasing population and poor management of urbanization. At present, only one-third of the sewage generated in the main-stem towns and cities is treated before being discharged into the river.
- Industrial pollution, accounting for about 20% of the total volume of wastewater inflows to the Ganga. Most of the pollution comes from small-scale industrial units from leather, paper, sugar, and brass industry clusters with little capacity to meet discharge standards.
- Solid waste choke drainage networks and exacerbates pollution in the Ganga. Little is known about the extent of contribution from non-point sources, including those from livestock and agriculture, nutrient loading and pesticide contamination.

[1] National Ganga River Basin Authority

- Inadequate in-stream flows: Almost 90% of the Ganga flows are abstracted for irrigation. This high abstraction results in very low in-stream flows, exacerbating the water quality problems, especially in the dry season and in the middle stretch which has the largest number of holy cities on the riverbank.

Need for improving urban service provisions

Untreated municipal sewage account for the bulk (over 75 percent[2]) of pollution in Ganga, mostly generated by the larger cities. Currently, the responsibilities for provision of adequate sanitation and waste management services overlap considerably across the state government and the Urban Local Bodies (ULBs). Ownership and commitment of local agencies, supported by an incentive to recover Operations and Maintenance (O&M) costs, is required to progressively build required technical and management capacity for effective service delivery.

Need for strengthening environmental regulators

Water in India is primarily a subject under the states' jurisdiction. The State Pollution Control Boards (SPCBs) are responsible for compliance with the water pollution regulations, under the overall technical and policy guidance of the Central Pollution Control Board (CPCB) at the national level. However, the SPCBs in almost all Ganga basin states are under-resourced and do not have adequate technical staff or equipment to carry out their assigned functions. The CPCB has the legal powers to instruct the SPCBs and even to take over their enforcement function. However, the capacity of the CPCB is also limited and not adequate compared to the challenges of cleaning the Ganga, especially for basin-level water quality monitoring, pollution inventorying, and enforcement.

Need for adequate data, information systems and baseline knowledge

The current water quality monitoring system for the Ganga is inadequate for situation analysis and decision-making. There is no comprehensive inventory of municipal or industrial wastewater sources discharging into the Ganga. Establishing data collection and analysis systems for regular monitoring of pollution sources and river water quality is required for baseline information, development of an effective strategy for a sustainable river clean-up and adaptive management, and impact evaluation in the basin.

The costs of inaction

Inadequate wastewater infrastructure and sanitation service provision have a huge health cost. Recent studies have estimated the burden of water-borne diseases in the basin at 1.4 million DALY[3]s per 100 million people[4], which amounts to health costs of almost $4 billion per year on a basin-wide level. Estimates of annual health costs related to inadequate water supply and sanitation in Kanpur (population 3.2 million) range from $111-279 million, with inadequate sanitation accounting for more than half of these costs in slum areas[5].

In peri-urban areas, the use of untreated or partially treated wastewater for irrigation is widely prevalent among farmers, and responsible for a variety of occupational health hazards and food safety issues. The poor water quality of the river also affects the health and livelihoods of the many marginal communities directly depending on it, such as fishermen, washermen, and cremation grounds workers. In the cities along the mainstem, as much as 25% of the population lives in slums, and a similar fraction of households are below the poverty level. Nationwide,

[2] Sharma, Y. 1997. Case Study I – The Ganga, India. In Richard Helmer and Ivanildo Hespanhol (eds.) "Water Pollution Control – A guide to the use of water quality management principles". WHO/ UNEP/ WSSCC.
[3] Disability adjusted life-years
[4] Climate Change Impact and Adaptation in Kolkata Metropolitan Area, World Bank, 2010
[5] India 2030: Vision for an Environmentally Sustainable Future, World Bank, 2011 (forthcoming)

economic losses from inadequate sanitation are estimated at 6.4% of GDP and the benefits of safe management of wastewater amount to about $50 per person[6].

The Ganga basin is expected to be the most seriously affected by imminent water scarcities. Deficits are projected to reach 50% of the total implied demand by 2030[7], and effective water resources management remains the only way to address this challenge.

The Ganga's immense cultural and religious significance for India, supplemented by the growing recognition of the Ganga as an environmental resource, is contributing to a strong grassroots movement for its clean-up and conservation. One example is the campaign to save the threatened Gangetic dolphin, the river's flagship species, which has resulted in significant conservation efforts. Economic analyses consistently indicate a very high degree of willingness to pay for conservation of these aspects of the Ganga.

Previous efforts to clean the Ganga:

There have been previous attempts to clean the river, with mixed results. The Ganga Action Plan (GAP) was launched in 1985 and extended to two phases over more than two decades. It focused primarily on urban wastewater and funded a large number of Wastewater Treatment Plants (WWTPs) and related urban wastewater infrastructure. Impact data show that, overall, the program was able to maintain or even improve water quality[8] in spite of significant increases in pollution loadings due to urban and industrial growth. An ex-post economic evaluation of the GAP showed that the benefits far exceeded the costs, with non-use benefits accounting for the majority (61%) of the total[9]. However, there were a number of weaknesses in implementation in the program - including insufficient investments, underutilization of created capacity, little ownership of local bodies, long delays, and poor communications - resulting in a public relations failure. Moreover, the resources provided to the GAP amounted to a relatively modest sum of about $250 million over two decades, and even in real terms, this cumulative spending was very small compared to actual needs. Nonetheless, despite the moderate gains made in arresting the declines in water quality, the GAP remains widely perceived as unsuccessful.

River clean-up requires sustained investments over a long time

Global experience shows that despite its benefits, river clean-up is always a lengthy and costly endeavor. The clean-up of the Rhine required investments of more than 40 billion euros from 1970 to 1990 for the construction of municipal and industrial wastewater treatment plants alone. In 2007, the Government in China's eastern Jiangsu Province pledged more than $14 billion to clean Lake Tai, the country's third largest freshwater lake. Clean-up of the Danube is still ongoing, 12 years after the Danube River Protection Convention entered into force in 1998. Given the scale of the river and current water quality status, it is clear that cleaning the Ganga is likely to take at least a few decades and will cost tens of billions of dollars.

[6] The Economic Impacts of Inadequate Sanitation in India, Water and Sanitation Program, 2010
[7] Charting our Water Future, 2030 Water Resources Group, 2010
[8] Shaw Lacy, University of Michigan, 2006
[9] Cost Benefit Analysis of the Ganga Action Plan, Oxford University Press, 2000

NGRBA - a renewed effort to clean the Ganga:

Building on lessons from the past, the Government of India (GoI) has developed a new and more comprehensive vision for clean-up and conservation of the Ganga, led by the establishment of the National Ganga River Basin Authority (NGRBA) in 2009. The NGRBA has been given a mandate to develop a multi-sector program ("the NGRBA Program") for ensuring pollution abatement in the Ganga.

Structure and legal basis of the NGRBA

The NGRBA has been established as a collaborative institution of central and state governments. It is chaired by the Prime Minister, with membership comprising of key GoI ministers and the Chief Ministers of the five basin states. NGRBA also has nine members representing civil society. Each of the five states has also constituted a State Ganga River Conservation Authority (SGRCA), to coordinate and implement the NGRBA Program at the state level. The central Ministry of Environment and Forests (MoEF) has been designated as the nodal agency for the program. The NGRBA is constituted under the Environment Protection Act of 1986, which gives it strong regulatory and enforcement powers.

The vision of the NGRBA Program marks a significant departure from the previous efforts, as follows:

A comprehensive, basin-level, and multi-sectoral approach has been adopted, with support for investments in wastewater, solid waste and river front management, and efforts to address non-point source pollution and ecological flows. This is in contrast to a town-centric and "end-of-the-pipe" wastewater treatment focus of the previous efforts. A consortium of seven premiere technical institutions is engaged in preparing dynamic, basin-level management plans;

Institutional development is recognized as a critical need, given the multi-sectoral and multi-tier agenda of river management. The NGRBA Program aims to develop strong and dedicated operational-level institutions for planning, managing and implementing the program with single-point accountability. Additionally, given the critical role of the ULBs, and serious capacity gaps at the local level at present, important reforms to empowering these is being introduced;

The knowledge-base for the Ganga system will be vastly upgraded to ensure that planning and investments are based on adequate and sound information. It will also form the basis of a comprehensive, and revamped, communications programme to engage various stakeholders.

Public participation will be through strategic and broad-based communications and community participation components. The aim is to build support, manage expectations and sustain public pressure to complement regulatory enforcement and investment outcomes.

The programme recognises the long-term horizon for polluted hydrological systems to respond, and commits funding support to cross the threshold level of investments. While $ 600 million worth of investments were approved in 2010-11 (compared to $ 250 million spent through GAP in two decades), an estimated $ 4 billion is expected to be mobilised to meet the declared objective of NGRBA of ensuring zero discharge of untreated wastewater into the mainstem of the river by 2020.

The NGRBA Programme

Initially, the NGRBA programme will set up the NGRBA's operational-level institutions, address the critical knowledge needs, design the investments program and implement the obvious priority investments. The programme will address multiple sources of pollution, including wastewater, solid waste and non-point sources. It would also seek to maintain adequate in-stream flows and other measures for ecological restoration of the river.

The costs of the NGRBA Program will be shared in 70:30 ratio between the central and state governments. In that regard, the program follows the model of "centrally sponsored schemes", whereby the central government gives grants to states for achieving specific objectives, while requiring the states to share some of the costs.

World Bank assisted project

The World Bank intends to support the NGRBA initiative in the long term through provision of substantial financing, knowledge support, and assistance in building a consortium of financiers.

The project seeks to support the establishment of the NGRBA Program Framework and processes for the entire NGRBA Program, build capacity of the NGRBA's new operational-level institutions, and finance a relatively small set (about 10-20 major ones) of demonstrative infrastructure investments in order to establish good practice precedents.

Project components

The project has two components relating to institutional development and priority infrastructure investments. The first component seeks to build the institutional capacity to effectively implement the overall NGRBA Program, including infrastructure investments funded by the second component.

Component One: Institutional Development (US$ 200 million), has three sub-components

1. NGRBA Operationalization and Program Management, which seeks to
   - provide institutional support to the Program Management Group (PMG) at the central level, and State Program Management Groups (SPMGs) at the state level;
   - support the establishment of a state-of-the-art Ganga Knowledge Center (GKC), as an integral part of the PMG;
   - finance a dedicated communications and public outreach program, undertaken in partnership with community-based organizations, school and college student groups, and the media.
2. Technical Assistance for ULB Service Providers, through provision of modern and efficient information and planning systems, training, equipment for managing physical systems, and technical assistance for improving revenue/cost recovery to ensure sustainability of local investments.
3. Technical Assistance for Environmental Regulators, to support capacity building of the central and state pollution control boards, to address the key constraints related to their functions regarding the Ganga, focusing on improving information systems, staff skills, laboratory accreditation, and infrastructure facilities. Activities will include
   - upgradation of the Water Quality Monitoring System (WQMS), including a system of automatic collection of water quality data from priority monitoring locations along the mainstem and some important tributaries of the Ganga;
   - comprehensive inventorying of pollution sources, including mapping of the location, flows and pollution loading characteristics of all large point source discharge locations on the mainstem of Ganga. Studies will be supported to estimate the extent and relative contributions of the non-point source pollution of various origins;
   - strengthening environmental compliance monitoring surveillance for the Central and State Pollution Control Boards, by improving information systems and support for incremental staffing.

Component Two: Priority Infrastructure Investments (US$ 1,356 million), will support demonstrative investments in four sectors. The majority of investments are expected to be in the wastewater sector, particularly in treatment plants and sewerage networks. Investments will also be supported in industrial pollution control and prevention (e.g. common effluent treatment plants), solid waste management (e.g. collection, transport and disposal systems), and river front

management (e.g. improvement of the built environment along river stretches, improvement of small *ghats* and crematoria, and the conservation and preservation of ecologically sensitive sites). Some investments may combine elements of more than one of these sectors.

In lieu of defining and appraising specific investments, an investments framework will apply to all investments under the NGRBA Program. This Framework is expected to provide a filter for all the NGRBA investments, make the decision-making process transparent and ensure that the investments are implemented in a sustainable manner. It effectively sets the "rules of the game", and will allow infrastructure investments to be selected on a dynamic and ongoing basis. Adoption of the framework approach will imply that disbursement on infrastructure investments may be slow in the first one-two years of the project, picking up in the subsequent years – a design feature of the project.

The NGRBA Program Framework includes investments selection 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. Some of the ways in which the investment process is likely to push for early gains and sustainability include prioritisation and appropriate bundling of projects, careful choice of technology, explicit ownership, transparent costing, long-term contracts and environmental and social safeguards.

For all investments with significant O&M needs, the O&M costs for 5 years will be capitalized and provided by the central and state governments. The ULBs commit to payment for O&M after the 5th year.

For all investments with significant O&M needs, the project will require long term contracts, including 15 years of O&M, with private operators. The states have agreed to guarantee O&M payments to the contractor after the 5th year, in case of default from the ULBs.

Technologies will be selected based on lifecycle cost analysis, in order to select the lowest cost feasible option. Technologies will not be prescribed at the bidding stage in order to encourage low life cycle costs (i.e. of capital, land, O&M, replacement).

Explicit consent of ULBs will be a pre-requisite for appraisal, indicating a clear recognition of the nature, scale and cost of the investment, and the ULB's own roles and responsibilities with regards to asset ownership and long-term O&M. Technology selection for wastewater treatment will be made on lowest lifecycle cost basis, specified for the local conditions and required degree of treatment. Plans and cost of providing house connections up to property line must be included in the DPRs for sewerage investments. The ULBs will implement outreach and other actions to encourage households to connect up to these points. Investments involving rehabilitation of existing infrastructure will be included on a priority basis, due to their intrinsically higher returns in terms of reductions in pollution loads entering the Ganga. Wherever possible, river front management investments must take an area development approach, both to achieve spatial scale along wider and longer stretches of the river, and to integrate across sectors.

Design-Build-Operate (DBO) contracts for all investments with significant O&M costs (such as WWTPs, pumping stations, landfills and waste processing) will be developed and managed. Long Term Contracts (for 15 years O&M) will bring enhanced accountability, adequate capacity and resources, and strong performance incentives to the sector. Capitalisation of initial (first 5 years) costs of O&M in the wastewater sector will be included in the total cost for each DPR, and will be financed on a shared basis by the central and state governments. Industrial pollution DPRs must include appropriate affidavits from industries outlining commitment to ensure satisfactory operation of common facilities. For other sectors, O&M costs may be capitalized on a case-by-case basis, depending on needs and revenue generation potential.

All investments will comply with the Environmental and Social Management Framework (ESMF) developed for the NGRBA program, which requires identification of possible impacts and proactive management measures for addressing them.

The project will also finance pilot investments in order to promote and demonstrate innovative technologies and implementation arrangements. The potential pilot areas identified so far include net-energy positive wastewater treatment technologies and innovative Public-Private Participation (PPP) financing models which have not been used in the Ganga basin states.

Implementation

Institutional arrangements:

The NGRBA has constituted a Standing Committee, headed by the Union Finance Minister, to frequently review implementation; and an Empowered Steering Committee, headed by the Union Secretary of Environment and Forests, for investment clearances and program coordination.

The MoEF, being the nodal Ministry, has the overall responsibility for the NGRBA Program, including the World Bank-supported project. It is establishing the Program Management Group (PMG), a dedicated entity with suitable structure, staffing, powers and leadership, charged with effective implementation of the overall NGRBA Program.

The implementing agencies at the state level are the SGRCA Program Management Groups (SPMGs), which are being established in the form of registered societies. These implementing agencies will be responsible for managing this project and achievement of its objectives, coordinating project activities on a full-time basis and directly executing some of the relevant project sub-components.

Each infrastructure investment will be executed by the Executing Agency (EA) selected specifically for that investment. Five EAs provisionally selected for early investments under the project are the existing state-level technical agencies which are in charge of the development of urban infrastructure in their respective states. Therefore this initial set of EAs has significant experience in preparation and management of infrastructure investments.

For the selection of future EAs, due diligence shall be conducted, along with the World Bank and the PMG and SPMGs, to ensure that they have adequate capacity to manage the technical, procurement, financial and safeguards aspects of the investment. The requirements in this regard have been provided in the NGRBA Program Framework.

For all local infrastructure investments, the EA will be chosen by a committee comprising the SPMG and representatives of the relevant ULB. The PMG will select the EAs for centrally-implemented activities (e.g. the national communications strategy). The EA will be responsible for successfully executing the activity for which it has been commissioned.

The EAs will be responsible for all contract management, including procurement, signing of contracts, regular supervision, and contract payments, with necessary support from PMG/ SPMGs. The PMG and SPMGs will be responsible for ensuring prudent planning, investments selection, quality assurance, procurement, contract management, monitoring and evaluation under the project/ NGRBA Program. The sharing of roles and responsibilities, including administrative and fiduciary arrangements between the PMG/ SPMG, EA and the relevant ULB will be documented in trilateral Memoranda of Agreement (MoAs).

The PMG and SPMGs will collaborate with and seek support and partnership with a range of other agencies, to draw upon their specialized expertise and supplement the capacity of main implementing agencies. These will include international, national and local knowledge institutions, private sector business houses and industries, and civil society groups.

During implementation the PMG will submit consolidated reimbursement requests for the entire project based on Interim Unaudited Financial Reports (IUFRs), whereby state level consolidation will be done by the SPMGs and forwarded to the PMG. There will be only one special account for this project.

The PMG will receive NGRBA funds from the MoEF budget, a part of which will be transferred to the SPMGs on half-yearly basis, for implementation of the agreed annual action plan. The State Government will release its share of funds to the SPMG within two months of receipt of the instalment from the PMG.

In order to streamline the arrangements, funds will flow only down to the level of the SPMG, which will have a project bank account (the "mother account") where funds received from the PMG, and from the states, will be held. Each EA will have a sub-project specific zero balance bank account (the "child account") in the same bank. The EA will have the authority to issue payment instructions to pay contractors/ suppliers/ service providers for undertaking project activities within the scope of the approved annual action plan.

Adequate provisions of staff, capacity and resources will be made within the PMG and SPMGs to ensure that they are able to efficiently discharge their responsibilities mentioned above. Two key consultancies are included to: (a) provide project management support to PMG for managing the entire NGRBA Program, including planning, technical support for investments review and appraisals, portfolio management, procurement, financial management, monitoring and evaluation, and reporting; and (b) technical support to SPMGs and EAs, for upgrading the process and practice of investments preparation and execution to global standards, for the entire NGRBA Program.

The project will be implemented according to the following documents that have been prepared and agreed:

(a) The NGRBA Program Framework, which will apply to all investments under the NGRBA Program, regardless of the source of financing, and which comprises:
    1. Investments framework for selecting and implementing investments (all four sectors);
    2. Detailed implementation process flow (step-by-step process covering planning, preparation, appraisal, implementation, initial operations, long term operations, monitoring and evaluation, along with roles and responsibilities of the entities involved);
    3. Guidelines for infrastructure investments preparation;
    4. Memoranda of Agreement (MoA) (There are two tripartite MoAs for ensuring clarity on roles and responsibilities of various parties regarding execution, O&M, and eventual transfer of investments to the ULB: one program-level MoA between PMG, SPMG, and the ULB; and one investment-specific MoA between SPMG, EA and the ULB);
    5. Environmental and Social Management Framework (ESMF);
    6. Governance and Accountability Action Plan;
    7. Communication Strategy and Action Plan; and
    8. Financial Management Manual.

(b) Project Procurement Manual.

Communications

Given the strong emotive status of the Ganga in India, and the perceived failures of the GAP, there are a wide range of stakeholder views, concerns and sensitivities that need to be taken into account, and high quality communications will be an integral part of the NGRBA Program. The PMG will oversee the preparation of the Communications Strategy and of the Communications Needs Assessment. It will further ensure successful roll-out and implementation of components of the strategy, including: (i) mass communications campaigns; (ii) support for voluntary public participation; (iii) pro-active disclosure; and (iv) formal community participation. The PMG and

SPMGs will also ensure that social intermediation and stakeholder engagement occurs around specific investments, including through city-level Citizen Monitoring Committees/ Forums. Social audits will be conducted by the Citizen Monitoring Committees.

Monitoring and evaluation of outcomes/results

The M&E Framework is designed to allow impact evaluation and enable a results-based management of the project, by (i) systematically monitoring the performance of project interventions; and (ii) ensuring that the lessons learned are fed back into program management. Given the inadequate baseline data on pollution sources and water quality, results indicators for the project have been structured in terms of incremental impact of project activities, in contrast to basin-level indicators. Therefore the baseline values for most of the indicators appear as zero. The M&E system will be coordinated with the Ganga Knowledge Center, to ensure that the baseline information generated through investment activities of Component Two is integrated with the knowledge activities supported under Component One, and that the critical knowledge gaps are closed at the earliest.

The M&E system is embedded in the institutional design of the NGRBA Program. The operational staffs of the PMG and the SPMGs include M&E Officers with the overall responsibility for planning and coordinating M&E activities. The PMG will prepare half-yearly progress reports for tracking progress of various activities, based on inputs from the SPMGs as well as the NGRBA MIS system. In addition, an independent M&E agency will be engaged to monitor project performance. The annual action plans prepared by the PMG and the SPMGs will include the achievements and lessons learned in the previous year, and the proposed implementation plans and budgets for the following year. These arrangements will ensure timely collection, analysis and reporting of information, and enable efficient use of the M&E system by managers, policy makers and other key stakeholders. An adequate computerized MIS will be designed and made operational during the first year of project implementation.

Sustainability

Ownership and commitment. The clean-up and conservation of the Ganga enjoys broad public and political support in India. The GoI is strongly committed to the NGRBA Program, as evidenced by: (i) establishment of the NGRBA under the enforceable legal authority of the Environment Protection Act; (ii) increasing fiscal support ($ 600 million of investments approved in the first year of the NGRBA); (iii) recent decisions on the Ganga, including suspension of 3 hydroelectric projects and intent to declare an eco-sensitive region in the upper reaches; and (iv) establishment of dedicated and permanent institutions for the NGRBA. The states have shown similar ownership, demonstrated by their commitment to establish and staff operational institutions, and provide their share of project costs and other resources.

Institutional sustainability. The operational institutions being established and supported under the project are permanent and dedicated entities with single-point responsibility for long-term implementation of the NGRBA Program. The institutions are not coterminous with the project, but will remain and evolve to address the challenges of conserving the Ganga in the future.

Fiscal sustainability. The NGRBA Program is modelled as a centrally sponsored program, with 70:30 costs sharing between the central and state governments. The World Bank financing will contribute to the central share of costs in this project. The state's capacity to bear their 30% share is deemed adequate, based on the experience from other centrally sponsored schemes, and especially from the GAP, where there were never any issues concerning the state contributions. In addition, a fiscal space analysis conducted for the Ganga basin states indicates that there is space for additional capital expenditure in the states, and that current and fiscal deficits are on a downward trend. In Bihar and UP, where the largest share of project investments is anticipated,

predicted state spending will amount to approximately 0.75% and 0.37%, respectively, of the current annual plan size.

Critical risks and possible controversial aspects

The most significant risks stem from the fact that the pollution and clean-up of the Ganga is a subject with a very high degree of public visibility and involvement in India, a wide variety of stakeholders, and a pervasive perception that previous initiatives to clean the river have all failed. In the process of establishing the NGRBA, the GoI has held numerous consultations with the states and with civil society stakeholders, the results of which are reflected in the design and structure of NGRBA. Not only does the NGRBA have as its members the Chief Ministers of five Ganga mainstem states all representing different political parties, it is also the only national Authority in India that counts among its members nine reputed civil-society representatives. The broad-based stakeholder consultations have continued in the period following the May 2009 elections. Consultations have also been conducted regarding World Bank support to the NGRBA Program. The program is designed with plans and resources to ensure transparent decision-making and implementation, including mechanisms for redressing potential grievances. Most importantly, all investments are covered by the frameworks and implementation arrangements which are designed to ensure high quality and effectiveness of interventions.