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GOVERNMENT OF ASSAM  
FINANCE (ECONOMIC AFFAIRS) DEPARTMENT

No. FEA.33/2017/1

Dated Dispur the March 14, 2017

To:

The Commissioner & Secretary to the Govt. of Assam  
Fisheries Department.

**Subject: Preparation of project concept notes for external funding**

Dear Sir/Madam,

You may be aware that the Government of Assam (GoA) has adopted the SDG 2030 goals for charting out the development roadmap for Assam. In this regard, the GoA has taken a slew of initiatives aimed at transforming the socio-economic landscape of Assam through large scale public investments in key economic sectors such as roads, energy, urban, transport as well as key social sectors like health and education.

GoA has established a dedicated cell called **LEAP (Lead Externally Aided Projects)** in the Finance Department to coordinate with External Funding Agencies such as World Bank, ADB, JICA, NDB, AIIB, etc. to explore potential partnership possibilities. This is part of Government of Assam's recently launched mission mode project **ReSTART Assam (Restructuring Systems and Technology for Augmentation of Resources for Transformed Assam)** which aims to increase our resource base which will help us drive large social and economic transformation projects.

As a first step, the LEAP cell has had discussions with various Administrative Departments, in addition to interactions with the **Chief Secretary** of Assam and the **Hon'ble Finance Minister** to the Govt. of Assam. Based on the feedback from these discussions, the team has drawn up a list of ten project opportunities which are in line with the priorities of the GoA and the funding agencies.

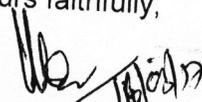
Please find enclosed herewith a copy of the presentation made by the LEAP cell to the Chief Secretary of Assam. We wish to draw your kind attention to Project Number **Five (5)** titled **Wetland Reclamation and Protection** on **page number 20 of the enclosed presentation** which could potentially be implemented by your department.

Also, please find enclosed herewith a one page write up on the proposed project opportunity along with a template for the concept note and a concept note review checklist which has been compiled in line with the requirements of Govt. of India/External Donor Agencies. Your Department is hereby requested to evaluate the project opportunity, and based on the enclosed reference documents submit a project concept note **within the next 15 (fifteen) days**. You may refer to the enclosed sample concept note on a health sector project which is illustrative in nature. The Chief Secretary of Assam has advised a **follow up meeting** seeking further action, which would be held in the coming fortnight.

Your department is requested to get in touch with Mr. Kailash Karthik, IAS, Deputy Secretary, Finance Department (email id: kailashkarthik@gmail.com; Mobile: 95310-69185) and Mr. Ranajoy Ghosh, Leap Cell, Finance (Economic Affairs) Department (email id: ranajoy.ghosh@in.pwc.com; Mobile: 84202-00195) for any clarifications regarding this matter.

This has the approval of the Chief Secretary, Government of Assam.

Yours faithfully,



(Dr. Ravi Kota, IAS)  
Commissioner & Secretary  
to the Govt. of Assam,  
Finance Department.

Enclosures:

1. Presentation made by LEAP Cell during the PMGC meeting held on 3<sup>rd</sup> March, 2017
2. Concept Note Template
3. Concept Note Review Checklist
4. Sample Concept Note on a Health Sector Project
5. One Page Write-up on Project titled **Wetland Reclamation and Protection**

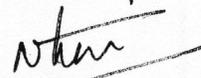
Memo No:FEA.33/2017/1

Dated Dispur the March 14, 2017

Copy to:

1. SO to Chief Secretary for kind appraisal of the Chief Secretary
2. PS to the Hon'ble Finance Minister for kind appraisal of the HFM
3. PS to the Additional Chief Secretary Finance for kind appraisal
4. Director Finance (Economic Affairs) Department for his kind information
5. Deputy Secretary (K.K.) for his information and necessary action
6. Team Leader LEAP Cell (Saurabh Bhattacharya) for his information and necessary action
7. e-Governance Unit for uploading the letter on the FinAssam Portal

By Order etc.



Deputy Secretary to the Govt. of Assam,  
Finance Department.

[www.pwc.com](http://www.pwc.com)

*Finance  
(Economic Affairs)  
Department  
Government of Assam  
“Lead Externally Aided Projects”  
- LEAP Cell*

**1<sup>st</sup> Meeting of PGMC - LEAP**  
3<sup>rd</sup> March 2017

# *Agenda*

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- 1 Donor Agencies – Focus Areas in India*
  - 2 Departmental Interactions*
  - 3 Key Considerations for Identifying Projects*
  - 4 List of Potential Projects*
  - 5 Performance Assessment of Existing EAPs*
  - 6 Way Forward*
-

# *Donor Agencies – Focus Areas in India*

# *1*

# Donor Agencies – Focus Areas in India

Donor Agency	Key Focus Areas	Investment Sectors/Areas
<a href="#"><u>World Bank</u></a>	Integration	<ul style="list-style-type: none"> <li>• Power</li> <li>• Manufacturing</li> </ul>
	Rural – Urban transformation	<ul style="list-style-type: none"> <li>• Urban</li> <li>• Agriculture</li> </ul>
	Inclusion	<ul style="list-style-type: none"> <li>• Health</li> <li>• Education</li> </ul>
<a href="#"><u>Asian Development Bank (ADB)</u></a>	Inclusive Growth	<ul style="list-style-type: none"> <li>• Energy</li> <li>• Transport</li> <li>• Water and Other Infrastructure and Services</li> <li>• Finance</li> <li>• Agriculture, Natural resources and Rural development</li> <li>• Public Sector Management</li> <li>• Education</li> </ul>
	Environmental sustainability	
	Regional cooperation and integration	
<a href="#"><u>Japan International Cooperation Agency (JICA)</u></a>	Inclusive and Dynamic development	<ul style="list-style-type: none"> <li>• Human resource development</li> <li>• Capacity building</li> <li>• Policy &amp; Institutional reforms</li> <li>• Social and economic infrastructure</li> <li>• Public service delivery</li> <li>• Threat and disaster management</li> </ul>

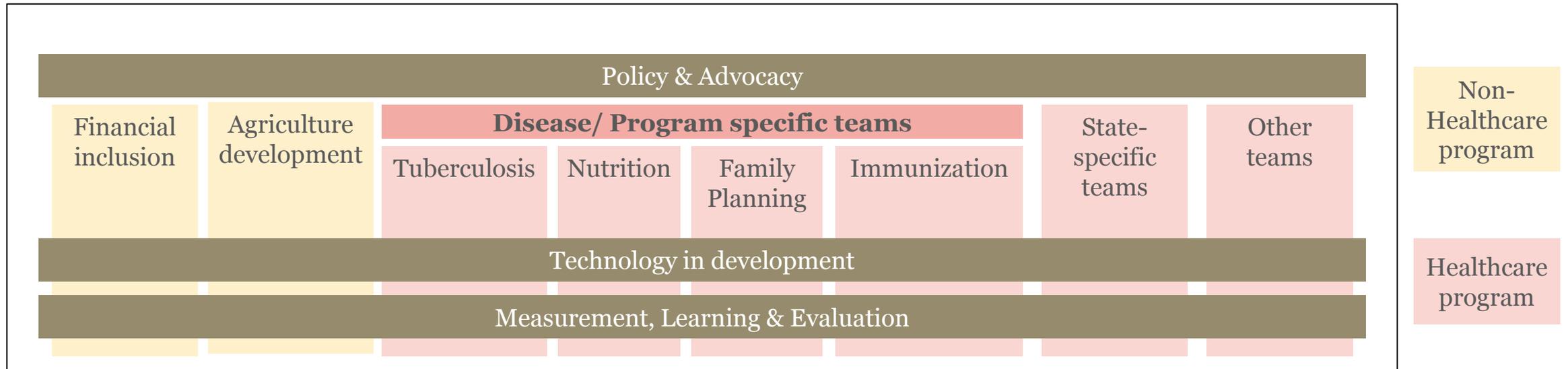
# Donor Agencies – Focus Areas in India

Donor Agency	Key Focus Areas	Investment Sectors/Areas
<b><u>Asian Infrastructure Investment Bank (AIIB)</u></b>	Sustainable Infrastructure	<ul style="list-style-type: none"> <li>Promoting green infrastructure</li> <li>Supporting countries to meet their environmental and development goals</li> </ul>
	Cross country connectivity	<ul style="list-style-type: none"> <li>Roads, Rail &amp; Ports development</li> <li>Maritime route(s) development</li> </ul>
	Private Capital Mobilization	<ul style="list-style-type: none"> <li>Devising innovative solutions that catalyze private capital</li> </ul>
<b><u>New Development Bank (NDB)</u></b> <b><u>**erstwhile BRICS Bank</u></b>	Infrastructure	<ul style="list-style-type: none"> <li>Promoting sustainable infrastructure</li> <li>Supporting economic development without depletion of natural resources</li> </ul>
	Sustainable Development	
<b><u>French Development Agency (AFD)</u></b>	Developing the Infrastructure network for sustainable cities	<ul style="list-style-type: none"> <li>Promotion of development of low-carbon transport</li> <li>Developing water and sanitation networks</li> </ul>
	Contributing to clean solutions for energy security	<ul style="list-style-type: none"> <li>Strengthening the energy performance of public and private partners</li> <li>Green finance: A tool to make India's financial sector the engine for sustainable growth</li> </ul>
	Supporting integrated Natural Resources management	<ul style="list-style-type: none"> <li>Biodiversity conservation</li> </ul>

# Donor Agencies – Focus Areas in India

Donor Agency	Key Focus Areas	Investment Sectors/Areas
<a href="#"><u>KfW Development Bank</u></a>	Clean Energy	<ul style="list-style-type: none"><li>• Renewable Energy Projects</li><li>• Green Energy based Projects</li></ul>
	Small and Medium Size Enterprise	<ul style="list-style-type: none"><li>• Small Industry and Agriculture</li><li>• Innovative products or efficient production methods</li></ul>
	Sustainable Municipal Infrastructure	<ul style="list-style-type: none"><li>• Sustainable Urban Concept</li><li>• Urban Mobility</li><li>• Water and Waste management</li></ul>
	Natural Resource and Environment	<ul style="list-style-type: none"><li>• Environment Conservation</li><li>• Natural Resource Management</li><li>• Climate Change and its effects</li></ul>

# Other Agencies - Bill & Melinda Gates Foundation



## Design of National Digital Health Architecture

- ✓ Prepare eHealth Vision for 5 / 10 / 15 years
- ✓ Define goals and objectives for the eHealth vision
- ✓ Prepare eHealth functional, solution and security architecture including its components
- ✓ Identify key building blocks and its business enablers and ICT enablers (Standards, ICT infrastructure, etc.)
  - ✓ Prepare eHealth Architecture Report

# *Departmental Interactions*

# 2

# Departmental Interactions (1/3)

Department Visited	Official Met	KEY INTERVENTIONS IDENTIFIED FOR POTENTIAL EAP
Tourism	Commissioner & Secretary	<p>TA for Preparation of Assam Tourism Master Plan</p> <p>ICT intervention for Integrated Tourism Management System to enhance tourist inflow in Assam</p>
PWDR	Commissioner & Secretary	<p>TA to increase Capacity Building of engineers in Planning, Quality Control, Modern Technology, Road Safety etc.</p> <p>Assist the department in review, appraisal and assessing their PPR for Assam State Highway and Major District Road Projects</p>
Smart City SPV	Managing Director	<p>Traffic Management ,Solid Waste Management, Drainage and Sewerage Improvement of Guwahati City through ICT</p> <p>Wetland Conservation to reduce the ill effects of flood, Storm water Drainage, Community Development</p>

## Departmental Interactions (2/3)

Department Visited	Official Met	KEY INTERVENTIONS IDENTIFIED FOR POTENTIAL EAP
Directorate of Municipal Administration	Managing Director	<p>TA for Municipal Reform Cell</p> <p>Technical education Quality Education Programme for ITI (Level 7 National Skill Qualification Framework)</p> <p>Green Housing, Local Bank and EAP Linkage</p>
Education - SSA	Managing Director	<p>Attendance monitoring through biometric devices</p> <p>Infrastructure upgradation in schools post amalgamation</p> <p>Computer Training Centres in Schools</p>
Transport	Commissioner Secretary	<p>Facilitation Support for two EAPs in conceptualisation Stage</p> <p>Institutional Reforms and Capacity Building</p>

# Departmental Interactions (3/3)

Department Visited	Official Met	KEY INTERVENTIONS IDENTIFIED FOR POTENTIAL EAP
Directorate of Medical Education	Director	Developing Assam as Health Care Hub for North Eastern India Requirement of upgrading the capacity of the Medical Colleges and its Standard in Assam
Health	Commissioner Secretary	Facilitation Support for two EAPs in conceptualisation Stage Infrastructure Upgradation, Health Services, Training and Capacity Building

# *Key Considerations for Identifying Projects*

# 3

## ***Key Considerations***

- 1** Alignment with Vision 2030 and “Act East” Policy of Government of India
- 2** Alignment with Donor Investment Priorities
- 3** Social and Economic Returns
- 4** Multi-Sectoral Impact
- 5** Sustainability and Futuristic Aspects
- 6** Transparency and Good Governance
- 7** Financial Commitment of Government of Assam

# *List of Potential Projects*

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## ***List of Potential Projects***

- 1. Development of Public Health Infrastructure***
- 2. Public Transport Improvement Project***
- 3. Integrated Urban Management System through City Command Center***
- 4. Feeder Bus Rapid Transit System***
- 5. Wetland Reclamation and Protection***
- 6. Assam Multi Skill Development Centers***
- 7. Solid Waste to Energy Project***
- 8. Sustainable Tourism Development Project***
- 9. Technical Assistance for PWRD***
- 10. Sustainable Residential Infrastructure Project***
- 11. Satellite City to Guwahati***





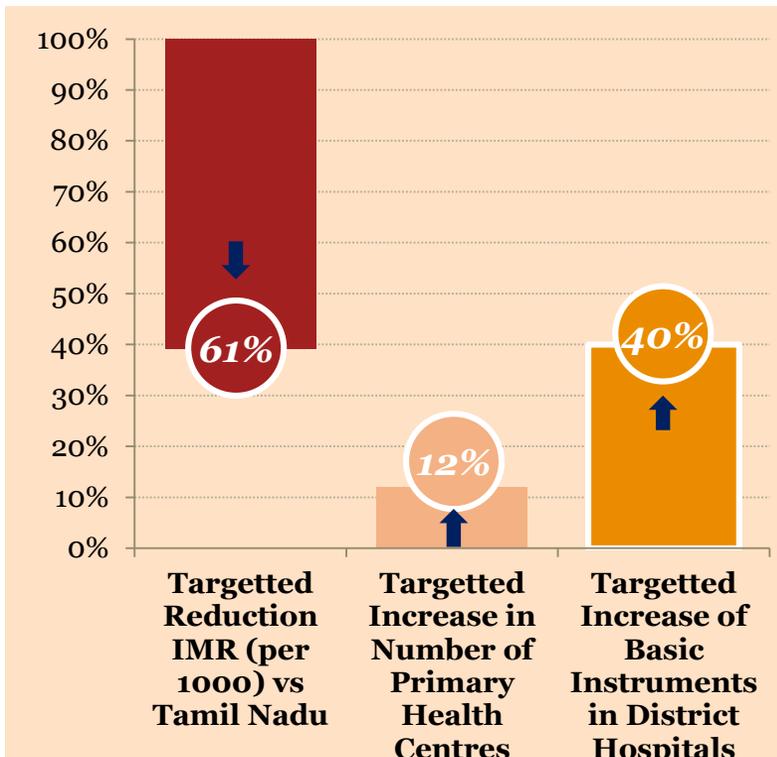
**Description:** Health being a state subject, Assam requires an integrated framework to oversee, manage, and improve Health & Nutrition delivery system. The Health vision should focus on ensuring proper utilization and better management and delivery of affordable services.

**Pain Points:** Institutional challenges have resulted in specific problems as mentioned below :

- **17%**<sup>1</sup> of Assam Tea Garden workers suffer from tuberculosis;
- Assam has an average of **10 beds per hospital** compared to Tamil Nadu<sup>4</sup> which has **31 beds per hospital**
- **More than 40%** of the child delivery are not institutional<sup>2</sup>
- Assam has **1 doctor per 4000 patients** vs WHO's recommendation of **1 doctor per 1000 patients**

**Similar Projects**

- **US\$ 48 million** Nagaland Health Project – **World Bank**
- **US\$ 290 million** Bihar Transformative Development Project – **World Bank**
- **US\$ 245 million** to improve the quality of urban healthcare services in Tamil Nadu - **JICA**



**Benefits:**

- Capacity building will bridge the shortfall of Sub Centers and Community Health Centers<sup>3</sup>.
- Outreach of vaccination programs to prevent outbreak of diseases like Japanese Encephalitis
- **ICT Intervention** is required for on demand monitoring of Health System of the state

Alignment Item	Assessment
<b>Multi-Sectoral Impact</b>	✗
<b>GoA Vision 2030</b>	✓
<b>2017-18 Budget Outline of GoA</b>	✓
<b>Donor Investment Priority</b>	✓

**Health & Family Welfare Department**

## The Impact Parameters

Sources : 1 - <http://economictimes.indiatimes.com/news/politics-and-nation/17-per-cent-tea-garden-workers-in-assam-have-tuberculosis/articleshow/46715235.cms>, 2 - [http://www.censusindia.gov.in/vital\\_statistics/AHSBulletins/AHS\\_Factsheets\\_2011\\_12/ Assam\\_Factsheet\\_2011-12.pdf](http://www.censusindia.gov.in/vital_statistics/AHSBulletins/AHS_Factsheets_2011_12/ Assam_Factsheet_2011-12.pdf), 3 - [http://nrhm.gov.in/nrhm-in-state/state-wise-information/assam.html#health\\_profile](http://nrhm.gov.in/nrhm-in-state/state-wise-information/assam.html#health_profile), 4 - <https://data.gov.in/catalog/number-government-hospitals-and-beds-rural-and-urban-areas>



ADB



JICA



**Description :** Public transport improvement is the need of the hour in the State. The major intervention areas are:

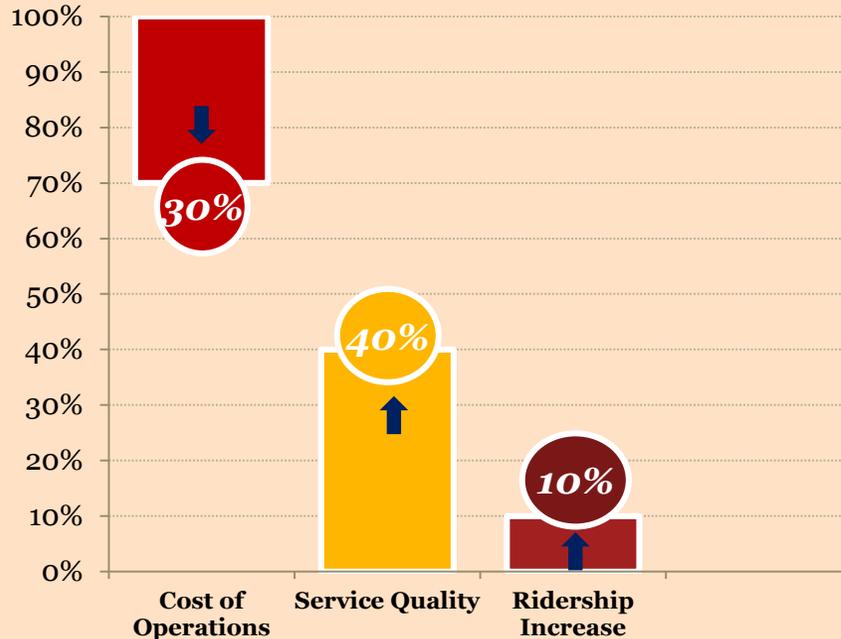
1. Fleet Automation & Augmentation
2. Organization Restructuring & Capacity building
3. Development of modernized transit routes
4. Upgradation & development of bus-stops/stations
5. Implementation of Intelligent Traffic Management System

**Pain Points:**

- Depleting/Aging fleet
- Mounting operational losses
- Private competition
- Minimum ICT intervention
- Reduced service reliability

### Similar Projects

- US \$ 1.8 billion funding for Delhi Mass Rapid Transport System Project - JICA
- US\$ 107 million for Sustainable Urban Transport Project through Bus Rapid Transit (BRT) System in Maharashtra - ADB



**Benefits :**

- Reduced cost of operations because of improved operational planning
- Improved service quality and reliability
- Safer travel and on-time availability because of ICT interventions
- Ridership increase because of improvement in service quality

Alignment Item	Assessment
Multi-Sectoral Impact	✗
GoA Vision 2030	✓
2017-18 Budget Outline of GoA	✓
Donor Investment Priority	✓

Transport Department

## The Impact Parameters





**Description :** IUCCC will consist of a command centre which will gather data from field devices & other sources to perform city management, thus reducing:

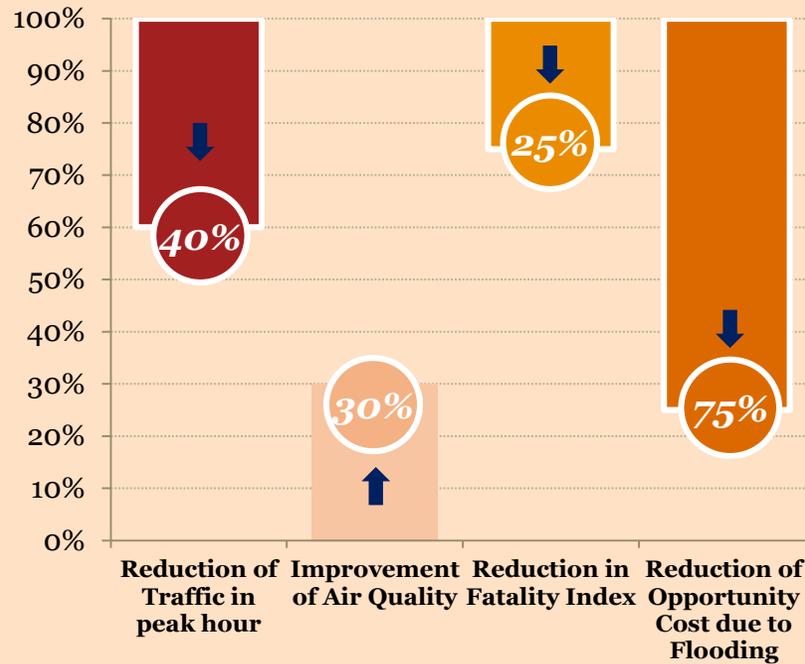
- Traffic Congestion
- Annual Floods
- Mismanagement of Solid Waste

**Pain Points :** WHO reports that Guwahati has one of the highest Black Carbon pollution levels in the world<sup>2</sup> In addition to this :

- **1,074 persons** have lost their lives in road accidents in Guwahati since 2010<sup>1</sup>
- **52.34%** of the Guwahati Municipal Area is flood prone<sup>3</sup>.
- Pollution control board issued a warning of outbreak of epidemic due to these kinds of contamination

### Similar Projects

- **US\$ 100 million** funding for Gansu Baiyin Integrated Urban Development Project –**ADB**
- **US\$ 100 million** funding for Xinjiang Yining Urban Transport Improvement Project – **World Bank**



### Benefits :

- Better Traffic Management
- Reduction in number of deaths caused due to road accidents
- Effective Solid Waste Management
- Single Point of Monitoring and Management for Traffic, Solid Waste and Flood Control Mechanism
- Effective Planning for handling calamities regarding Floods

## The Impact Parameters

Alignment Item	Assessment
<b>Multi-Sectoral Impact</b>	✓
<b>GoA Vision 2030</b>	✓
<b>2017-18 Budget Outlay of GoA</b>	✗
<b>Donor Investment Priority</b>	✓

**Urban Development, Transport, Revenue & Disaster Management Departments**



World Bank



ADB



### Similar Projects

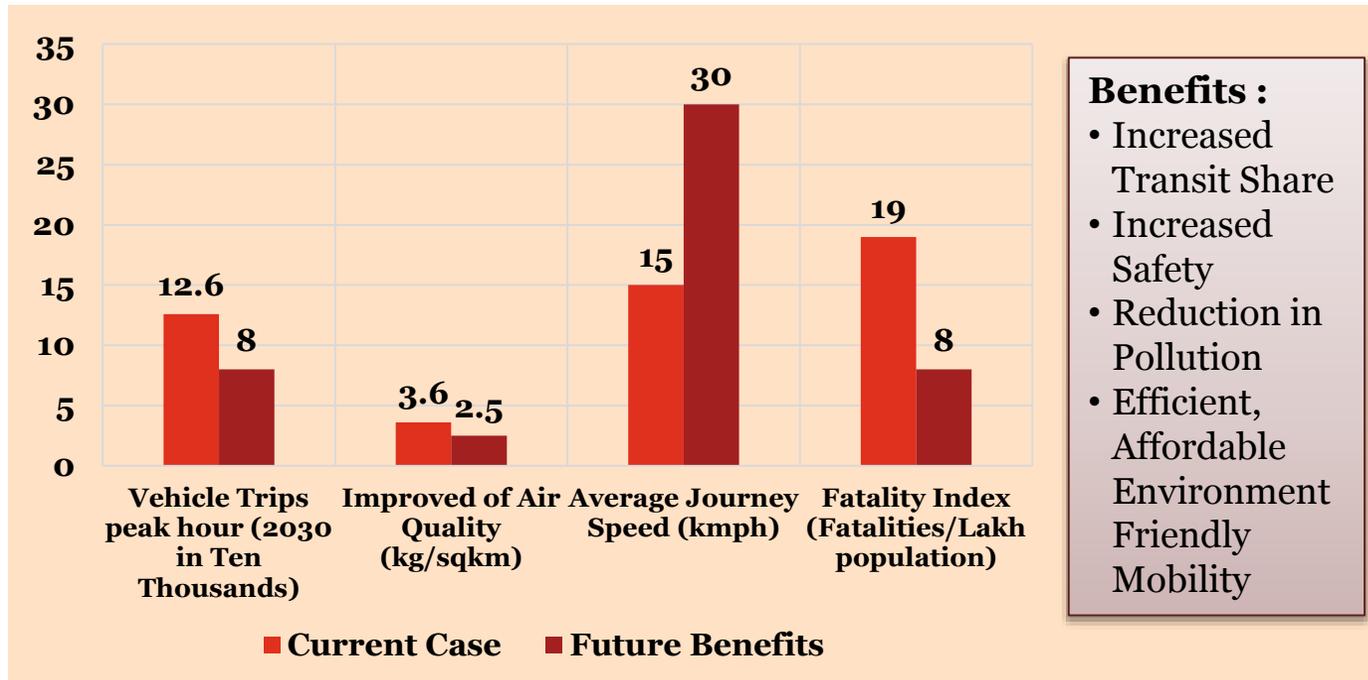
- US\$ 105 million funding for Sustainable Urban Transport Project (Hubli-Dharwad) - World Bank
- US\$ 107 million for Sustainable Urban Transport Project through Bus Rapid Transit (BRT) System in Maharashtra - ADB

**Description :** Traffic congestion in Guwahati is growing in leaps and bounds. There is an immediate requirement for a Feeder Bus Rapid Transit System (BRTS) in the following routes :-

- Jalukbari via Lakhra to Nepali Mandir which will be extended from Lakhra to Khanapara and Lakhra to Airport via Pamohi along new VIP Road.

### Pain Points :

- Projected **1,26,000 peak hour vehicle trips** in the year 2030 - 2.7 times of current volume<sup>1</sup>
- **2.5 fold** vehicle growth in the last 7 years with 16% through truck traffic<sup>1</sup>
- Current traffic transit speed is **15 kmph** which will go down to **8 kmph** with non-intervention



### Benefits :

- Increased Transit Share
- Increased Safety
- Reduction in Pollution
- Efficient, Affordable Environment Friendly Mobility

Alignment Item	Assessment
Multi-Sectoral Impact	✓
GoA Vision 2030	✓
2017-18 Budget Outline of GoA	✓
Donor Investment Priority	✓

Public Works Roads, Transport Department

## The Impact Parameters



**World Bank**



**ADB**



**JICA**



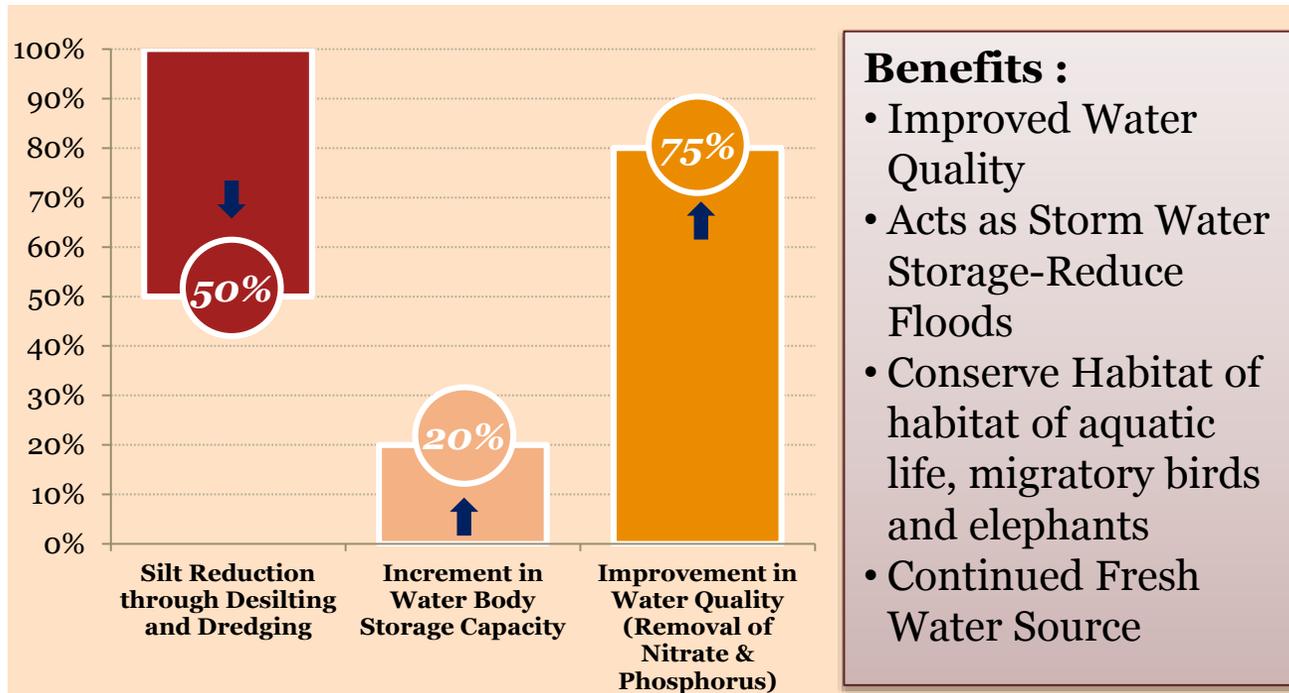
**Description :** Assam's wetlands occupy ~10123 sq. km. i.e. **9.7% of the total geographical area**<sup>3</sup>. It provides livelihood to **44000** fishermen associated<sup>2</sup> with 356 Fisherman Cooperative Societies. Work involved will include desilting & dredging, provisioning of inflow & outflow of water, improvement of water quality, increasing storage capacity, etc.

**Pain Points :** The increasing pollution levels and mismanagement of waste are resulting in the following:

- Reduction in coverage of wetlands by 9% – Assam **faces a deficit** in Fish Production (2015-16)<sup>2</sup> – **0.34 Lakh Tonne**
- Encroachment has lead to shrinkage of the Deepor beel (**RAMSAR Site**) area from **40 sq km<sup>1</sup>** and endangering bio-diversity of all forms

**Similar Projects**

- **US\$ 400 Million** funding for Lake Bhopal Conservation and Management (2004) Project – **JICA**
- **US\$ 150 Million** funding for Zhuzhou Brownfield Remediation Project – **World Bank**
- **US\$ 250 Million** funding for Integrated Wastewater Management Project - **ADB**



**Benefits :**

- Improved Water Quality
- Acts as Storm Water Storage-Reduce Floods
- Conserve Habitat of habitat of aquatic life, migratory birds and elephants
- Continued Fresh Water Source

Alignment Item	Assessment
<b>Multi-Sectoral Impact</b>	✓
<b>GoA Vision 2030</b>	✓
<b>2017-18 Budget Outline of GoA</b>	✓
<b>Donor Investment Priority</b>	✓

**The Impact Parameters**

**Environment & Forest, Water Resource, Fishery Departments**

Sources : 1 - Economic Survey of Assam 2015-16, 2 – Flood Plain Wetland of Assam, Paper presented at 4<sup>th</sup> World Congress on Conservation Agriculture, February 2009, 3 – ARSAC Report March 2013

**World Bank**



**ADB**



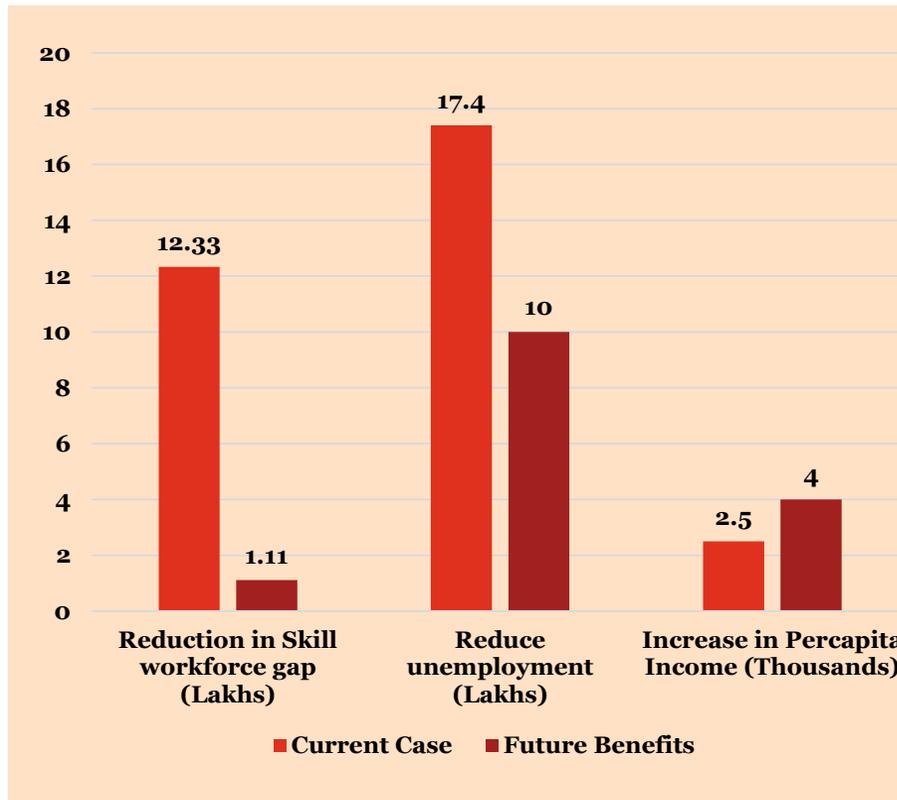
### Similar Projects

- Karnataka German Multi Skill Development Centre - **Germany**
- Bharat Skill Development Campus, Jaipur –**Switzerland**
- **US\$ 156 million** funding for Odisha Skill Development - **ADB**
- **US\$ 50 million** funding for Education and Skill Training for Minorities India –**World Bank**

**Description :** Assam needs quality skilled work force to support a high GSDP growth. Project envisages World Class Advanced Technological Training Institutes to provide Technical Training along with incubation, blended learning and consultancy services. Special focus on MSME cluster development.

**Pain Points :** Major concerns shrouding skill sector are :

- One of the major reasons, technical skill based industry fails in Assam is due to the lack of Skilled Trainers
- Areas for skill development within State
  - Vocationally Trained - **1.79 Lakhs<sup>1</sup>**
- Work force available for Skill Upgradation- **40.23 lakhs<sup>1</sup>** not having access to Specialized Technical Skills



### Benefits :

- Quality Education Programme for ITI (Level 7 National Skill Qualification Framework)
- **1-3 years** duration courses and flexible market driven short courses
- Availability of Local Skilled Trainers
- Skilled work force will lead to investments.

Alignment Item	Assessment
<b>Multi-Sectoral Impact</b>	✓
<b>GoA Vision 2030</b>	✓
<b>2017-18 Budget Outline of GoA</b>	✓
<b>Donor Investment Priority</b>	✓

**Labor and Employment Department**

## The Impact Parameters



# Solid Waste to Energy Project

(Probable Funding :USD \$5 Million)

ADB



NDB



WB IFC PPP



**Description:** There is a need to replace the traditional fossil fuels with new Renewable energy sources. New power generation technology provides options for emission & odor control measures along with processing of Municipal Solid Waste and production of all usable by-products.

**Pain Points:** Guwahati struggles with inefficient management of SW which adds to **Air Pollution levels<sup>1</sup> (32-41%), Water Pollution (30-40%), Soil Pollution (20-33%)**. The problem gets magnified as Guwahati has **0.28%** share of geographical area which supports **3.9%** of the State's population<sup>2</sup>



## Benefits:

- Potential production of **4.2 MWs/day<sup>3</sup>** of electricity from Solid Waste from Guwahati
- Potential Compost production **50 Tonnes/day<sup>3</sup>**
- Solution to the **1260 MW** monthly power shortfall in Assam<sup>4</sup>
- Reduced reliance on fossil fuels
- Air, Water and Soil Pollution control

Alignment Item	Assessment
Multi-Sectoral Impact	✗
GoA Vision 2030	✓
2017-18 Budget Outline of GoA	✗
Donor Investment Priority	✓

Power Department

## The Impact Parameters

1 - Municipal solid waste disposal: a case study in Guwahati city to mitigate the man made disaster, 2 - Performance Audit of Public Private Partnership (PPP) in Solid Waste Management (SWM) in Guwahati 3 - Municipal Solid Waste Management And Energy Recovery From It – A Case Study Of Guwahati, Assam, 4- <http://news.webindia123.com/news/Articles/INDIA/20170206/3050507.html>



**ADB**



**World Bank**



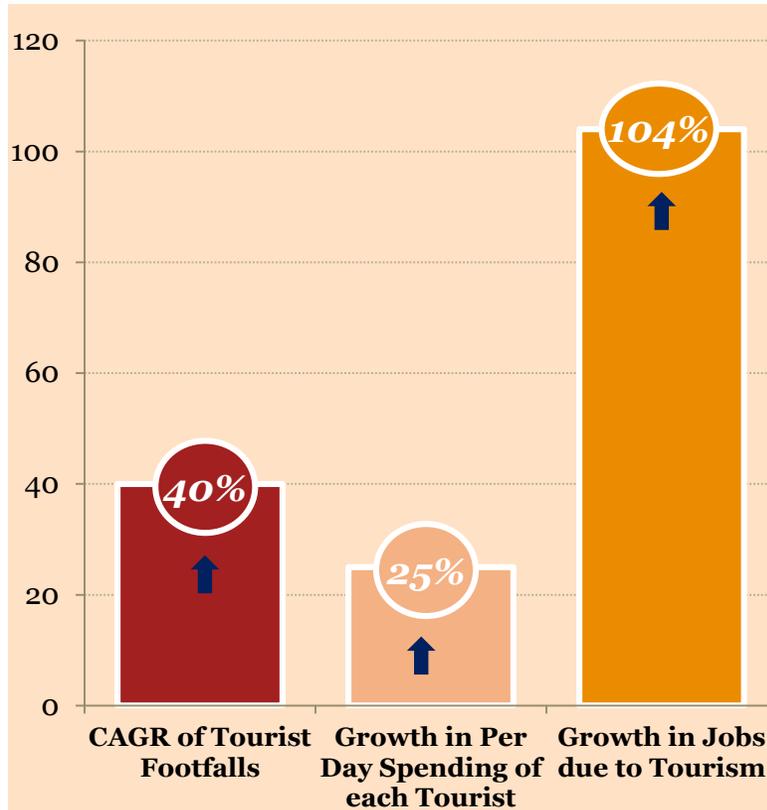
**JICA**



**Description :** Assam known for its natural beauty and pristine tea gardens. In 2015<sup>1</sup> it has attracted 5.52 million tourist all over the world. Development of various forms tourism like Wildlife, Spiritual, Adventure and Wellness bear promise for the state.

**Pain Points :** Assam's tourism destinations does not provide a world-class experience due to :

- Crumbling Infrastructure
- Lack of Cleanliness
- Absence Hospitality Trainings



**The Impact Parameters**

**Benefits :**

- Collaborative growth in social development, cultural heritage preservation, **MSME support**, hospitality management and infrastructure development.
- **Destination Development** of Restrooms, Road, Hotels, etc. along with **Circuits Development** like (Kamakhaya, Kaziranga, Upper Assam) to prolong stay of tourists.
- Unused Eastern Coal fields can be developed as uncommon attractions like Mining Tourism.

Alignment Item	Assessment
<b>Multi-Sectoral Impact</b>	✓
<b>GoA Vision 2030</b>	✓
<b>2017-18 Budget Outline of GoA</b>	✓
<b>Donor Investment Priority</b>	✓

**Tourism, Minority Welfare, Panchayat & Rural Development, Social Welfare and Tea Tribes Department**

**Similar Projects**

- **US\$ 210 million** funding for Uttar Pradesh Pro-poor Tourism Development Project – **World Bank**
- **US\$ 123 million** funding to upgrade tourism infrastructure for 3 states in India – **ADB**

**World Bank**



**ADB**



**DFID**

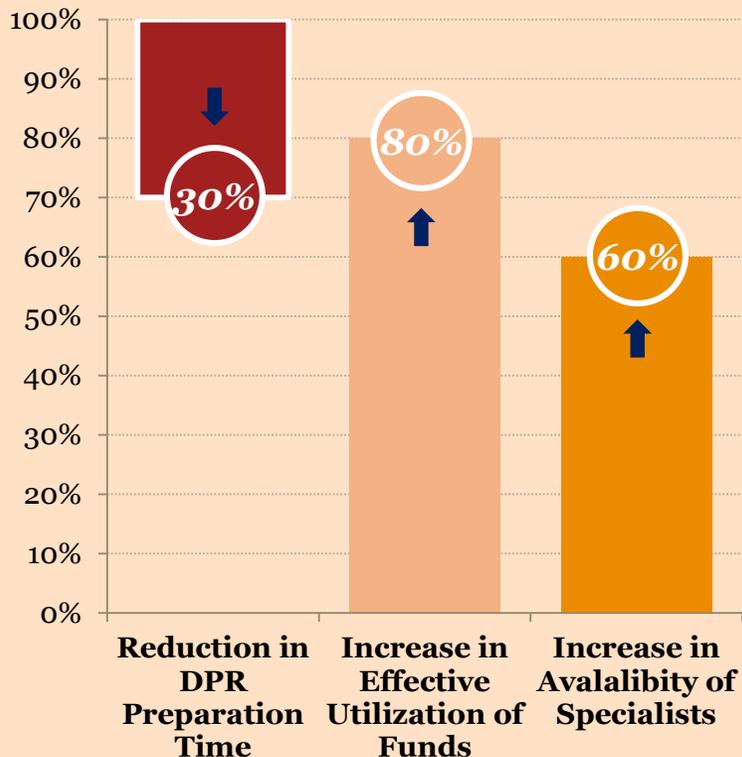


**Description :** The project will help develop institutional capacity within Public Works Road, Department Assam which is currently implementing large projects worth more than US\$ 500 million. The work will involve development of road asset management system.

**Pain Points :** PWRD has a PMU to manage externally aided projects but, there are challenges in fund utilization (**less than 50%**), availability of DPR preparation specialists and maintenance of existing systems (**capacity building**)

### Similar Projects

- US\$ 40 million funding for NHAJ Technical Assistance Project – World Bank
- US\$ 2.4 million TA to improve Chhattisgarh’s road maintenance management capabilities – ADB & DFID



**The Impact Parameters**

### Benefits :

- Availability of funds for maintenance of real time road database and existing online systems.
- Contractor development programs
- Adoption of modern work procedure, processes and construction/maintenance practices.
- Quick turn around time and effective utilization of funds through ICT based monitoring.

Alignment Item	Assessment
Multi-Sectoral Impact	✗
GoA Vision 2030	✓
2017-18 Budget Outline of GoA	✗
Donor Investment Priority	✓

**Public Works Roads Department**

KfW



ADB



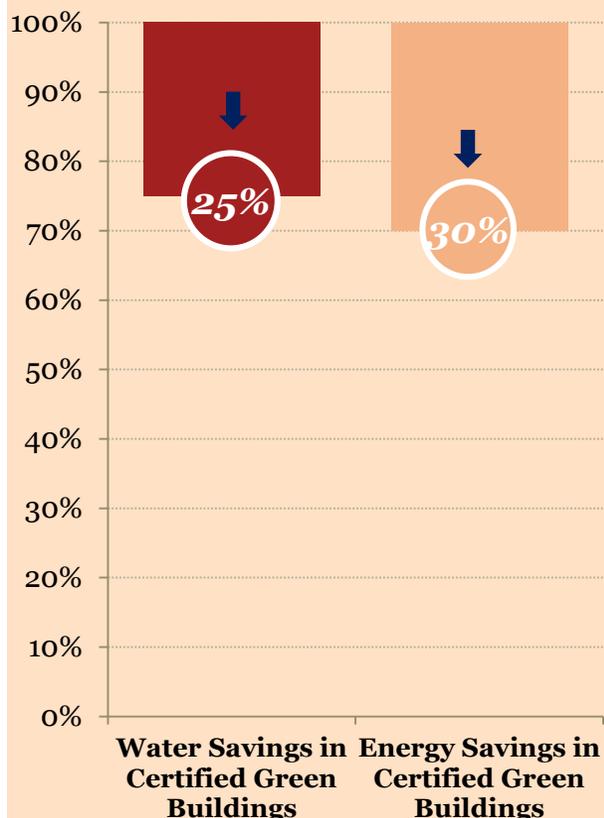
AIIB



**Description :** Guwahati is one of the fastest growing cities in India. The city is expected to house **28<sup>1</sup> Lakh residents by 2025**. Sustainable infrastructure development is the need of the hour for housing the additional 18 Lakh residents.

**Pain Points:** Buildings have major environmental impact depleting resources such as:

- Ground Cover, Forest, Water and Energy
- Current Urban Buildings are one of the major pollutants that affect the air quality and Contributes to Climate Change<sup>3</sup>



**Benefits :**

- KfW Development Bank has invested US\$ **20 million to fund 25000** new energy efficient homes in South Africa that will save 182 million liter of water every year over traditional housing.
- Advantages of Green Buildings include :
  - Better sanitation
  - Recycling of Water
  - Less stress on centralized storm management systems
- With successful Green Projects to showcase, Green Cities project can be pursued through DONOR funding.
- TERI aims to achieve **90%** penetration<sup>2</sup> of Renewable Energy sources by 2025.

Alignment Item	Assessment
Multi-Sectoral Impact	✓
GoA Vision 2030	✓
2017-18 Budget Outline of GoA	✗
Donor Investment Priority	✓

**Similar Projects**

•US\$ 55 million for refinancing 2,000 home loans comprising of 22,000 residential units across India. – KfW

•US\$ 150 million in a 7-year loan to PNB Housing Finance Limited to fund affordable housing in India – ADB

**Urban Development, Transport, Revenue & Disaster Management**

**The Impact Parameters**

Sources : 1 – Population Data <https://online.assam.gov.in/web/guest/capitalofassam> and <https://online.assam.gov.in/web/guest/capitalofassam>  
 2 – TERI Report on Green Buildings <http://www.teriin.org/projects/green/pdf/National-Buildings.pdf>, 3 - <http://iosrjournals.org/iosr-jhss/papers/Vol19-issue8/Version-1/Jo19816467.pdf>

# *Satellite city to Guwahati*

The Hon'ble Finance Minister, mooted the idea for setting up a new city with the objective of - *Setting up a satellite city to Guwahati which would hold Capital function as its primary identity*

## **Impact Areas**

- Economic and social transformation
- Growth across multiple sectors
- Hub of trade & hospitality, cultural services, high quality medical services, quality educational services
- Services hub for goods manufacturing, Information Technology and Bio-Technology sectors

## **Potential Benefits**

- Organized urban planning
- Improved land usage, both at existing and new city
- Decongestion of existing city
- Improved traffic management
- Well defined business hubs for attracting new investment, etc.



# Amaravati (Andhra Pradesh) Study

## Need for New City

- New capital envisioned for Andhra Pradesh after bifurcation of erstwhile State
- Capital Region Development Authority (CRDA) setup for the purpose of
  - Planning, Co-ordination, Execution, Supervision, Financing & Funding
  - Promoting & Securing the Planned Development of the Capital Region and Capital City Area for the State
- Capital city<sup>2</sup> spread over an area of ~ **218 km<sup>2</sup>**

- Funding of ~ **US \$ 6700 million<sup>1</sup>** for development of capital city of Amaravati required
- Funding sources –
  - ~**US \$ 60 million** from State Government
  - Likely to get another ~**US \$ 150 Million** from State Government
  - ~US \$ 375 million from Central Government
- Funding from agencies such as HUDCO, **World Bank, ADB, AIIB, NDB & AFD**, Crowd Funding
- Proposal(s) being discussed with agencies
- Amaravati Sustainable Capital City Development Project<sup>3</sup> of value US\$ 715 Mn would be funded by:
  - AIIB – US\$ 200 Mn; WB – US\$ 300 Mn;
  - Government of Andhra Pradesh – US\$ 215 Mn

## Funding required

Source : 1 - <https://www.mirchi9.com/politics/no-issue-funding-amaravati/> ; 2 - [www.google.com](http://www.google.com) ; 3 - [www.aiib.org](http://www.aiib.org) ;

# *Naya Raipur (Chhattisgarh) Study*

## *Need for New City*

- New capital envisioned for Chhattisgarh after bifurcation of erstwhile Madhya Pradesh and challenges being faced by the city of Raipur
- Naya Raipur Development Authority (NRDA) setup for the purpose of
  - Development of Infrastructure, implementation of utility and social projects
  - Use of multi-lateral agencies, procurement contracts, etc. for execution of projects
- Smart Greenfield city with an area<sup>1</sup> of ~**80 km<sup>2</sup>**

- Funding of ~ US \$ 1.00 billion was required for development of capital city of Naya Raipur
- Funding sources<sup>2</sup> –
  - ~**US \$ 75 million** from State Government interest free loan
  - ~US \$ 82 million from HUDCO
- Funding to happen from external agencies such as **World Bank, ADB, AIIB, HUDCO & Other commercial banks**
- Sustainable Urban Transport Project (SUTP) through MoUD in association World Bank (WB) of value **US\$ 27 million** is being funded<sup>3</sup>

## *Funding Sources*

Source : 2 – [http://www.business-standard.com/article/economy-policy/chhattisgarh-builds-new-capital-with-loans-grants-109122500014\\_1.html](http://www.business-standard.com/article/economy-policy/chhattisgarh-builds-new-capital-with-loans-grants-109122500014_1.html)

# Proposed Projects vis a vis GoI Schemes (1/2)

Proposed Projects	Agenda/Objectives	Related GoI Scheme	Agenda/Objectives	Remarks
Development of Public Health Infrastructure	Proper utilization and better management and delivery of affordable services	National Health Mission (NHM)	Focused on both rural and urban health infrastructure	The proposed EAP will complement NHM by providing more capacity building and infrastructure support (tertiary)
Public Transport Improvement Project	Implementation of Intelligent Traffic Management System with necessary capacity building	AMRUT, Smart City Mission	Focused on core municipal services like solid waste management, water supply and sewerage, storm water drainage; does not cover the entire state	The proposed EAPs take into account the urban transport and municipal services requirements across the state and also aims at capacity building through international co-operation
Integrated Urban Management System through City Command Center	Traffic, Flood and Solid Waste Management			
Waste to Energy Project	Production of renewable energy from municipal solid waste			
Feeder Bus Rapid Transit System	Efficient, Affordable Environment Friendly Mobility	NA	NA	
Technical Assistance for PWRD	Institutional Capacity Development	Pradhan Mantri Gram Sadak Yojana (PMGSY)	Focused more on rural roads	This would be a technical assistance EAP

## ***Proposed Projects vis a vis GoI Scheme (2/2)***

<b>Proposed Projects</b>	<b>Agenda/Objectives</b>	<b>Related GoI Scheme</b>	<b>Agenda/Objectives</b>	<b>Remarks</b>
Wetland Reclamation and Protection	Desilting & dredging, provisioning of inflow & outflow of water, improvement of water quality, increasing storage capacity	Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	This is more from the perspective of irrigation	The proposed EAP goes beyond modernization of irrigation and aims at conservation of aquatic life also
Assam Multi Skill Development Centers	Skill development, especially for the MSME Sector	Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	Design and Implementation of Skill development program through international knowledge partnership	The proposed EAP will complement PMKVY by providing more capacity building and infrastructure support
Sustainable Tourism Development Project	State wide tourism development with focus on Collaborative growth in social development, cultural heritage preservation, etc.	Swadesh Darshan PRASAD	Targeted at holistic tourism development but at very few locations	The proposed EAP covers more geographic locations
Sustainable Residential Infrastructure Project	Development of Green Buildings	Pradhan Mantri Awas Yojna (PMAY)	Focused more on affordable housing	This EAP is focused on green buildings

# *Performance Assessment of Existing EAPs*

5

## Framework for performance rating the ongoing EAPs

**Percentage of Physical Progress till date** = (Total Physical Progress till date/Planned Physical Progress throughout the project duration)

**Percentage of Financial Progress till date** = (Total Physical Progress till date/Planned Physical Progress throughout the project duration)

**Percentage of Time elapsed till date**= (Total Physical Progress till date/Planned Physical Progress throughout the project duration)

**Rating**=Simple Average of (**% Physical Progress/% Time Elapsed**) and (**% Financial**

Name of the Project	Funding Agency	% physical progress	% financial progress	Ranking in terms of Progress
Improvement & upgradation of Road Section of Tamulpur to Paneri, Paneri to Udalguri and 5 nos of Major Bridges under NESRIP project	ADB	6.40	3.65	<b>13</b>
Rural Water Supply & Sanitation Project - Low income states (RWSSP-LIS)	World Bank	26	-	<b>12</b>
Assam Urban Infrastructure & Investment Programme	ADB	28.9	16	<b>11</b>
Assam State Road Project	World Bank	18.25	26.08	<b>10</b>
Assam Project on Forest & Biodiversity Conservation	AfD	57.2	23.8	<b>9</b>

# Performance Assessment of Existing EAPs

## More Road Rehabilitation than Improvement Works

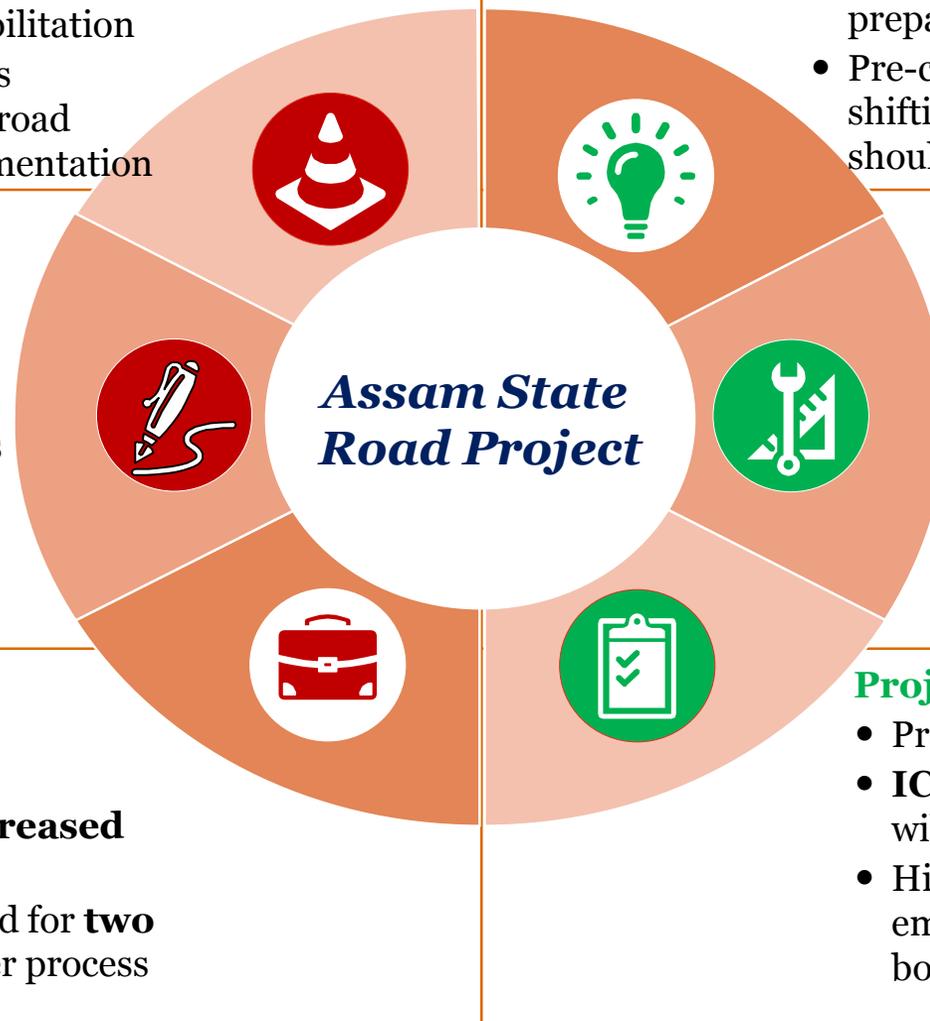
- Land acquisition, utility shifting & poor performance of some contractors has shifted the focus from road improvement to rehabilitation
- **Road Rehabilitation** work expedites disbursements, but adversely affected road network development or capacity augmentation

## Multiple Entities

- Delay in utility shifting by Power, and other departments, rather than by the same Civil works contractor under supervision of concerned departments
- Restrictions by Forest department on quarrying of construction materials affected progress of works

## ASRP Restructuring

- Road upgradation and widening is **reduced** by 52 Kms to 256Kms
- Rehabilitation of existing roads is **increased** by 580 Kms to 800 Kms
- Extension of project completion period for **two years** beyond March 31, 2018 is under process



## Project Planning & Pre-construction Activities

- Project planning to be a demarcated phase prior to start of a major project along with a **dedicated experienced team** to be formed for project preparation (Construction material planning, etc.)
- Pre-construction activities like land acquisition, utility shifting, tree cutting, environmental clearances, etc should be sufficiently advanced before start of project

## Construction Industry Capacity

- Contractors' capacity assessment should be done and packages accordingly sized
- Improve technical competence of contractors by setting up Construction Academy as in Andhra Pradesh
- Deployment of technical staffing of contractors should be strictly monitored during execution of works

## Project Monitoring & Management

- Project monitoring indicators to be set at the outset
- **ICT** based real-time project monitoring/management will help in informed decision making and reporting
- High level Project steering committee should be empowered to effectively resolve any project bottlenecks

# *Way Forward*

# 6

## Continue Departmental Interactions

<b>Departments/Agencies covered (1<sup>st</sup> round)</b>	<b>Departments/Agencies planned to be covered by 15<sup>th</sup> March 2017</b>
<ol style="list-style-type: none"><li>1. PWD (Roads)</li><li>2. Guwahati Smart City Development Authority Ltd.</li><li>3. Directorate of Municipal Administration</li><li>4. Education Department</li><li>5. Tourism Department</li><li>6. ARIAS</li><li>7. Sarva Siksha Abhiyan Mission</li><li>8. Transport Department</li><li>9. Health Department</li></ol>	<ol style="list-style-type: none"><li>1. Social Welfare Department</li><li>2. Panchayat &amp; Rural Development</li><li>3. Power Development</li><li>4. Industries Department</li><li>5. Water Resource Department</li><li>6. Urban Development Department</li><li>7. Environment &amp; Forest Department</li><li>8. Sports &amp; Youth Welfare Department</li></ol>

## Project Plan

Activities	March 2017					April 2017				May 2017			
	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13
Complete rest of the initial departmental meetings	■												
Meeting with donor agencies		■							■				■
Identification of Intervention areas (TA/Development) by the LEAP Cell	■												
Study of similar externally aided projects and benchmarking of impact factors across India	■												
Finalization of proposed projects			■		★								
Assist the department in preparation of first 4 Concept Notes						■			★				
Approval of concept notes from the department													
Assist the department in preparation of next 4 Concept Notes										■			★

---

# *Thank you.*

## *Questions?*

***Saurabh Bhattacharya***

**Team Leader, LEAP**

PricewaterhouseCoopers Pvt. Ltd.

[saurabh.bhattacharya@in.pwc.com](mailto:saurabh.bhattacharya@in.pwc.com)

+91-9901-066-089

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## ***World Bank – Few Ongoing Projects (India)***

- 1. Uttarakhand Health Systems Development Project (2017)***: Improve access to quality health services, particularly in the hilly districts of the state, and to expand health financial risk protection for the residents of Uttarakhand (***Status: Active; Commitment Amount: US \$100.00 million; Sector: Health***)
- 2. Tejaswini (2016) – Socio-economic Empowerment of Adolescent Girls & Young Women***: Socio-economic Empowerment of Adolescent Girls and Young Women (AGYW) Project. Improve completion of market-driven skills training and secondary education for adolescent girls and young women in select districts of Jharkhand (***Status: Active; Commitment Amount: US \$63.00 million; Sector: Social Welfare***)
- 3. Bihar Kosi Basin Development Project (2015)***: Project is to enhance resilience to floods and increase agricultural production and productivity in the targeted districts in the Kosi river basin, and to enhance Bihar's capacity to respond promptly and effectively to an eligible crisis or emergency (***Status: Active; Commitment Amount: US \$250.00 million; Sector: Flood and Irrigation***)
- 4. Nai Manzil - Education and Skills Training for Minorities (2015)***: Improve completion of secondary education and market-driven skills training for targeted youth from minority communities (***Status: Active; Commitment Amount: US \$50.00 million; Sector: Skill Development***)
- 5. Enhancing Teacher Effectiveness in Bihar (2015)***: Improve the effectiveness of elementary school teachers in Bihar (***Status: Active; Commitment Amount: US \$250.00 million; Sector: Education***)



## ***ADB – Few Ongoing Projects (India)***

- 1. Madhya Pradesh Urban Services Improvement Project (2014)***: Technical Assistance for identification the extent to which government programs are effectively utilized and their impact in terms of poverty alleviation  
***(Status: Active; Funding Amount: US \$1.00 million; Sector: Urban Development)***
- 2. Madhya Pradesh District Connectivity Sector Project (2014)***: Upgrade district roads in a project which will tackle an important link in road improvements  
***(Status: Active; Funding Amount: US \$350.00 million; Sector: Road Infrastructure)***
- 3. Rajasthan Urban Sector Development Program (2014)***: Improve water supply and wastewater services to the residents of the state of Rajasthan  
***(Status: Active; Funding Amount: US \$500 million; Sector: Urban Development)***
- 4. Supporting Human Capital Development in Meghalaya (2013)***: The proposed project will help in enhancing the employability of Meghalaya's youth by improving the quality and delivery of its skill development and secondary education programs  
***(Status: Active; Funding Amount: US \$100.00 million; Sector: Skill Development)***
- 5. Bangalore Cluster City Development Investment Program (2013)***: Technical assistance to conduct economic and sector analyses, road map and policy framework preparation for cluster development in Bangalore Metropolitan Region  
***(Status: Active; Funding Amount: US \$ 1.30 million; Sector: Industry and Investment Promotion)***



## ***AIIB – Proposed Projects (India)***

- 1. Andhra Pradesh 24x7 – Power for All Project (2017)***: The Project will improve the supply of power and improved efficiency of operations in the target areas, leading to better financial performance of the companies, thus releasing funds for overall socioeconomic development  
***(Status: Proposed; Committed Amount: US \$160 million; Sector: Power )***
- 2. India: Transmission System Strengthening Project (2017)***: Project will enhance the capacity of electricity supply in the Southern Region of the country  
***(Status: Proposed; Committed Amount: US \$100 million; Sector: Power)***
- 3. Amaravati Sustainable Capital City Development Project (2017)*** : The proposed Project is part of the overall city development program for Amaravati. It is focused on some basic infrastructure of the new city, such as main roads and drainages. It will serve to create jobs for existing resident villagers by upgrading their skills, as well as providing high-tech and knowledge based industry jobs to be globally competitive.  
***(Status: Proposed; Committed Amount: US \$200 million; Sector: Smart City)***

## ***NDB – Ongoing Projects (India)***

- 1. Madhya Pradesh Major District Roads Project (2016)***: Upgradation of approximately 1,500 km of major district roads with a focus on all weather road availability, improved road maintenance and asset management ***(Status: Ongoing; Committed Amount: US \$350 million; Sector: Road )***



## ***AFD – Projects (India)***

- 1. Bangalore Metro Rail Corporation (BMRC) (2015)***: Technical assistance program to improve urban mobility in Bangalore City  
***(Status: Ongoing; Committed Amount: US \$ 326.4 million; Sector: Transport and Urban Mobility)***
- 2. Kochi Metro (2014)***: The project will contribute to improving mobility for the residents of Greater Kochi and to ensuring urban transport is efficient, while promoting the sustainable development of the city  
***(Status: Ongoing; Committed Amount: NA; Sector: Transport and Urban Mobility)***
- 3. Reorganizing the water supply system in Jodhpur (2012)***: The project's main objective is to extend and improve the service performance, based on redeveloped and lower-carbon infrastructure  
***(Status: Ongoing; Committed Amount: NA; Sector: Urban Development)***
- 4. Restoring ecosystems with the residents of Assam (2012)***: The project aims at addressing the major threats to biodiversity and forest conservation in Assam by financing a comprehensive, participatory and sustainable management program, working closely with the local communities, for forest resources (protected areas, development, production, recovery, local development) throughout the State of Assam.  
***(Status: Ongoing; Committed Amount: US \$56 million; Sector: Environment and Climate Change)***



## ***KfW – Projects India***

- 1. Environmental line of credit SIDB (2015)***: The objective is to reduce environmental impacts caused by industrial pollutants and associated risk to human health ***(Status: Ongoing; Committed Amount: US \$ 40.5 Million; Sector: Environmental Policy and Administrative Management)***
- 2. Housing finance (2015)***: The objective is to provide adequate housing and adequate sanitary condition in rural and urban areas ***(Status: Ongoing; Committed Amount: US \$ 16.2 Million; Sector: Financial Sector/Low Cost Housing)***
- 3. Capitalization Programme for Microcredits (2014)*** : The objective of the project is to ensure sustainable improvement in the access of poor woman to microcredit in rural and urban areas of Gujarat. ***(Status: Ongoing; Committed Amount: US \$ 3 Million; Sector: Financial Sector)***
- 4. Secondary Hospitals Karnataka (2014)***: The objective of the project is to improve the quality and efficiency of secondary health care in Gulbarga Region. ***(Status: Ongoing; Committed Amount: US \$ 15.1 million; Sector: Basic Health Infrastructure)***
- 5. REC Energy Efficiency Programme (2014)***: The objective of the project was to improve the energy efficiency of rural electricity distribution by issuing sub loans to energy supply companies in Andhra Pradesh. ***(Status: Ongoing; Committed Amount: US \$ 73.7 million; Sector: Electricity Transmission and Distribution)***



## ***JICA– Projects (India)***

- 1. Prevention of Diarrheal diseases in Kolkata Region (2003-08)***: Technical assistance project aimed at transferring more advanced technologies and strengthening and spreading the techniques for fighting diarrhea. The project aimed at lowering the infant mortality rate (***Status: Closed; Financing Amount: NA, Sector: Health***)
- 2. Attapady Wasteland Comprehensive Environmental Conservation Project, Kerala (1996)***: The objective of the project is ecological restoration of degraded wastelands in Attapady and development of replicable models of participative eco-restoration promoting sustainable livelihood with special emphasis on tribal population in harmony with resource base (***Status: Closed; Financing Amount: US \$: 44.76 million, Sector: Environment and Natural Resource*** )
- 3. Technical Assistance ITS Master Plan for Bangalore & Mysore (2015)***: (***Status: Ongoing; Financing Amount: NA, Sector : Transport***)
- 4. Mumbai – Ahmedabad High Speed Train Corridor (2015)***: (***Status: Ongoing; Financing Amount: US \$ 10492.8 million, Sector : Transport***)
- 5. Peripheral Ring Road Plan for Bangalore City (2015)***: (***Status: Ongoing; Financing Amount: NA, Sector: Roads*** )



# Concept Note on <<ABC>>

<<XYZ>> Department, Government of Assam

## 1. Description

### 1.1. Background

<<This section should cover the high level details of the current backdrop of the project like socio-economic factors, national agenda, global changes, etc. >>

### 1.2. Rationale for proposed Project

<<This section should broadly outline in a qualitative manner why this project was conceived in the first place >>

### 1.3. Objectives

<<This section should include clear, unambiguous and quantifiable objectives of the project>>

### 1.4. Demographic & Geographic Coverage

<<This section should highlight the project coverage in terms of demography and geography>>

### 1.5. Envisaged Benefits

<<This section should highlight the tangible - direct and indirect benefits which can be realized through implementation of this project >>

## 2. Stakeholders

### 2.1. Name/Role/Department

<<This section should detail out all direct and indirect stakeholders of the project; A Stakeholder is a person with interest in a business which can either affected or affected by the business carried out>>

### 2.2. Stakeholder Matrix

<<This section should detail out all the stakeholders that would be identified based on their interest and influence on the project: Responsible, Accountable, Consulted and Informed.  
Responsible – The stakeholder has the responsibility of the getting the work done  
Accountable – The stakeholder who is accountable for correct and through completion of the work  
Consulted – The stakeholder who provides information (two-way communication) about the work  
Informed – The stakeholder who is kept informed (one-way communication) about the work>>

### 2.3. Stakeholder Benefits

<<This section should highlight the stakeholder centric benefits>>

## 3. Key Performance Indicators

### 3.1. Context for Selection

<<KPI is a measureable value that demonstrates how effectively an organization is achieving key business activities; this section should highlight the reason for selection of the KPIs>>

### **3.2. Baseline and Target**

*<<This section should define the baseline targets already existing for the defined KPIs and expected targets for those KPIs that the project proposed to achieve during the implementation period; For example, in a five year Health Improvement project, the existing IMR i.e. Infant Mortality Rate which is currently (as of 2013) is 54 per 1000 is the baseline, while implementation of a project may plan to achieve a IMR of 45 per 1000 after one year of implementation, 32 per 1000 after second year of implementation, 21 per 1000 after third year of implementation, and so on >>*

## **4. Project Structure**

### **4.1. Components**

*<<This section should define the list of broad projects components>>*

### **4.2. High Level Project Plan**

*<<A Gantt chart is a horizontal bar chart used to depict the activity wise project schedule in a parallel manner; this section would map the components vs timeline in a Gantt chart>>*

### **4.3. Project Governance Structure**

*<<This section should contain a project governance structure with defined roles of the entities in the governance structure responsible for both policy, regulatory, institutional and operational aspects>>*

## **5. Cost Estimation**

### **5.1. Funding Requirement**

*<<This section would contain a detailed description of estimated year wise funding requirement for each project component (as defined in section 4.1) to meet the project objectives. Broad level line items for expenditure will include cost for procurement of goods and services including advisory services for policy, legal and regulatory, institutional, operational reforms, Training and Capacity Building, physical infrastructure, ICT and non ICT infrastructure, etc.>>*

### **5.2. Identified Funding Sources**

*<<This section should contain a detailed description of all the possible sources of funding including resources from local government, state government, central government, external aid agencies, etc.>>*

### **5.3. Financial Analysis**

*<<This section should highlight the revenue generation aspect of the project (if any) using appropriate financial models based on quantified data and assumptions (if any)>>*

## **6. Implementation Mechanism**

### **6.1. Statutory and Regulatory Clearance**

*<<This section should explain the statutory and regulatory clearances necessary for the implementation of this project and the current status of these clearances >>*

### **6.2. Expertise and Experience in the domain**

*<<This section should clearly articulate departmental expertise and earlier experience that would help to build a strong case for donor funding>>*

### **6.3. Methodology**

*<<This section should contain the high level description of the approach and methodology/processes that would be adopted for project implementation>>*

### **6.4. Utilization Framework**

*<<This section should explain the framework designed to ensure effective utilization of funds along with clearly laid down accountability among the executing agency, implementing agency and other stakeholders as applicable>>*

### **6.5. Innovation and/or Value addition**

*<<This section should showcase the use of innovative methods to be used in this project and indirect value additions that project would provide apart from the direct objectives>>*

## **7. Risk Management**

### **7.1. Risk Identification Plan**

*<<This section would contain how a risk identification has been formed to identify and log risk>>*

### **7.2. Land Acquisition, R&R, Environmental Impact, Social Impact, etc.**

*<<This section would highlight typical risks (if involved) related to land, environment and social impacts>>*

### **7.3. Mitigation Plan**

*<<This section would define an effective plan to flag risk and dependencies; and plan for resolution >>*

## Concept Note Review Checklist

		To be filled by the Concerned Department	To be filled by the Finance Department	
Sl. No.	Item	Compliance (Put a ✓ mark)	Comments	Evaluation (Good, Fair, Poor)
1.	Does the concept note provide a convincing rationale for Donor Agencies to fund the project? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Description of current situation, challenges</li> <li>Clarity in project objectives</li> </ul>	<input type="checkbox"/>		
2.	Are the demographic and geographic impact parameters clearly defined?(including land usage) <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Identify the required data/parameters</li> <li>Identify data sources</li> </ul>	<input type="checkbox"/>		
3.	Were all the stakeholders and their roles properly identified along with benefits envisaged for them? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Interactions with direct and indirect stakeholders</li> </ul>	<input type="checkbox"/>		
4.	Does the concept note show case Department's expertise and domain knowledge to ensure high success? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Department's experience with similar projects</li> <li>Implementation success rate</li> </ul>	<input type="checkbox"/>		
5.	Does the concept note outline a sound project implementation strategy along with timelines? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Identification of project preparatory activities/ clearances and their status</li> <li>Strategy for effective fund utilization</li> </ul>	<input type="checkbox"/>		

		To be filled by the Concerned Department	To be filled by the Finance Department	
Sl. No.	Item	Compliance (Put a ✓ mark)	Comments	Evaluation (Good, Fair, Poor)
6.	Is there a scope for Innovation/Value Addition to showcase? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Multi sectoral impact</li> <li>Socio-Economic benefits for the growth of the State of Assam</li> <li>Additional revenue sources for the state</li> </ul>	<input type="checkbox"/>		
7.	Are the project components clearly defined? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Design of project components</li> <li>Clear linkage among objective, outcome, output and activities</li> </ul>	<input type="checkbox"/>		
8.	Are Key Performance Indicators properly defined keeping in mind a practical approach? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Indicators chosen are in line with project objectives</li> <li>Indicators chosen are Specific, Measurable, Attainable, Realistic and Timely</li> </ul>	<input type="checkbox"/>		
9.	Does the concept note have a comprehensive cost estimation approach? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Inclusion of all cost elements; direct, indirect, fixed and variable costs</li> <li>Use of a proper costing framework</li> </ul>	<input type="checkbox"/>		
10.	Does the concept note provide a comprehensive approach to risk identification and risk mitigation? <u>Things to consider:</u> <ul style="list-style-type: none"> <li>Probability and Impact of risk event</li> <li>Process for quick risk resolution</li> </ul>	<input type="checkbox"/>		

Name of the Official: \_\_\_\_\_

Designation & Department: \_\_\_\_\_

Stamp and Date: \_\_\_\_\_

## Wetland Conservation and Protection

Assam is endowed with extensive aquatic resources in the form of beels, swamps, ponds and rivers. The floodplains wetlands (beels) in Assam extends over one lakh hectare. There are a total of 5097 wetlands in Assam. In addition there are also 6801 small wetland (<2.25 ha) and the total wetland area of Assam is estimated to be around 764372 Ha, which is around 9.74 percent of the total geographic area of the state<sup>1</sup> These wetlands constitute the home for the major fishery resources of the state. Apart from being fishery sources, these beels also constitute one of most productive ecosystems due to their natural interface with land masses and the water bodies thereby making them important biodiversity hotspots within the state. The proposed project aims at Wetland Reclamations and Protection.

Key benefits that could be realized through this project include:

- Improved Water Quality
- Development of Storm Water Storage which could be effective in reducing Floods
- Conservation of habitat for aquatic life, migratory birds and elephants
- Perennial source for fresh water

Multilateral donor agencies like **Japan International Cooperation Agency** and **Asian Development Bank** have a primary focus on environment conservation efforts and can be potential donors who can assist the state in wetland conservation initiative through financial assistance. The below table details out similar projects that have been funded in India and elsewhere:

Sl. No.	Project Name	Project Description	Year	Funding
1	Lakes Bhopal Conservation and Management Project <sup>2</sup> (India)	Improvement of environmental conditions of Bhoj Wetland (Lake Bhopal) and water quality of the Upper and Lower Lakes	2004	Loan of US\$ 75 billion funded by Japan International Cooperation Agency (JICA)
2	Jiangsu Yancheng Wetlands Protection <sup>3</sup> Project (China)	Improved ecosystem health and services in the coastal wetlands in Yancheng	2012	Loan of US\$ 37 million funded by Asian Development Bank (ADB)
3	Sanjiang Plain Wetlands Protection <sup>4</sup> (China)	Established integrated conservation and development model to protect natural resources of the Sanjiang Plain wetlands and their watersheds	2013	Loan of US\$ 37 million funded by Asian Development Bank (ADB)

Sources:

1 - National Wetland Atlas: Assam, Sponsored by MoEF,GoI

2 - Lake Bhopal - [https://www.jica.go.jp/english/our\\_work/evaluation/oda\\_loan/post/.../project32.pdf](https://www.jica.go.jp/english/our_work/evaluation/oda_loan/post/.../project32.pdf)

3 - Jiangsu Yancheng Wetlands Protection Project - <https://www.adb.org/projects/40685-013/main>

4 - Sanjiang Plain Wetlands Protection - <https://www.adb.org/projects/35289-013/main>

## Solid Waste to Energy Project

Guwahati struggles with inefficient management of solid wastewhich adds to Air Pollution levels<sup>1</sup> (32-41%), Water Pollution (30-40%), Soil Pollution (20-33%). The problem gets magnified as Guwahati has 0.28% share of geographical area which supports 3.9% of the State's population<sup>2</sup>.

Waste-to-energy (WTE) is recognized as the single most effective method for Municipal Solid Waste (MSW) treatment, as it reduces waste volume by 90%<sup>1</sup> and eliminates methane emissions.

The proposed project aims to contribute to *improved municipal waste management in Guwahati* and other cities of Assam which currently have significant issues with untreated MSW. The impact of deploying effective waste management technologies such as incineration proposed under the project will catalyze MSW management investments that treat larger volumes of municipal waste in a safe and environmentally friendly manner.

Envisaged benefits of the project include; *potential production of 4.2 MWs/day<sup>3</sup> of electricity from Solid Waste from Guwahati, potential Compost production 50 Tonnes/day<sup>3</sup>*

Key interventions/activities that could be taken up though external funding include:-

- Identification and Construction of sanitary landfill site
- Construction of Waste to Energy Plant
- Construction of Compost Plant
- Procurement of equipment and manpower for MSW collection

Multi-lateral Donor agencies like **Asian Development Bank (ADB)** and **New Development Bank (NDB)** are funding/have already funded projects renewable energy projects. The prevalence of PPP mode in this sector is also under consideration with assistance from World Banks International Finance Corporation wing that looks after PPP projects , a few of which have been indicated in the table below.

**Below table gives an insight on similar initiatives undertaken in India and other parts of the world along with the funding arrangements for the initiatives:**

Sl. No.	Project Name	Project Description	Year	Funding
1	Dynagreen Waste to Energy Project, China <sup>4</sup> - ADB	Increased production of energy from technically efficient and environmentally sustainable waste-to-energy (WTE) power plants in small and medium sized cities in the PRC.	2015	Loan of US \$ 100 million funded by Asian Development Bank (ADB)
2	Municipal solid waste-to-energy plant at Narela-Bawana, New Delhi <sup>5</sup>	Spread over 100 acres, the Rs 458-crore plant is the country's biggest WTE plant and will cater to Civil Lines and the Rohini zone. The WTE plant, which has two boilers, is capable of incinerating over 2,000 tonnes of waste per day to generate 24MW energy, almost double the capacity of the existing two in the capital	2014	Public Private Partnership (PPP).
3	Waste to Power Plant, Nellore - Swacch Andhra Corporation <sup>6</sup>	The State government had planned to produce 63 MW power from the waste being generated in the State and had proposed plants at 9 districts for converting the waste to energy, under "Swacch Andhra Corporation"	2015	

Sources :1 - <https://www.adb.org/sites/default/files/project-document/75111/46930-01-prc-rrp.pdf>

2 - <http://iosrjournals.org/iosr-jhss/papers/Vol9-issue3/K0935560.pdf>

3 - Municipal Solid Waste Management and Energy recovery from it – A Case Study of Guwahati, Assam - Kuldeep Kaushik and Abhinav Bhattacharyya

4 - Dynagreen Waste to Energy Project, China - <https://www.adb.org/projects/46930-014/main>

5 - Municipal solid waste-to-energy plant at Narela- Bawana, New Delhi - <http://www.eai.in/360/news/pages/17899>

6 - Waste to Power Plant, Nellore, Swacch Andhra Corporation - <http://www.eai.in/360/news/pages/17688>

## Assam Multi Skill Development Centres

A significant proportion of the workforce employed in Assam comprises youth workers and there is a tremendous potential for their skill development. The core problem in Assam is low employability of the young workforce due to multiple reasons such as low skills, weak capacity, fragmented skills ecosystem, weak synergy with industries, etc. Moreover, this acute shortage of skilled workforce is experienced in those economic sectors which employ maximum workforce thereby compounding the problem manifold.

The total number of vocationally trained workers in Assam is around 1.79 Lakhs<sup>1</sup>. Also, around 40.23 lakh work forcedo not have access to Specialized Technical Skills. The Government of Assam (GoA) requires both financial and technical assistance to achieve the desired outcomes from skills development programs and achieve employment targets.

The envisaged benefits that could be realized from implementation of this project include:

- Flexible market driven short courses (of 1-3 years duration)
- Increased investment due to availability of skilled work force
- Availability of Local Skilled Trainers
- Also, the proposed project will complement the flagship scheme of Government of India, PMKVY by providing more capacity building and infrastructure support for the existing Industrial Training Institutes within the state.

Key interventions/activities that could be taken up through external funding include:

- Preparation of a comprehensive road map for skills development in Assam
- Establishment of World Class Advanced Technological Training Institutes to provide Technical Training along with incubation, blended learning and capacity building support with special focus on MSME cluster development
- Development of Quality Education Programme for ITI (**Level 7 National Skill Qualification Framework**)

Below table gives an insight on similar initiatives undertaken in India along with the funding arrangements for the initiatives.

Sl. No.	Project Name	Project Description	Year	Funding
1	Odisha Skill Development Project <sup>2</sup> - Asian Development Bank (ADB)	The project is increasing equitable access to market responsive skills development programs. The project will also improve the quality and relevance of skills development programs. A holistic approach to strengthening the skills ecosystem of the state.	2017	Loan of US\$ 156 million funded by ADB
2	Madhya Pradesh Skills Development Project <sup>3</sup> - Asian Development Bank (ADB)	The proposed project will reinforce GOMP's efforts to modernize and reform the state's technical and vocational education and training (TVET) system so that its workforce can be equipped with the skills required by the growing secondary and tertiary sectors.	2017	Special Fund of US\$ 225,000 funded by ADB
3	Supporting Skill Development in Himachal Pradesh <sup>4</sup> - Asian Development Bank (ADB)	The project aims at developing a strategy for reforming and rationalizing of TVET programs being run by different departments of Government of Himachal Pradesh; reforming employment exchanges into centers for career counseling through stakeholder consultation	2017	Loan of US\$ 80 million funded by ADB

Source :

1 - NSDC Skill Gap Study of North East – Assam [www.nsdcindia.org/sites/default/files/files/assam-sg.pdf](http://www.nsdcindia.org/sites/default/files/files/assam-sg.pdf)

2 - Odisha Skill Development Project – <https://www.adb.org/projects/46462-003/main#project-pds>

3 - Madhya Pradesh Skills Development Project – <https://www.adb.org/projects/48493-001/main#project-pds>

4 - Supporting Skill Development in Himachal Pradesh – <https://www.adb.org/projects/49108-002/main#project-pds>

## Sustainable Tourism Development Project

Assam has a lot of tourism potential which goes away untapped. Various flavors of tourism in form of Wildlife, Spiritual, Adventure, Mining and Wellbeing can be promoted in Assam. The state **now attracts 5.52 million<sup>1</sup>** tourists all over the world. There are 6 (six) airports including one international airport which can be leveraged to provide impetus to growing tourist footfall in the state.

Currently there are many challenges which hinder Assam's potential to promote itself as a world class tourism destination including inadequate infrastructure, lack of cleanliness and hygiene issues, dearth of hospitality trainings, etc. A focused effort to address these challenges is the need of the hour which will lead Assam to achieve its true growth potential in the tourism sector thereby making a significant impact on the state's GDP.

Government of Assam's mandate **to double the current tourism footfall by next two years** will require substantial investment in various areas like *institutional strengthening, asset rehabilitation, infrastructure and services*. In this regard the Tourism Department can leverage External Aid in form of grants/loans as a possible source of funds.

### Key areas of intervention that can be addressed by external funding:

- Development of a one stop online tourism portal for public awareness, reservations and registrations
- Preservation of the rich cultural heritage by Monument and Heritage conservation
- Sustenance of rich culture heritage through selling of traditional goods manufactured by MSME
- Increased investment in Hospitality Management and Infrastructure Development
- Community collaboration and participation resulting in preservation of natural Flora and Fauna
- Destination Development of Restrooms, Road, Hotels, etc. along with Circuits Development like (Kamakhya, Kaziranga, Upper Assam) to prolong stay of tourists thereby increased spending

Multi-lateral Donor agencies like **Asian Development Bank, World Bank, JICA**, etc. are funding/have already funded projects for development of Tourism Infrastructure in India, a few of which have been indicated in the table below.

### **Below table gives an insight on similar initiatives undertaken in India in recent past:**

Sl. No.	Project Name	Project Description	Year	Funding
1	India: Infrastructure Development Investment Program for Tourism – Asian Development Bank <sup>2</sup>	This objective of this project is to make rural tourist destinations more visitor friendly with improved water facilities, upgraded restrooms and sanitation systems, new signs and street lights, and more efficient garbage disposal methods. The program is helping state governments (Himachal Pradesh, Punjab, Uttarakhand and Tamil Nadu) build the basic infrastructure for tourism while encouraging private companies to provide services and facilities.	2017	Loan of US\$ 210.77 million in 3 (three) tranches funded by Asian Development Bank (ADB)
2	Uttar Pradesh Pro-poor Tourism Development Project – World Bank <sup>3</sup>	The project aims to improve living standards and increase income opportunities for the poor population through enhanced tourism development living in/and close to the primary tourism attractions like the Buddhist Circuit, Braj region and Agra. The Project will encompass key thematic areas like social development, participation & civic engagement, MSME support along with preservation of cultural heritage.	2015	Loan of US\$ 105 million through IBRD and IDA funded by World Bank

#### Sources :

- 1- Indian Brand Equity Forum Report on Assam January 2017 - <http://www.ibef.org/states/assam.aspx>
- 2 -Infrastructure Development Investment Program for Tourism - <https://www.adb.org/projects/40648-023/main#project-pds>
- 3 -Uttar Pradesh Pro-poor Tourism Development Project - <http://projects.worldbank.org/P146936/?lang=en&tab=overview>

## Feeder Bus Rapid Transit System Project

Traffic congestion is a major problem for the city of Guwahati which is growing in leaps and bounds. One of the mechanisms to address the problem would be the introduction of Feeder Bus Rapid Transit System (BRTS). It is expected that by the year 2030 the peak hour vehicle trips would **increase to 1,26,000 which would be 2.7 time of the current volume<sup>1</sup>**, leading to further congestion and increase in pollution. In the **last seven (7) years** the vehicle growth has **increased by 2.5 times<sup>2</sup>** of which 16% has been through truck traffic. At this rate it is expected that that transit speed would go down to 8 kmph from current speed of 15 kmph.

### Indicative routes for which the Feeder Bus Rapid Transit System project may be undertaken:

1. Jalukbari via Lakhra to Nepali Mandir which may be extended from Lakhra to Khanapara
2. Lakhra to Airport via Pamohi along new VIP road

### Key areas of intervention that can be addressed by external funding:

1. Reduction in other vehicular trips and increase in transit share of public transport system
2. **Increased Safety** due to decrease in traffic thus contributing to **decrease in fatality index**
3. **Reduction in pollution** through improvement in quality of air
4. Efficient, affordable & environmental friendly mobility

The project in discussion is also in-line with the Government of Assam **Vision of 2030** goal of **Sustainable Cities & Communities** and would also create a **multi-sectoral impact** benefitting sectors like transport & environment. **Donor agencies** such as **World Bank and Asian Development Bank**, have funded similar projects elsewhere in India, a few of which have been indicated in table below:

Sl. No.	Project Name	Project Description	Year	Funding
1	Urban Transport Project <sup>3</sup> (Hubli-Dharwad) – World Bank	These investments are expected to improve and promote environmentally sustainable urban transport infrastructure and services in the city.	2012	Loan of US\$ 105 million funded by World Bank (WB)
2	Urban Transport Project through Bus Rapid Transit (BRT) System in Maharashtra <sup>4</sup> – Asian Development Bank	PimpriChinchwad Municipal Corporation (PCMC) is developing a network of 130km-long bus-based mass transit road corridors across PimpriChinchwad City based on its comprehensive mobility plan. Each of these corridors is composed of a pair of dedicated Bus Rapid Transit System (BRTS) lanes and associated networks of sidewalks and bike lanes,	2010	Loan of US\$ 107 million funded by Asian Development Bank (ADB)

#### Sources:

- 1 - <http://www.kmciutindia.org/admin/upload/Guwahati%20Final%20Report.pdf>
- 2 - <http://projects.worldbank.org/P110371/sustainable-urban-transport-project?lang=en&tab=overview>
- 3 - <http://documents.worldbank.org/curated/en/427411468041444277/Main-report>
- 4 - <https://www.adb.org/sites/default/files/project-document/63670/43910-01-ind-rp.pdf>

## Technical Assistance for PWRD

Public Works Road, Department, Assam (PWRD) has a PMU to manage externally aided projects but, there are challenges in fund utilization (less than 50%), availability of Detailed Project Report (DPR) preparation specialists and maintenance of existing systems (capacity building). Further due to inadequate contracting capacity of the vendors present in the State, progress of projects being undertaken by the Department is being hampered.

PWRD is currently implementing large projects worth more than US\$ 500 million and this project will help *develop institutional capacity within PWRD, shall assist in real time monitoring of road assets, create capacity on the supply side, introduce modern work procedure, processes and construction/maintenance practices and improve utilization of funds through ICT based monitoring.*

Key areas of intervention that can be addressed by external funding:

- Transformation study and adoption of improved Project Preparation, Design, Review & Monitoring processes
- Masterplan for the road infrastructure in the State
- Development of a real-time Road Asset Management System
- Setting up an Equipment Bank from which the contractors can lease equipment for their implementation requirements
- Setting up of Construction Academy in the lines of National Construction Academy in Andhra Pradesh
- ICT based monitoring of fund utilization

Multi-lateral Donor agencies like **Asian Development Bank, World Bank and DFID** are funding/have already funded projects for Technical Assistance initiatives in India, a few of which have been indicated in the table below.

**Below table gives an insight on similar initiatives undertaken in India in recent past:**

Sl. No.	Project Name	Project Description	Year	Funding
1	NHAI Technical Assistance Project <sup>1</sup> – World Bank	The objective of this project is to assist National Highways Authority of India (NHAI) to adopt the appropriate practices that would enhance its program management and operational efficiency. The first component of the project is program level technical support which includes preparation of a project preparation manual. The second component of the project is institutional strengthening and capacity building. And the third component of the project is technology and innovation which recommendations on Nation-wide tolling strategy .	2010	Loan of US\$ 45million through IBRDfunded by World Bank (WB)
2	Technical Assistance- Institutional Strengthening of the Chhattisgarh Public Works Department <sup>2</sup> – Asian Development Bank and DFID	The Project aims to : (i) promote development of six main road corridors (ii) remove capacity bottlenecks from the network to better connect rural areas (iii) support socio-economic development by improving road access and connectivity among growth centers	2012	Grant jointly funded US\$ 1million by DFID and ADB (ordinary capital resources)

Sources :

1 - NHAI Technical Assistance Project <http://projects.worldbank.org/P121515/nhai-technical-assistance-project?lang=en&tab=overview>

2 - Institutional Strengthening of the Chhattisgarh Public Works Department <https://www.adb.org/projects/44427-013/main#project-pds>

## Integrated Urban Management System through City Command Center

Urban infrastructural capacities in Guwahati has failed to keep up pace with its rapid urbanization resulting in key challenges such as traffic congestion, flash floods and alarming levels of pollution of all forms. WHO reports that Guwahati has one of the highest Black Carbon pollution levels in the world; moreover, 1,074 persons have lost their lives in road accidents in Guwahati since 2010<sup>1</sup>. Therefore there is an urgent need for an urban and traffic management system for the city. This could be in the form of an ICT based integrated control setup for an effective and efficient city and traffic management system.

The proposed project aims to establish *a citywide command system integrating data from all agencies concerned with administration of Guwahati City. This will be an integrated system which will house data-collection systems like sensors, video cameras and GPS devices under one roof.* Incidents like car accidents, power failures and other issues like flash floods resulting from heavy rainfall can be monitored and reported on a near real-time basis.

Key benefits that could be realized from a city command centre include:

- Integration with Weather Prediction Systems to monitor rainfall and issue flood alerts
- Effective Monitoring of traffic and identification of problem areas using hundreds of cameras located throughout the city
- Near Real-time update of traffic conditions using data from multiple traffic detectors
- Effective coordination with the law enforcement agencies and emergency response crews to resolve incidents
- Effective management of the activities of incident response teams to move disabled vehicles, and to keep traffic moving safely
- Effective monitoring of solid waste generation and improved co-ordination of the response teams for effective management of solid waste

Multi-lateral Donor agencies like **Asian Development Bank, World Bank, Japan International Cooperation Agency (JICA)**, etc. are funding/have already funded projects for integrated urban development and urban transport improvement, a few of which have been indicated in the table below.

Sl. No	Project Name	Project Description	Year	Funding
1	Gansu Baiyin Integrated Urban Development Project, China <sup>2</sup> - Asian Development Bank	The project aims to upgrade key urban infrastructure and services to: (i) provide efficient water service for drinking and industrial processing; (ii) provide wastewater treatment to improve water management, environment, and locals' quality of life; (iii) enhance road safety and traffic management in central urban district; and (iv) enhance environmental management for industrial transformation	2014	US\$ 100 million funded by Asian Development Bank (ADB).
2	Xinjiang Yining Urban Transport Improvement Project, China <sup>3</sup> - World Bank	The project aims to improve transport mobility in the city of Yining and to provide transport accessibility in the selected new city areas in a safe, clean and efficient manner.	2014	US\$ 100 million funded by World Bank (WB).

### Sources

1 - <http://timesofindia.indiatimes.com/city/guwahati/Road-accidents-on-the-rise-in-Guwahati/articleshow/33875319.cms>

2 - Gansu Baiyin Integrated Urban Development Project - <https://www.adb.org/printpdf/projects/46062-002/main>

3 - Xinjiang Yining Urban Transport Improvement Project - <http://www.worldbank.org/projects/P126454/xinjiang-yining-urban-transport-improvement-project?lang=en>

## **Sustainable Residential Infrastructure Project**

Guwahati is the gateway to North-east India and is one of the fastest growing cities in India. It is estimated that the metropolitan area of Guwahati will house approximately **28lakh residents by 2025**<sup>1</sup>. As growing population demands more buildings and residential areas, there could be adverse effects on the environment as a result of increased construction activities. Conventional buildings incur more cost on their construction and also have major environmental impact such as depletion of resources such as ground cover, forest, water and energy. Existing urban buildings are one of the major pollutants that affect air quality and contribute to climate change<sup>2</sup>.

The above challenges press upon the need of creating sustainable/green infrastructure. The proposed project aims at developing sustainable residential infrastructure within Guwahati.

Key benefits that could be realized through this project include:

1. Considerable saving of water over traditional housing through water recycling and other methods
2. Preservation of green cover of the city and decrease in pollutants from urban infrastructure
3. Improved sanitation, hygiene and less stress on centralized storm-water management systems

The creation of sustainable residential infrastructure in in-line with the Government of Assam **Vision 2030** goal of **Sustainable Cities and Communities**.

The intervention(s) in this sector would create a **Multi sectoral impact**. Donor agencies such as **Asian Development Bank**, have funded similar projects elsewhere in India, a few of which have been indicated in table below:

<b>Sl. No.</b>	<b>Project Name</b>	<b>Project Description</b>	<b>Year</b>	<b>Funding</b>
1	Seven year loan to PNB Housing Finance Limited to fund affordable housing in India <sup>2</sup> - Asian Development Bank	The project envisages to support purchases of much needed affordable housing units across the country	2016	Loan of US\$ 150 million to PNB Housing Finance Limited by Asian Development Bank (ADB)

Sources:

- 1 - Population Data <https://online.assam.gov.in/web/guest/capitalofassam>, <https://online.assam.gov.in/web/guest/capitalofassam>
- 2 - <https://www.adb.org/news/adb-loan-pnb-housing-finance-boost-purchases-low-cost-homes>

## Public Transport Improvement Project

The existing public road transport system in Assam is in dire need of reforms in multiple areas since it has been plagued with various issues such as depleting & aging fleet, mounting operational losses for the state transport unit, stiff competition from private operators, etc. A combination of lack of reforms and minimal ICT intervention & automation in public road transportation has led to inadequate service provision coupled with reduced service reliability, effectiveness and efficiency.

The Government of Assam (GoA) also has also taken a major initiative for revamping the state public transport unit through substantial investment in key areas such as institutional strengthening, transport asset management and rationalisation, improved public road transport infrastructure and services. In this regard, the Transport Department can leverage External Aid in form of grants/loans as a possible source of funds.

Key intervention areas that can be addressed through external funding could include:

1. Strengthening and creation of road transport asset in form of fleet rationalisation and augmentation
2. Institutional strengthening of the public road transport unit through organizational restructuring & capacity building for improved service quality and operational efficiency
3. Developing modernized transit routes leading to better service availability
4. Upgradation of bus stops/stations leading to better infrastructure
5. Implementation of Intelligent Traffic Management and other ICT interventions ensuring safer travel, on-time service and service reliability

The proposed interventions are also in-line with the Government of Assam **Vision 2030** under the goal of **Industry, Innovation and Infrastructure**.

Donor Agencies such as **Japan International Cooperation Agency (JICA)** and **Asian Development Bank (ADB)** have been funding similar projects in India, a few of which have been highlighted below:

Sl. No.	Project Name	Project Description	Year	Funding
1	Delhi Mass Rapid Transport System Project <sup>1</sup> - Japan International Cooperation Agency(JICA)	Development of a mass rapid transit system in order to alleviate Delhi's traffic congestion as well as to reduce air pollution caused by exhaust fumes and emission of greenhouse gases through accelerating the modal shift from automobile to the metro system	2010	Loan of US\$ 1.8 billion in five (5) tranches funded by JICA
2	Sustainable Urban Transport Project <sup>2</sup> - World Bank	Promotion of environmentally sustainable urban transport in India and improvement in the usage of environment-friendly transport modes through demonstration projects in selected cities	2009	Loan of US\$ 105.23 million funded by World bank through IBRD

Sources:

1 - <https://www.jica.go.jp/india/english/activities/activity10.html>

2 - <http://projects.worldbank.org/P110371/sustainable-urban-transport-project?lang=en&tab=overview>