



INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT

FOR

PROPOSED LOAN IN THE AMOUNT OF US\$800 MILLION EQUIVALENT TO INDIA

FOR THE

AMARAVATI CAPITAL CITY DEVELOPMENT PROGRAM (P507508)

DRAFT ESSA for Feedback

October 23, 2024

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ABBREVIATIONS

ACC	Amaravati Capital City
ACCDP	Amaravati Capital City Development Program
ADB	Asian Development Bank
ADCL	Amaravati Development Corporation Limited
AGC	Amaravati Government Complex
AIS	All India Services
AP	Andhra Pradesh
APCRDA	Andhra Pradesh Capital Region Development Authority
APPCB	Andhra Pradesh Pollution Control Board
APWALTA	Andhra Pradesh Water, Land, and Trees Act
ASI	Archaeological Survey of India
ASIIDP	Amaravati Sustainable Infrastructure and Institutional Development Project
BC	Backward Caste
BOQ	Bill of Quantities
C&D	Construction and Demolition
CAO	Competent Authority Office
C-ESMP	Contractor Environmental and Social Management Plan
CPCB	Central Pollution Control Board
CTE	Consent to Establish
CTO	Consent to Operate
DLI	Disbursement-Linked Indicator
DLR	Disbursement-Linked Result
DMP	Detailed Master Plan
DPMS	Development Permissions Management System
DPR	Detailed Project Report
E&S	Environmental and Social
EC	Environmental Clearance
EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMRA	Environmental Management Regulatory Authority
ESMD	Environmental and Social Management Division
ESMF	Environmental and Social Management Framework
ESSA	Environmental and Social Systems Assessment
EWS	Economically Weaker Section
F&I	Formulation and Implementation
GBV	Gender-Based Violence
GIIP	Good International Industry Practices
GO	Government Order
GoAP	Government of Andhra Pradesh

GoI	Government of India
GRM	Grievance Redress Mechanism
GSWS	<i>Gram Sachivalayam and Ward Sachivalayam</i>
ICC	Internal Complaint Committee
ICT	Information and Communication Technology
iRAP	International Road Assessment Programme
IT	Information Technology
JAC	Joint Action Committee
KPI	Key Performance Indicator
LA	Land Acquisition
LARR	Land Acquisition, Rehabilitation, and Resettlement
LPOC	Land Pooling Ownership Certificate
LPS	Land Pooling Scheme
M&E	Monitoring and Evaluation
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MoEF&CC	Ministry of Environment, Forest, and Climate Change
MSIP	Management strategy and implementation plan
NABARD	National Bank for Agriculture and Rural Development
NGO	Nongovernmental Organization
NGT	National Green Tribunal
NOC	No Objection Certificate
NS	Negotiated Settlement
O&M	Operation and Maintenance
OBC	Other Backward Class
OHS	Occupational Health and Safety
OSC	One-Stop Center
PAP	Program Action Plan
PDO	Program Development Objective
PforR	Program for Results
PgMC	Program Management Consultant
PGRMS	Public Grievance Redress Management System
PIC	Public Information Center
PMC	Project Management Consultant
POT	Prevention of Transfer
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PUC	Pollution Under Control
R&R	Resettlement and Rehabilitation
RA	Results Area
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RTI	Right to Information

SC	Scheduled Caste
SEA	Sexual Exploitation and Abuse
SEIAA	State Environmental Impact Assessment Authority
SH	Sexual Harassment
SHG	Self-Help Group
SIA	Social Impact Assessment
SOP	Standard Operating Procedure
SPCB	State Pollution Control Board
ST	Scheduled Tribe
STP	Sewage Treatment Plant
SWM	Solid Waste Management
ULB	Urban Local Body
VIT	Vellore Institute of Technology
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

E1. Introduction

Background. Following the bifurcation of Andhra Pradesh (AP) in 2014, Amaravati was chosen as the new capital. It is located along the Krishna River and spans 217.23 km² (53,748 acres) across 24 villages (covering 29 habitations across 25 Gram Panchayats) in Guntur district. The Amaravati Capital City (ACC) Project, launched in 2014, pooled 34,389 acres through the voluntary Land Pooling Scheme (LPS), offering farmers 22–30 percent of developed land and other benefits. Between 2017 and 2019, major infrastructure projects were initiated, but development halted due to a change in government policy to make three capitals. Following the 2024 state elections, the new government has decided to revive the development of the capital at Amaravati.

The development of Amaravati Capital City is divided into two phases based on land availability and strategic investment needs. Phase 1 focuses on constructing public buildings, basic trunk infrastructure, and neighborhood infrastructure for Zones 1–7 and Zone 10. Phase 2 will cover the remaining trunk infrastructure and neighborhood services for other zones. This Environmental and Social Systems Assessment (ESSA) has been undertaken primarily for the proposed Phase-1 activities, parts of which will be supported by the operation, the Amaravati Capital City Development Program (ACCDP), financed by the World Bank and the Asian Development Bank (ADB).

World Bank's Earlier Engagement. The Government of India (GoI) had requested World Bank for the development of Amaravati in 2016 through the Amaravati Sustainable Infrastructure and Institutional Development Project (ASIIDP), but withdrew the request for financing in 2019 following the change in the then state government's priorities. As part of the preparation for the ASIIDP, APCRDA had prepared key safeguards documents, including the Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (RPF), Environmental Impact Assessments (EIAs), and Environmental Management Plans (EMPs) and Resettlement Action Plans (RAPs) for proposed interventions such as priority roads, building infrastructure and flood mitigation works. These documents were aligned with the World Bank's Operational Policies, were consulted upon and duly disclosed by Andhra Pradesh Capital Region Development Authority (APCRDA) and adopted by issuing Government Orders (GOs), and provide a base for current environmental and social (E&S) assessment.

Proposed PforR Program. The Government of Andhra Pradesh (GoAP) is developing the ACCDP for Phase 1 and has sought financing from the World Bank in accordance with the World Bank policy on Program-for-Results (PforR) Financing, and ADB Results-Based Lending (RBL) Policy. The Program Development Objective (PDO) is to support the initial institutional, socioeconomic, and infrastructural development of ACC. It aims to create an economically dynamic, inclusive, and sustainable city. With a budget of INR 15,000 crores (US\$1.8 billion), the Program focuses on activities aligned with the World Bank's PforR policy and ADB standards, supporting three interrelated results areas (RAs): RA1 - Strengthened governance and financing framework, RA2 - Inclusive socioeconomic growth for community development, and RA3: Sustainable infrastructure and resilient service delivery.

E2. Environmental and Social Effects

Environmental and social integration in Master Plan. The ACC Master Plan¹ seeks to integrate E&S aspects to create a balanced, sustainable, and inclusive city. It is aimed at balancing urbanization with sustainability, economic growth, and cultural preservation, ensuring a high quality of life for its citizens while protecting natural ecosystems. Key features include (a) protection of forests and water bodies through the preservation of 251.77 ha of forests and natural water bodies; (b) reliable drinking water supply from the Krishna River, with wastewater treated and reused for non-potable purposes, and rainwater harvesting; (c) dedication of 30 percent of the city to parks, ecological reserves, and water bodies to enhance livability and mitigate the urban heat island effect; (d) climate resilience and carbon

¹ Detailed Master Plan of Amaravati 2016-2036.

neutrality aimed through urban greenery, clean transportation fuels, and renewable energy such as rooftop solar; (e) zero waste goal through integrated waste management facilities; (f) green transport through electric buses and a comprehensive walking and cycling network; and (g) zoning and thematic clusters, organizing the city into residential, commercial, and industrial areas while promoting growth in sectors such as finance, health, and tourism.

The Master Plan is designed to create a socially responsible urban environment that integrates the needs of all stakeholders, including marginalized communities. Central to its vision is the land pooling scheme (LPS), which serves not just as a tool for land acquisition (LA) but as a core design principle embedded within the APCRDA Act of 2014.

The LPS scheme seeks to integrate elements of social inclusion to ensure that development benefits extend to local landowners and non-landowners/landless and laborers, and improving their economic well-being while also preserving their local and social ties. Elements such as the offer of developed urban plots in return for pooled land for landowners, pension for landless households, and livelihood support to both landowners and landless households have been incorporated into the LPS, making it a potential model for inclusive development of greenfield cities where social cohesion and economic empowerment are prioritized.

E&S benefits. The GoAP expects the development of ACC to drive economic growth, generate employment, and promote sustainable urban development. Key E&S benefits include (a) economic development of Amaravati that attracts significant private sector investments, particularly in information technology (IT), finance, education, and health care, with the potential of creating 1.5 million jobs by 2050 through public-private partnerships (PPPs) and land monetization strategies; (b) employment and social development by generating jobs and providing employment with skill development programs to help farmers, landless households, and street vendors transition to new livelihoods; and (c) integration of existing villages of the area into Amaravati's urban framework, while preserving their identities and providing modern services, including clean water supply, sewage treatment, and waste management systems.

Environmental effects. The environmental effects of the Program are primarily positive, especially in RAs 1 and 2, which focus on governance and community development and will help contribute to improved E&S outcomes. However, RA3, which includes large-scale infrastructure projects such as trunk infrastructure, flood mitigation, and neighborhood development, can present environmental challenges. The operational phase of the city will increase resource consumption and waste generation, which can have implications for sewage, stormwater management, pollution, and traffic congestion, the city's design includes systems for waste management, sewage treatment, efficient water supply, integrated and inclusive emergency preparedness and response (EPR) systems. These systems will require thorough environmental and social impact assessments, regular maintenance, training, drills, ongoing stakeholder engagement (including grievance redress management and awareness raising) to ensure their long-term effectiveness. Other potential negative impacts of construction activities include soil erosion, pollution of ecosystems such as natural water bodies, air quality deterioration from dust and emissions, increased carbon emissions, poor management of construction waste, traffic congestion, construction-related nuisances, and occupational health and safety (OHS) risks for both workers and local communities.

In 2018, the APCRDA commissioned an institution to conduct an ex-post audit of the Environmental Management Plan (EMP) implementation for the construction of 10 sub-arterial roads in Amaravati, which began in 2017. The audit aimed to evaluate the effectiveness of the EMP measures, assess their compliance with World Bank policies and national regulations, identify gaps in implementation, and provide recommendations to improve future development phases. The findings from the audit report of previous construction works have been considered to develop mitigation measures, ensure compliance, and minimize adverse impacts. These measures include controlling soil erosion through stormwater drainage systems, preserving topsoil, and planting native species to enhance biodiversity.

Flood management will involve regular maintenance of stormwater systems and proper disposal of spoils, which will be undertaken by applying Good International Industry Practices (GIIP). For waste management, contractors will segregate waste at the source, use existing waste management facilities in nearby cities, treat wastewater, and secure fuel and chemical storage areas to prevent contamination. Dust and air pollution will be mitigated through regular water sprinkling and emission monitoring. Occupational and community health and safety risks will be addressed with site-specific OHS plans, the use of personal protective equipment (PPE), medical facilities, and traffic management to reduce congestion and prevent accidents. In the existing villages that will be integrated into the capital city area, timely connections to sewage and waste management services will be prioritized, with controls on unplanned growth through building approvals and ongoing infrastructure maintenance.

Social effects. As of September 2024, 34,389.79 acres (90.6 percent) have been pooled through the LPS for the entire Capital City in exchange for serviced residential and commercial plots and other safety net benefits from 28,740 farmers. Most of this land collation occurred between 2016 and 2019 and now only 3,551.79 acres remains to be pooled for the entire city. For Phase 1 activities which will form a part of the Bank-financed Program, around 1 percent (224.45 acres) of the 20,420 acres required is yet to be pooled or acquired.

The key social risks emerge from (a) the need for land procurement/acquisition and resettlement necessary for Phase 1 infrastructure, including potential legacy issues associated with the LPS and the physical and economic displacement of non-landowning users (including disadvantaged and vulnerable) and workers; (b) disruptions due to construction activities, including increased traffic and construction nuisances in those areas; (c) OHS risks to workers and local communities; (d) poor labor standards enforcement; (e) labor influx requiring accommodation; (f) risks of sexual exploitation and abuse (SEA) and sexual harassment (SH) and gender-based violence (GBV); (g) lack of community participation in infrastructure design and construction; (h) weak voice and accountability mechanisms; and (i) unplanned growth in existing villages to accommodate the transient population. All farmers participating in the LPS receive developed urban plots, amounting to 20–30 percent of their original land, for residential or commercial use. They also receive livelihood support such as an annuity, which increases annually by 10 percent; free education; healthcare; and Agriculture loan waivers. The landowners who opted to participate in the LPS have already seen benefits in terms of substantial increases in the market value of the plots they received in the capital area; according to APCRDA and farmers met during stakeholder consultations land price in the area has been estimated to have already increased 10-15 times (by September 2024) compared to the rate before land pooling and is expected to go up further with infrastructure development in the city. According to estimates by the Real Estate Developers' Association of India (CREDAI), land price in the area appreciated five times between 2015 -2019 and hovered around INR40 k to INR50 k per square yard on the main roads of ACC in June 2024.

The revival of development plans for the ACC has also seen a revival of interest from some remaining farmers in joining the LPS. Some 151 farmers presented a total of 140 acres of land over August - September 2024. APCRDA has offered additional incentives to promote further land pooling. For landowners not joining the LPS, land is being acquired under the Land Acquisition, Rehabilitation, and Resettlement (LARR) Act 2013. Some of the trunk infrastructure packages under Phase I, such as flood mitigation activities, may affect private lands within village boundaries that are not eligible for LPS. The negotiated settlement (NS) policy of the APCRDA will be followed for these areas. This may also affect some houses and community structures, and the APCRDA has already initiated the process of identifying and verifying the resettlement requirements.

At the time of land pooling in 2015-16, around 21,374 families were identified as landless laborers working in the Capital City area. They were eligible to receive a combination of livelihood restoration benefits, including a pension of INR 2,500 per month per family for 10 years (increased to INR 5,000 per month as of February 2024, with the period extended to 15 years). And based on the six-step

validation² process used as common eligibility for all categories of social security pensions in Andhra Pradesh, around 17,176 landless families receive a monthly pension from the APCRDA, of which about 5,504 landless families receive both the social security pension of INR 4,000 per month as per GoAP norms and the APCRDA pension. Also, of the 7,876 families that were identified as houseless in 2015, 5,024 have received the government-built Economic Weaker Section (EWS) housing units.

Amaravati's development has also affected the livelihoods of agricultural laborers and landless families, many of whom transitioned to other occupations. About 2,600 locals found employment in universities and government offices established in Amaravati, while street-vending created new jobs for around 3,300 individuals. About 25,319 women in 2,427 self-help groups (SHGs) have accessed skill training and collectively secured or received over INR 100 crores per annum in funding or credit through links with the National Bank for Agriculture and Rural Development (NABARD) and other banks³. The APCRDA is also actively working with SHGs, Mahila Police, and nongovernmental organizations (NGOs) to monitor labor camps for GBV risks, ensure that complaint mechanisms are in place, and sensitize laborers.

World Bank Inspection Panel Cases. In the context of the proposed ACCDP PforR program, it is important to take note of and draw lessons from the World Bank's previous engagement. During the preparation of the ASIIDP in 2016-17, the World Bank's Inspection Panel received two Requests for Investigation from complainants regarding the impacts of the LPS, on their livelihoods, environment and food security, and claiming inadequate consultation as a result of the Bank's non-compliance with its policies in the preparation of the project at that time.

In response, the Panel conducted a review of these Requests, visiting India in September 2017, and engaging with various stakeholders, including community members, landowners, government officials, and civil society representatives, and recommended an investigation. This investigation, however, was deferred twice following World Bank Management's request for time to address the concerns raised through several impact mitigation and management actions. These actions included an independent audit of the land assembly arrangements; the inclusion of all 21,374 landless laborer households in the area as project-affected; targeted support for the most vulnerable; and measures to enhance public participation and voice through the formation of a Citizens' Advisory Committee and stronger grievance redress mechanisms.

However, in March 2019, the Panel, while acknowledging the positive steps taken by Management to address issues of concern, recommended still going ahead with an investigation due to remaining concerns about the Bank's due diligence and Project design, especially regarding livelihood restoration requirements, and the considerable risks of a rural-to-urban transition at such a large scale. Subsequently, as the project was withdrawn at the Government of India's request, the Panel updated its recommendation not to investigate as the project was no longer under consideration by the Bank; this recommendation was approved by the World Bank Board in July 2019. The design of the current engagement takes into account the issues and concerns raised by the Requests about possible impacts, and factors those in mitigation and management measures.

E3. Assessment of Borrower's E&S Capacity and Systems

Institutional systems. The Program is managed by the APCRDA and supported by the Amaravati Development Corporation Limited (ADCL) for infrastructure works. The APCRDA will be further supported by a Program Management Consultant (PgMC) for operational support and a Project Management Consultant (PMC) for each of the subprojects/packages. The Landscape and Environment Wing of the APCRDA monitors environmental compliance with a team led by an

² That includes land ownership, asset ownership, government employment/ pension, income tax payee, size of house in municipal area, and monthly electricity consumption

³ APCRDA White Paper September 2024

Additional Director and comprising eight environmental staff. There is one existing environmental staff, and recruitment is ongoing to fill two additional positions. This unit's responsibilities include securing environmental clearances (ECs), integrating norms into city by-laws and permitting procedures, green development, and overseeing flood management and waste treatment. For land acquisition and land pooling, the APCRDA has a Land Unit headed by a Special Grade Deputy Collector and supported by two land and resettlement officers along with 11 Competent Authority Offices (CAOs) at the village level. The APCRDA also has a Social Development Unit headed by a Group Director to oversee social development and gender-related aspects. The assessment identifies the gaps and the need for further strengthening and recommends establishing a dedicated Environmental and Social Management Division (ESMD) or unit within the APCRDA which also includes strengthening institutional capacity for grievance redressal. The APCRDA is in the process of strengthening its capacities for public outreach by setting up a communication unit which will be supported by PgMC as well as a professional communications agency to support broader outreach with all stakeholder groups including the farmers and landless households in the capital city area.

Regulatory systems. The legal framework for E&S systems in Amaravati is adequate, governed by the APCRDA Act, 2014, which regulates the city's planning and development. Key environmental regulations, such as the Environmental Impact Assessment (EIA) Notification 2006, require projects to obtain EC. As a Category B1 project, Amaravati mandates both an EIA and an EMP, with the EC secured in 2015 and valid until 2026, with potential extensions. The social framework includes the LARR Act 2013 and the LPS. Land assembly is carried out through three methods—LPS, NSs, and LA—and aims to minimize resettlement. Consultations have led to adjustments in the LPS, such as differentiated compensation for various land types and provisions for non-titled occupants, ensuring social inclusion, and other welfare measures. The implementation of these aspects and its impacts on the farmer groups and landless households will be further informed by a study to plan necessary actions.

Alignment with World Bank Core Principles. The proposed program and the government systems are broadly aligned with all the Core Principles. Some gaps have been identified and measures have been recommended as program actions to bridge them.

- **Core Principle 1: Program E&S Management System.** The E&S management system for the Program complies with national and state regulations, such as the Environmental Protection Act (1986) and EIA Notification (2006). However, gaps in implementing environmental risk management were identified, including inconsistently applied EMPs and Bills of Quantities (BOQs). To address these issues, stronger integration of EMPs (to be updated by using Standard Operating Procedures -SOPs) into bidding documents, site-specific mitigation strategies, and better oversight are needed. Future actions should focus on developing SOPs to address gaps in the EMPs, including budgetary provisions in procurement and ensuring regular reporting to align with Core Principle 1.
- **Core Principle 2: Natural Habitat and Physical and Cultural Resources.** The Program aligns well with Core Principle 2 on protecting natural habitats and physical and cultural resources through measures such as buffer zones and a no-construction zone around the forests and the Undavalli Rock Caves. There will also be no construction or development on the active floodplains of the Krishna River, in the area between the existing embankment and the river. In addition, as noted in the Program Appraisal Document (PAD), the Program will not finance any activities involving significant conversion or degradation of critical habitats or important cultural heritage sites. The Amaravati Master Plan designates 30 percent of land for green and blue spaces to enhance ecosystem services through afforestation, ecological and water quality monitoring initiatives. However, enhancing ongoing monitoring, coordination with regulatory agencies, and adaptive management are essential to mitigate any potential risks and ensure long-term sustainability.

- **Core Principle 3: Public and Worker Safety.** The Program aligns with Core Principle 3 by incorporating OHS plans, ensuring contractors provide PPE, conduct safety inspections, and follow labor standards. However, gaps in EMPs regarding OHS risks, GBV, and hazardous materials management require addressing through updated SOPs. Better coordination with licensed waste management vendors and training on handling hazardous chemicals are also needed. The APCRDA is committed to addressing these gaps through detailed OHS risk assessment, stronger safety measures, updated EMPs, developing key performance indicators (KPI) aligned with GIIP, enhanced worker training, monitoring and reporting mechanism, including periodic audits and follow up of corrective measures, if any. These improvements will ensure public and worker safety and minimize environmental and labor-related risks and necessary provisions will be integrated into the bidding documents.
- **Core Principle 4: Land Acquisition and Resettlement.** The Program largely aligns with Core Principle 4 as having necessary policies and systems in place for LA and resettlement. The ACC development primarily used the LPS to acquire land, offering farmers returnable urban plots while preserving their social ties and providing livelihood support. As of September 2024, out of 20,420 acres, 224.45 acres are yet to be procured under Phase 1. Some LA and resettlement are needed for infrastructure in village habitation areas where LPS does not apply and will be done as per the NS Policy notified in 2018. The Right to Fair Compensation and Transparency in Land Acquisition Act 2013, governs any necessary acquisition. The RPF aligns with World Bank policies, but institutional mechanisms and resettlement processes need updates and strengthening.
- **Core Principle 5: Rights and Interests of Indigenous People.** The Program aligns with Core Principle 5, as it addresses the needs of the landless and vulnerable population, including those from Scheduled Caste (SC) and Scheduled Tribe (ST) communities and women. There are no primitive tribal groups (PTG) in the ACC area. The ACC area includes 31 percent SC and 4.6 percent ST populations, primarily from the Yerukulas, Yenadi, and Nayaks/Lambadis tribes. These groups are often landless, with occupations and livelihoods similar to those of SCs and other poor households in these villages. They, among others, have been supported by the APCRDA through targeted initiatives for vulnerable households, including skill training, job opportunities, and social security measures. In 2018, the APCRDA constructed 5,024 houses for 7,876 identified families lacking proper housing, with additional housing planned. Despite these efforts, there is a need for updated socioeconomic assessments to better address the changing livelihood patterns of SC, ST, and vulnerable populations since 2015–18, which is integrated into the Program actions.
- **Core Principle 6: Social Conflict.** The Program aligns with Core Principle 6, as the Program interventions are designed to set up city institutions and service infrastructure that is inclusive and enhances social cohesion in the capital city area. While recent consultations indicate broad stakeholder support for the development of the ACC, there have been conflicts of opinion in the past between groups of differing political or social affiliation who were either supportive of or opposed to the program. APCRDA is cognizant of the need to ensure social cohesion and inclusion for the speedy and sustainable realization of the vision of Amaravati as a People's Capital. It is committed to maintaining several two-way channels of communication with all stakeholders, as well as setting up platforms for voice and participation such as the proposed Citizens' Committee. It maintains village-level offices in 11 villages for direct interaction with local stakeholders and addressing questions, concerns and grievances. Going forward, APCRDA further aims to strengthen the Grievance Redress Mechanism (GRM) system with feedback and audit function and setting up clear accountability for resolution and

initiate regular communication with all stakeholder groups including farmers and landless households, and other disadvantaged and/or vulnerable communities.

- **Grievance redress management.** APCRDA has an effective and robust GRM in place. This includes the GoAP Public Grievance Redress Management System (PGRMS), APCRDA dedicated online system, and a mechanism to register and resolve grievances at CAOs. Grievances received through these channels are redirected to the APCRDA portal for feedback and tracking and redirected to appropriate departments for resolution. Once the grievance is redressed, it is closed with a proper digital signature of the officer closing it so that the process is transparent and the authorities are held accountable. The Additional Commissioner of APCRDA also convenes public meetings every Friday at the village level as an open communication channel with the citizens. Finally, citizens who would like to meet with the APCRDA in person and/or are not able to use any of the abovementioned channels can request for meeting with the APCRDA officials at various levels to communicate their grievances verbally or in writing, attend village-level camps held by the Additional Commissioner, and/or directly go to the APCRDA office. The APCRDA further plans to strengthen the GRM system by instituting a grievance audit and feedback mechanism.

E4. Stakeholder Consultations

Since 2015, the APCRDA has undertaken numerous consultations with each of the stakeholder groups and many of the policies, including LPS, ESMF, RPF, and Resettlement Action Plans (RAPs), have been informed by those consultations before being notified by the GoAP. As part of the ESSA process, apart from consultations with the APCRDA and ADCL officials, stakeholder consultations conducted with farmers, landless laborers, SHG women members, and community representatives from Venkatapalem, Lingayapalem, Mandadam, Thullur, Undavalli, Penumaka, and Nidamaruru during August, September and October 2024. Consultations were also held with Competent Authority Officers, EWS housing beneficiaries, farmer associations, civil society members, and resettled landless households, alongside stakeholders such as university officials, village secretariat staff, and local government officers.

Based on feedback during these consultations, the Bank's current assessment is that there is support for the ACC amongst local farmers and landless households. Farmers who joined the LPS have reported satisfaction with increased land values, the developed plots they have received, and annual annuities which, for some farmers, exceed their previous farming income. They also expressed satisfaction with the support for free education and healthcare. Some farmers used the benefits to support educational and livelihood opportunities for their families. Some of the landless households also reported satisfaction with social security pensions, and increased livelihood opportunities in the ACC area with the functioning of GoAP Secretariat, High Court, and other academic institutions. They also expressed satisfaction with the free education and healthcare.

The draft ESSA report will be disclosed on the APCRDA and World Bank's websites before Appraisal to facilitate discussion and gather feedback. Based on this input, including from the multi-stakeholder consultation workshop, the draft ESSA report will be revised, and the final ESSA report will be re-disclosed on the World Bank's external website before negotiations. In addition, the APCRDA is putting into place a multi-layered approach to engage proactively with stakeholders on an ongoing basis.

E5. Recommendations and Actions

Exclusion of high-risk activities. The Program will exclude high-risk activities that conflict with the World Bank's PforR financing policy, specifically those with significant adverse environmental or social impacts, including (a) packages with significant LA and physical displacement, (b) activities involving significant conversion or degradation of critical habitats or important cultural heritage sites, (c) activities involving large-scale changes in natural resources and designated forest areas and/or key biodiversity areas (during implementation, it will be necessary to ensure that all such activities remain

excluded from the World Bank-financed program), and (d) civil works commencing in the portions where the LPS/LA is incomplete.

Recommendations to be integrated into the Program's disbursement-linked indicators (DLIs) are as shown in Table 1.

Table 1. Recommendations Integrated into the DLIs

S.No.	Recommendation	Responsibility	Timeline	Means of Verification
1	Establishment of an Environmental and Social Management Unit/Division (ESMU/D) within APCRDA	APCRDA	Before December 31, 20 25)	Aligned with DLI 1/ DLR 1.2
2	Environmental and Social Monitoring	APCRDA	Continuous	Aligned with DLI 1/ DLR 1.3
3	PgMC and PMC to have adequate qualified E&S staff	APCDRA and ADCL	Before December 31, 2025	Aligned with DLI 1/ DLR 1.1
4	Skill development and employment from ACC villages for women and youth in construction and urban services jobs	APCDRA and ADCL	Continuous	Aligned with DLI 4
5	Strengthening community participation with gender focus through reviving Citizen Advisory Committee, Village Level Committees	APCRDA	Before December 31, 2025	Aligned with DLI 6

Measures for inclusion in the Program Action Plan (PAP). The recommendations for the PAP are provided in Table 2.

Table 2. PAP Recommendations

Sl.No.	Recommendations	Responsibility	Timeline	Means of Verification
1	Prepare RAPs for Phase I packages as per GoAPs RPF and LARR 2013 Act.	APCRDA	Before the contract award	RAP prepared and disclosed
2	Prepare SOPs to strengthen EMPs	APCRDA and ADCL	Before June 30, 2025	SOPs prepared and adopted for implementation including addressing risks like waste management, OHS, labor influx, and GBV/SEA

Sl.No.	Recommendations	Responsibility	Timeline	Means of Verification
3	Strengthen OHS/E&S clauses in the bidding documents (by newly developed SOPs and updated EMPs and other GIIPs)	APCRDA and ADCL	Before Issuance of Bidding Document	Bidding documents to be standardized and available on APCRDA website with OHS/E&S clauses, and contractor performance indicators including E&S staffing, bill of quantities for EMP implementation, and review, monitoring mechanisms.
4	Create a socio-economic baseline covering LPS farmers and landless households for assessing current skills and livelihood profiles for preparing and implementing livelihood action plans and this to be monitored through annual sample studies.	APCRDA	Baseline survey and livelihood action plan by June 30, 2025 and thereafter monitoring study reports every year by December 31 starting 2026.	Socio-economic baseline and annual monitoring reports shared
5	Implement LPS Benefits as per the APCRDA Act and Rules	APCRDA	Continuous	Biannual reports
6	Annual orientation programs for E&S teams to improve capacities on E&S aspects	APCRDA	Continuous	Programs delivered and reports shared
7	Resolve grievances related to assigned land farmers.	APCRDA	Continuous	Share updates through bi annual reports
8	Implement APCRDA's policy to upgrade basic infrastructure in existing villages on a priority basis	APCRDA	December 31, 2027	Village infrastructure upgraded as planned
9	Fill in Social Facilitators positions for all villages	APCRDA	June 30, 2025	Recruited and reported

1 INTRODUCTION

1.1 Background and Context

1. The reorganization of the earlier state of Andhra Pradesh⁴ into Andhra Pradesh (AP) and Telangana, where the latter retained the state's original capital, Hyderabad, necessitated the development of a new capital for AP. Shortly after, the government of the new AP State announced its decision to build Amaravati as the new Capital City. Amaravati is located along the Krishna River, covering 217.23 km² (53,748 acres) across 25 villages in three *mandals* (Thulluru, Mangalagiri, and Tadepalli) in Guntur district with a population of approximately 100,000 (39,000 households). Strategically situated between the business hub of Vijayawada (3 km away) and the education hub of Guntur (18 km away), Amaravati benefits from a strong economic base and pool of talent, making it an ideal location for development. The city is well-connected by national highways (NH 16: Kolkata-Chennai, NH 65: Pune-Machilipatnam, and NH 30: Jagadalpur-Vijayawada), and its location along the Krishna River, the second largest river in South India, aligns with the development of National Waterway 4. It is also near Vijayawada International Airport, which is 30 km away, and within 68 km of the upcoming Machilipatnam Port, making it a strategic hub for trade and connectivity.

2. The Amaravati Capital City Development Program (ACCDP) is a large-scale initiative aimed at developing a world-class city with a focus on sustainability, economic growth, and inclusivity, setting a benchmark for future urban developments in India. Through the Land Pooling Scheme (LPS), 34,390 acres of land were acquired voluntarily from farmers for development starting in 2014. Construction commenced in 2017, making some progress by 2019, including the completion of key projects such as the Interim Secretariat, High Court, and a few roads and educational institutions. However, the project was halted in 2019 following a change in government and its policies. In 2024, the new government revived the project, resuming development efforts and once again seeking funding from the World Bank after the previous engagement was withdrawn in 2019.

1.1.1 Amaravati Capital City Planning

3. The Amaravati Master Plan for ACC was developed in 2015. The plan outlines a vision for a sustainable, livable city designed to accommodate 4 million residents by 2050.

4. The city is divided into distinct zones for residential, commercial, industrial, and green spaces, ensuring organized development. Residential zones will offer diverse housing options and access to amenities, while commercial areas will foster business growth through strategic connectivity. Industrial zones will support economic activities with minimal environmental impact. Green spaces, including parks and ecological reserves, promote environmental sustainability and enhance livability.

5. The Master Plan also integrates modern infrastructure, including smart city technologies for governance, waste management, water conservation, and energy efficiency. Amaravati's zoning strategy includes nine thematic clusters: Government City, Justice City, Electronic City, Knowledge City, Health City, Educational City, Financial City, Sports City, and Tourism City, each designed to optimize resource use and economic output. The Seed Capital Area, covering 16.94 km², will house the Amaravati Government Complex area with Secretariat and High Court, serving as city's administrative hub. It will also include a Central Business District as the city's economic hub.

6. A Perspective Plan for the Amaravati Capital Region (Vision 2050) and a Detailed Master Plan (DMP) (2016–2036) for the ACC were prepared in 2016 accordingly.⁵ The DMP outlined the Government's vision of developing Amaravati as the 'People's Capital of Andhra Pradesh', focusing on six goals: creating jobs, attracting investments, providing good quality housing, preserving nature and

⁴ The Andhra Pradesh Re-Organization Act 2014.

⁵ Both plans are prepared by the Andhra Pradesh Capital Region Development Authority (APCRDA).

environment, improving flood management and climate resilience, and revitalizing heritage and culture.

1.1.2 ACC Development Status

7. **Master Plan development.** In September 2015, the APCRDA appointed M/s Surbana International Consultants to create a DMP for the ACC. The draft plan was submitted in December 2015, followed by public consultations in 29 villages from January 12 to 21, 2016. A total of 4,740 objections and suggestions were received and evaluated by a technical committee. Based on the committee's recommendations and feedback from public representatives, modifications were made, and the final Master Plan was notified in February 2016.

8. **Land pooling and progress.** The Government of Andhra Pradesh (GoAP) followed the LPS as an alternative to land acquisition (LA) and assembled about 90 percent of the land for ACC. Under the LPS, 28,740 farmers voluntarily contributed 34,390 acres of land in exchange for a predefined proportion (around 22–25 percent) of developed land after completing key requisite infrastructure such as roads, water, power, and sewerage. In addition to the developed plots, farmers were also provided annuities and other benefits to ensure long-term support.

9. **Initiation of construction activities.** The APCRDA initiated infrastructure works soon after pooling the land, setting the foundation for Amaravati's development. Between 2017 and 2019, Amaravati saw the initiation of construction for key projects such as the High Court; Secretariat; residential developments for government staff; and critical infrastructure such as roads, water pipelines, and stormwater drains. However, construction progress varied, with some areas showing 0–18 percent completion. In addition, housing development for MLAs,⁶ AIS officers, and other government officials in the Amaravati Government Complex (AGC) reached up to 80 percent progress in some parts. In line with its original vision, the Interim Secretariat and High Court were completed in 2017 and are already fully operational, serving as the administrative and judicial hubs of the state.

10. **Other construction activities, such as universities.** Some of the pooled land in the city area was allotted to universities to support Amaravati's growth as an academic and research hub. Since 2019, no further land allotment has been made to any institution. Some of the institutions that were allotted land earlier have completed construction, set up their campuses, and commenced operations. For example, SRM University and Vellore Institute of Technology (VIT) have collectively enrolled over 25,000 students including other state and foreign students. The National Institute of Design (NID) is partially operational, with construction ongoing, while Amrita University is being established/under construction. Furthermore, AIIMS,⁷ located close to Amaravati, is fully established and operational, offering advanced medical services and training.

11. **Halting the development and farmers' protest.** In 2019, the development of Amaravati came to a standstill following a change in government, which deprioritized Amaravati in favor of a decentralized capital approach, with plans to develop three capital cities across the state. This shift led to the suspension of all ongoing construction works in Amaravati. Farmers who had voluntarily given their land under the LPS strongly opposed this move, leading to widespread protests and legal battles. In 2022, the AP High Court ruled that Amaravati must remain the state's capital, marking a significant legal victory for the protesting farmers.

12. **Resumption of works.** Following the 2024 elections, the new government revived the Amaravati project, resuming development efforts and restoring confidence among farmers. With the majority of farmers now supporting the project, viewing it as a source of job creation and prosperity, the GoAP officially adopted the DMP of the Amaravati Government Complex (AGC) in June 2024. By

⁶ MLA = Member of the Legislative Assembly.

⁷ AIIMS = All India Institute of Medical Sciences.

July 2024, full-scale development efforts were back on track, restoring the project's momentum and focusing on its original vision of creating a world-class capital city.

1.2 Program Design and Components

13. The Program Development Objective (PDO) is “to support the initial institutional, socioeconomic, and infrastructural development of Amaravati Capital City.” The proposed Program-for-Results (PforR) Program ('P', the Program) will support selected activities of the government's program that conform to the World Bank's PforR policy and the relevant policies of the Asian Development Bank (ADB). The Program supports three results areas (RAs) that are complementary and mutually reinforcing, aimed at building strong foundations to achieve the long-term development goals of Amaravati as an economically dynamic, inclusive, and sustainable city. The selected activities grouped by the three RAs, as summarized in the following paragraphs, have a total cost of INR 15,000 crores (approximately US\$1.8 billion). It is worth noting that the activities of the three RAs will be carried out concurrently to take advantage of the synergies. Disbursements will be made based on the achievement of defined disbursement-linked indicators (DLIs) throughout the Program cycle.

14. **RA1: Strengthened Governance and Financing Framework.** This RA aims at setting up an accountable and effective city governance structure that will evolve as Amaravati transitions from its early greenfield construction phase to become a living city occupied by the initial groups of residents, offices, and businesses and its governance requirements change to fit this transformation. It also involves setting up frameworks for sustainable financing of infrastructure and services, including leveraging private sector partnerships and mobilizing market-based financing. Proposed interventions under this RA include strengthening the metropolitan planning functions of the APCRDA, establishing an urban local body (ULB) and service delivery modalities for the ACC and the broader metropolitan region, and rolling out a land-based financing strategy to mobilize capital financing for development. Finally, this RA also strengthens the institutional capacity of the APCRDA and the Amaravati Development Corporation Limited (ADCL) for environment, social management, and contract management for the ACCDP.

15. **RA2: Inclusive Socioeconomic Growth and Community Development.** This RA aims at catalyzing robust economic growth and inclusive and equitable socioeconomic development, thus ensuring long-term vibrancy of the ACC and its communities. Proposed interventions include technical assistance and institutional mechanisms to help the APCRDA attract businesses and investments that generate economic activity and jobs and foster economic inclusion; skilling programs for existing and incoming residents of the area to take advantage of various construction and other economic activities associated with development of the city, with a focus on women and youth; increased access to affordable housing; and encouragement of citizen engagement and participation in neighborhood planning, community development, and community service operation and maintenance (O&M) in the respective LPS neighborhoods.

16. **RA3: Sustainable Infrastructure and Resilient Service Delivery.** This RA supports developing green and resilient trunk infrastructure for the city and community infrastructure for the LPS neighborhoods in an integrated manner, followed by effective and sustainable service delivery. The proposed activities focus on the design, construction, and operation of these infrastructure investments, including construction of roads and streets with utility corridors for water supply, stormwater drainage, wastewater treatment, power and information and communication technology (ICT), and solid waste management (SWM); construction of flood mitigation civil works and rehabilitation of the blue green infrastructure system such as retention reservoirs, water channels and parks, including nature-based solutions wherever feasible; establishment of public transport system including the procurement of e-bus services and associated infrastructure; and establishment of a digital infrastructure with the adoption of digital technologies and innovative methods for improved city management, development approval, and service delivery.

17. Details of the proposed infrastructure works under the Program are presented in Annex 3.

1.3 Government Program and Bank-Financed Program (P versus p)

18. The ACCDP will be implemented in two phases based on the readiness of land availability and the strategic importance of the investments for the long-term development of ACC. The entire ACC was divided into 12 zones. Phase 1 refers to the initial and prioritized investments to kick-start operationalization of ACC, including institutional setup and public building construction for the AGC. It also involves the development of basic trunk infrastructure, such as arterial road corridors with major utility pipelines and flood mitigation works covering the majority of ACC, as well as the neighborhood infrastructure that includes secondary and tertiary road networks with utility connections and public spaces and common community facilities for Zones 1–7 and Zone 10, a geographic area where over 98 percent of the land has been acquired through the voluntary LPS process. Phase 2 refers to the remaining trunk infrastructure, public services, and neighborhood infrastructure for Zones 8, 9 (including 9a), 11, and 12 (including 12a), with an estimated total financing of INR 20,000 crores, or US\$2.5 billion. The GoAP's program 'p' refers to the planned Phase 1, consisting of three main components with a total estimated cost of INR 30,000 crores (approximately US\$3.6 billion). The scope of the 'p' includes the following three components: (a) establish the governance structure for the management of ACC and construct public buildings and public housing with municipal infrastructure services for the AGC; (b) establish mechanisms to attract investments and foster economic inclusion; (c) provide serviced land parcels and deliver community infrastructure for the LPS neighborhoods, including necessary social support programs for the residents; and (d) construct and operate the trunk infrastructure to provide connectivity and municipal services, as well as improve flood risk mitigation and climate resilience of the entire ACC.

19. The outline of the proposed program under the PforR and the Government program ('P' versus 'p') is presented in Table 3.

Table 3. Proposed Program and Government Program

	Government Program	Program Supported by the PforR
Objective	To develop the priority area identified as Phase 1 of ACC as the People's Capital of Andhra Pradesh, aiming to be a happy, green, climate resilient, and inclusive city.	To support the initial institutional, socioeconomic, and infrastructural development of Amaravati Capital City.
Duration	2025–2029	2025–2029
Geographic coverage	Amaravati Capital City	Amaravati Capital City
RAs	<ol style="list-style-type: none"> 1) Establish the governance structure for the management of ACC and construct public buildings with municipal infrastructure services for AGC and establish mechanisms to attract investments and foster economic inclusion. 2) Provide serviced land parcels and deliver community infrastructure for the LPS neighborhoods, including necessary social support programs for the residents. 3) Construct and operate the trunk infrastructure to provide connectivity and municipal services, as well as to improve flood risk mitigation and climate resilience of the entire ACC. 	<ol style="list-style-type: none"> 1) Strengthened governance and financing frameworks 2) Inclusive socioeconomic growth for community development 3) Sustainable infrastructure and resilient service delivery.
Overall Financing	US\$3.648 billion	US\$1.785 billion, including US\$185 million from the GoAP, and financing of US\$800 million each from the World Bank and ADB

1.4 Program Implementing Agencies

20. The program will be implemented by the APCRDA and the ADCL.

1.4.1 Andhra Pradesh Capital Region Development Authority (APCRDA)

21. The GoAP enacted the APCRDA Act in 2014 to officially designate the New Capital Area and establish the APCRDA. The APCRDA was created to oversee the planning, coordination, execution, and sustainable development of the Capital Region and ACC. In 2015, the Andhra Pradesh Capital City LPS Formulation and Implementation (F&I) Rules were introduced to support land procurement. The APCRDA, under the leadership of the Commissioner and chaired by the Chief Minister, demonstrates strong technical and managerial expertise in executing the ACC Project. A dedicated team of experts will oversee implementation, and a Program Management Consultant (PgMC) will provide additional support to the APCRDA during the Program's execution.

22. The APCRDA is further supported by the ADCL, a corporate project implementation entity established through government order (GO MS. No. 112) in May 2016. The ADCL is responsible for executing trunk infrastructure works, including inner roads, water treatment plants (WTPs), water supply, sewerage and sewerage treatment plants, power infrastructure, drainage, government buildings, greenery, and flood management, and so on.

1.5 Environmental and Social Systems Assessment

23. The Environmental and Social Systems Assessment (ESSA) was prepared as per the World Bank's PforR Financing Policy. The ESSA evaluates the Program's effectiveness in promoting environmental and social (E&S) sustainability and ensuring that effective measures are in place to mitigate potential adverse impacts. Its objectives include identifying environmental, health, safety, and social effects; reviewing the legal and policy frameworks; assessing the borrower's capacity to manage adverse impacts; and recommending actions to address gaps, if any. The assessment aligns with six Core Principles: E&S Management, Protection of Natural Habitats and Cultural Resources, Public and Worker Safety, Land Acquisition and Resettlement, Right and Interest of Indigenous People, and Social Conflict, ensuring comprehensive management of E&S risks during program implementation.

1.6 Methodology Adopted for ESSA

24. The ESSA encompasses both the evaluation process of a borrower's system for managing E&S risks and the resulting final report. The methodology involves multiple steps: analyzing the E&S effects of program activities, assessing the borrower's management systems, and comparing them against core principles and key planning elements to identify significant discrepancies that could affect program performance. Recommendations are made to address the gaps and enhance E&S capacity and performance of the institutions, systems, resources. The ESSA includes a comprehensive review of relevant information provided by the APCRDA; past project documents; and consultations with the APCRDA, ADCL, and key stakeholders, including land pooling farmers, landless laborers, women, community institutions, and civil society members, among others. This involved reviewing government policies, legal frameworks, and program documents, along with conducting interviews and discussions with officials, civil society members, and community groups. Primary field visits were conducted across various parts of the ACC to gather insights and address concerns related to E&S systems.

2 SUMMARY OF WORLD BANK'S EARLIER ENGAGEMENT IN ACC DEVELOPMENT

2.1 Summary of World Bank's Earlier Engagement in ACC Development

25. The World Bank was initially engaged in the development of Amaravati through the 'Amaravati Sustainable Infrastructure and Institutional Development Project (ASIIDP) (P159808)' during 2016–18. It was a Category A Investment Project Financing (IPF) project with investment support for subprojects related to city roads, flood mitigation, sewerage management, and SWM. However, the project was dropped after the Government of India (GoI)⁸ requested for this given the change in the GoAP's priority.

26. Several key documents were prepared by the APCRDA as part of the preparation for the World Bank project, in line with the World Bank's OP 4.01 and 4.12, to address E&S impacts related to various infrastructure projects in Amaravati and they were disclosed both on the APCRDA website and the World Bank external website.⁹

- (a) The **Environmental and Social Management Framework (ESMF)** was developed to guide the assessment and management of E&S risks, ensuring compliance with applicable policies and regulations. Key environmental issues identified include the conversion of agricultural land for non-agricultural use, flood risks near seasonal watercourses, and concerns related to labor influx. The ESMF recommends appointing dedicated E&S specialists within implementing agencies, supervision consulting firms, and capacity-building initiatives to ensure effective risk management and compliance with environmental safeguards.
- (b) **Environmental Impact Assessments (EIAs)** were conducted for 10 priority roads and flood mitigation works, detailing the potential environmental impacts and management plans. Mitigation measures identified in existing Environmental Management Plans (EMPs) and road designs prioritize sustainable urban mobility by including sidewalks, cycle paths, and avenue plantations. To address construction-related impacts, EMPs focus on minimizing air and noise pollution through regular dust suppression, vehicle and equipment control, pollution prevention, personal protective equipment (PPE) usage, and regular environmental monitoring to ensure compliance with standards. Utility-related measures include the supply of treated drinking water, the reuse of treated water from sewage treatment plants (STPs), and the treatment of sludge for safe reuse and disposal. Flood-related measures emphasize strengthening of embankments, erosion control, regulated muck disposal, resilience to extreme rainfall, and adaptation to climate change.
- (c) **Resettlement Action Plans (RAPs)** were established, including a Resettlement Policy Framework (RPF) and specific action plans for resettling populations affected due to road and flood mitigation projects. The RPF vide GO MS. No. 320 issued on September 19, 2018, is well aligned with the World Bank Core Principles. Based on the RPF, RAPs were prepared for the proposed investments in 2018 and were also notified vide the same GO MS. No. 320 issued on September 19, 2018. This included RAP for (i) the 10 sub-arterial roads and (ii) flood mitigation measures, outlining the detailed process of LA and benefits that needed to be followed for the ACC area. While the RPF followed the Land Acquisition, Rehabilitation, and Resettlement (LARR) Act 2013, it added provisions to align with the World Bank safeguard requirements that were accepted and adopted by the GoAP and the APCRDA.

⁸ <https://www.worldbank.org/en/news/press-release/2019/07/21/world-bank-andhra-pradesh-amaravati>.

⁹ <https://projects.worldbank.org/en/projects-operations/document-detail/P159808?type=projects>.

- (d) The **Executive Summary** of the E&S Assessment to inform stakeholders of findings and recommendations.

27. Overall, these documents reflect a structured approach to integrating E&S considerations into the planning and implementation of infrastructure projects in the Capital Region. A summary of the documents prepared, consulted, and disclosed details is presented in Annex 4.

28. Also, many significant studies were conducted to evaluate and analyze the LPS in Amaravati and contribute valuable insights into the land pooling process, its challenges, and its successes in the context of Amaravati's development.

- (a) **Independent Evaluation of Land Pooling Scheme in the Capital City 'Amaravati' 2017.** Conducted by the Administrative Staff College of India in Hyderabad.
- (b) **Case Study: Incentivizing Land Pooling - Amaravati, India.** Authored by Yu-Hung Hong, this case study explores the mechanisms and incentives associated with the land pooling process in Amaravati, focusing on its effectiveness and outcomes.
- (c) **Assessment of Land Assembly Instruments and their Implementation 2018.** Commissioned by the World Bank and conducted by Geoffrey Payne, this note examines the various land assembly instruments used in the ACCDP, evaluating their implementation and effectiveness.

2.2 World Bank Inspection Panel Cases

29. In the context of the proposed ACCDP PforR program, it is important to take note of and draw lessons from the World Bank's previous engagement. During the preparation of the ASIIDP in 2016-17, the World Bank's Inspection Panel received two Requests for Investigation from complainants regarding the impacts of the LPS, on their livelihoods, environment and food security, and claiming inadequate consultation as a result of the Bank's non-compliance with its policies in the preparation of the project at that time. In response, the Panel conducted a review of these Requests, visiting India in September 2017, and engaging with various stakeholders, including community members, landowners, government officials, and civil society representatives, and recommended an investigation. This investigation, however, was deferred twice following World Bank Management's request for time to address the concerns raised through several impact mitigation and management actions. These actions included an independent audit of the land assembly arrangements; the inclusion of all 21,374 landless laborer households in the area as project-affected; targeted support for the most vulnerable; and measures to enhance public participation and voice through the formation of a Citizens' Advisory Committee and stronger grievance redress mechanisms.

30. However, in March 2019, the Panel, while acknowledging the positive steps taken by Management to address issues of concern, recommended still going ahead with an investigation due to remaining concerns about the Bank's due diligence and Project design, especially regarding livelihood restoration requirements, and the considerable risks of a rural-to-urban transition at such a large scale. Subsequently, as the project was withdrawn at the Government of India's request, the Panel updated its recommendation not to investigate as the project was no longer under consideration by the Bank; this recommendation was approved by the World Bank Board in July 2019.

31. The design of the current engagement takes into account the issues and concerns raised by the Requests about possible impacts, and factors in mitigation and management measures mainly through (a) undertaking a socio-economic baseline assessing current skills and livelihood profiles for preparing and implementing livelihood action plans; (b) conducting a social audit of the Land Assembly process for ACC, with focus on (i) the process, (ii) the impacts on landowners, landless and other PAPs, (iii) mitigation measures; TORs of the audit to be agreed with the Bank; (c) strengthening GRM system

and citizen engagement mechanism; (d) developing SOPs for environmental and social risk management; and (e) strengthening environmental and social management unit within APCRDA.

3 ASSESSMENT OF ENVIRONMENTAL AND SOCIAL EFFECTS

3.1 Environmental and Social Overview

32. The rationale for selecting Amaravati as the new Capital City of AP was based on its central location and excellent connectivity to all parts of the state, leveraging its proximity to the urban centers of Vijayawada and Guntur. These cities already have developed infrastructure such as railways, airports, and national highways, reducing the need for new infrastructure and minimizing environmental impacts. The Amaravati area also avoids the flood-prone Krishna delta lands as it is located upstream of the Prakasam Barrage and is further protected by flood control embankments along the Krishna River. It benefits from better road connectivity through major highways (NH16, NH65, and NH30), proximity to the Machilipatnam Port, and minimal cyclone impact due to its distance from the Bay of Bengal. Additionally, the proximity to cities such as Vijayawada and Guntur helped absorb the immediate demand for office space, housing, schools, and hospitals, allowing the state to transition its administrative setup smoothly while providing time for sustainable development of the new capital.

33. At the time of land pooling, the ACC area predominantly consisted of agricultural fields, mainly commercial crops irrigated through lift irrigation schemes from the Krishna River. The main crops grown were cotton, chilly, corn, maize, and vegetables. Most of these lands were handed over to the APCRDA for Capital City development and currently lie fallow, except in a few places where farmers continue to use the land for cultivation, as the APCRDA did not formerly take these over given the suspension of works between 2019 and 2024. Kondaveeti Vagu and Pala Vagu are two seasonal watercourses that flow through Amaravati and act as important drainage channels during the monsoon season. Pala Vagu joins into Kondaveeti Vagu, which then flows into the Krishna River upstream of the Prakasam Barrage near Vijayawada. Kondaveeti Vagu, in particular, has been a source of concern due to floods during heavy rainfall. These watercourses are integral to flood management in the region, and any disruption to their natural flow could exacerbate flood risks in the surrounding areas. In addition, several small ponds are located within the villages, some of which have been traditionally used for irrigation.

34. Amaravati's Capital City area consists of 25 Gram Panchayats, with 29 villages/habitations and a portion of the municipal area (Tadepalli). Nine villages have an overall literacy rate below 60 percent (Anantavaram, Koragallu [Neerukonda], Lingayapalem [Mogula Lankapalem], Nekkallu, Nelapadu, Nidamaru, Rayapudi [Kondamarajupalem], Sakamuri, and Velagapudi). Almost all villages, except Undavalli and Abbirajupalem, have female literacy rates lower than 60 percent, with the lowest being 46 percent (Koragallu). The villages have a network of 2,427 self-help groups (SHGs) with 25,319 women members. There are two colleges and 54 schools (6 high schools, 8 upper primary, and 40 elementary schools) managed by the government. There is one primary health center at Thulluru, and the nearest referral hospitals are NRI Hospital (18 km), Guntur General Hospital (35 km), and Vijayawada Government General Hospital (23 km) in addition to many corporate hospitals that are covered under the Government Health Insurance Program. The villages abound with places of worship for all faiths. In all the villages, there is social cohesiveness among people from different castes and religion and a collective system that is amenable to change.

3.1.1 Environmental and Social Integration in the Master Plan

35. The ACC Master Plan has been designed to balance urbanization with sustainability, economic growth, and cultural preservation. It integrates environmental, social, and economic considerations to ensure that the development of the city fosters a high quality of life for its residents while protecting natural ecosystems and promoting inclusivity. The plan incorporates innovative zoning, energy-

efficient infrastructure, and smart city technologies, positioning Amaravati as a model for sustainable urban development. The key features of the Master Plan include the following:

- **Protection of forests and water bodies.** The Master Plan preserves 251.77 ha of forests and safeguards the Krishna River and natural streams. It integrates a blue and green network to maintain ecological corridors and promote biodiversity.
- **Drinking water supply and wastewater management.** The plan ensures safe and reliable water supply from the Krishna River, with advanced monitoring systems in place to manage and oversee the entire process, ensuring consistent water quality and distribution. STPs will treat and reuse wastewater for non-potable purposes, such as green zones, while ensuring that treated effluent meets national discharge standards, thereby reducing freshwater demand. Water conservation measures such as rainwater harvesting are also incorporated.
- **Green infrastructure and open spaces.** The plan designates 30 percent of Amaravati's area for green and blue spaces, such as parks, ecological reserves, and water bodies, to enhance livability and environmental health. The city's green infrastructure is designed to mitigate the urban heat island effect and improve air quality, making it a healthier environment for residents.
- **Climate resilience and carbon neutrality.** The city aims for carbon neutrality through urban greenery, clean transportation fuels, integrated public transport including cycle tracks, and renewable energy such as rooftop solar.
- **Waste management.** Development of an integrated waste management facility to achieve a zero-waste goal through scientific waste processing.
- **Zoning and thematic clusters.** The city is divided into distinct zones for residential, commercial, industrial, and green areas, ensuring organized development. Thematic clusters are a key feature, with nine clusters focusing on Government, Finance, Knowledge, Health, Justice, Tourism, Media, Sports, and Electronics. These clusters are strategically designed to optimize resource use, promote economic growth, and foster innovation, establishing Amaravati as a hub for various industries.
- **Quality of life and accessibility.** The Master Plan prioritizes enhancing the quality of life by ensuring that public transit and neighborhood amenities are easily accessible to all residents. Universal access is emphasized, with safe environments for all ages, including children, the elderly, and people with disabilities. The plan includes ample opportunities for work, learning, and recreation and ensures that essential services, such as health care and education, are within easy reach. Additionally, a public transit system is designed to ensure that commutes within the city do not exceed 30 minutes, significantly improving ease of living.
- **Cultural identity and heritage.** The Master Plan seeks to preserve Amaravati's cultural heritage by safeguarding historically and culturally significant sites. It integrates existing villages into the city's development while maintaining their cultural identity. Tourism circuits and dedicated cultural zones are planned to promote local heritage, attracting both residents and tourists. Strategic locations are allocated for cultural activities and events, allowing the community to engage in and celebrate local traditions.
- **Smart city technologies.** Amaravati plans to incorporate smart city technologies for efficient governance, waste management, energy conservation, and service delivery. These technologies will enable real-time monitoring and management of city services, ensuring sustainability, cost-effectiveness, and improved quality of life for residents. Smart systems for energy use and public services will also help manage resources efficiently.

- **Inclusive growth and livability.** The city is planned with the principle of inclusive growth, ensuring high living standards for all residents. It adopts the 5-10-15 principle, meaning that emergency facilities will be reachable within 5 minutes, recreational spaces within 10 minutes, and workplaces within 15 minutes. Each township (1 km × 1 km) will be equipped with essential services such as education and health care, fostering a balanced and accessible environment for all. This approach aims to make Amaravati a livable and thriving Capital City for its diverse population.

3.2 Environmental and Social Benefits of the program

36. The GoAP expects the development of ACC to foster economic growth, create employment opportunities, and promote sustainable urban development. By integrating green infrastructure, promoting private sector participation, and prioritizing inclusivity, the plan aims to transform Amaravati into a model of environmental resilience, economic prosperity, and social equity. The expected benefits of the program ('p') are summarized in the following paragraphs.

37. **Economic development and private sector participation.** Amaravati's development is poised to stimulate significant economic growth by attracting private sector investments, particularly in sectors such as information technology (IT), finance, education, and health care. These sectors, organized into thematic clusters, are expected to generate 1.5 million jobs by 2050. Public-private partnerships (PPPs) and land monetization strategies are expected to further drive investments, positioning Amaravati as a major regional and international economic hub.

38. **Employment and social development ('P').** The development of Amaravati has already generated some employment opportunities for the local people. Institutions such as SRM University, VIT University, and the AP Secretariat are operational, collectively employing over 2,500 local residents and providing jobs for around 7,400 staff members. Skill development training enabled some farmers to transition to new livelihoods, while street vending opportunities have provided jobs for more than 3,200 individuals. The skill development trainings under the Program are targeted to generate 15,000 jobs, including 9,000 jobs for women. The construction activities are also expected to provide employment and business opportunities for local communities. It is estimated that about 15,000 to 20,000 jobs in construction will be created, with another 10,000 to 20,000 indirect or induced jobs in supply chains and services.

39. **Integration of existing villages and sustainable urban services.** The program aims to integrate existing villages into Amaravati's urban framework while preserving their identity. These villages will be connected to modern urban services, including clean water supply, sewage treatment, and waste management systems.

40. **Improved quality of life and ease of living.** Once it is developed, Amaravati will provide convenient access to essential public amenities such as health care, education, and recreational facilities. The efficient public transit system will ensure short commutes, while green spaces and sustainable urban services will contribute to a high standard of living for all residents.

3.3 Environmental Effects of the Program

41. The environmental effects of RAs 1 and 2 are primarily positive, contributing to improved E&S outcomes. RA 3, which involves large-scale infrastructure development activities, such as trunk infrastructure, flood mitigation works, building construction, and neighborhood infrastructure, has impacts primarily related to construction. As Amaravati moves into the operational phase, urbanization will increase resource consumption and waste generation, intensifying challenges such as stormwater management, pollution, and traffic congestion. To address these, the city's design integrates systems for environmental sustainability, including waste management, sewage treatment, flood mitigation, and efficient water supply without affecting downstream users. These measures, alongside green infrastructure and energy conservation, will require regular maintenance to ensure long-term effectiveness, fostering a livable and eco-friendly city.

42. During construction, the likelihood of significant impacts is substantial but manageable. Most activities are located on fallow agricultural land pooled between 2014 and 2019. These potential negative impacts include soil erosion, pollution of ecosystems such as natural water bodies, air quality deterioration from dust and emissions, increased carbon emissions, poor construction waste management, traffic congestion, construction-related nuisances, and occupational health and safety (OHS) risks for both workers and local communities. These potential impacts are further discussed in the following sections.

43. The project's contextual risks, particularly flood risks from Kondaveeti Vagu, have been addressed through a comprehensive flood management plan that includes retention reservoirs, pumping stations, and enhanced stormwater networks.

44. A review of construction works from 2017 to 2018, along with the 2018 audit on EMP implementation, provided valuable insights into the challenges encountered during past construction activities, highlighting the need for stronger environmental mitigation measures. The lessons learned from these past activities have been integrated into the current program, leading to improved supervision controls and environmental protection measures. By addressing past issues and adopting proactive strategies, the current program is better equipped to mitigate impacts while maximizing the environmental, social, and economic benefits of Amaravati's development.

3.3.1 Natural Resources

45. The natural resources in the ACC primarily consist of surface water bodies in the villages and the forests on Undavalli Hill. The program activities do not involve direct interventions in these natural resources. The active floodplains of the Krishna River are protected by existing embankments (bunds) constructed prior to 1853¹⁰, which have since been expanded, altered, and strengthened as needed. No development of Amaravati city will occur between the embankment and the Krishna River. Approximately 30 percent of the city's land is designated for green and blue spaces, such as parks, water bodies, and buffer zones, which are vital for biodiversity conservation and ecological balance. The immediate floodplains of Kondaveeti Vagu and Pala Vagu, which were used for agriculture, will now be converted to green buffer zones. The city's Master Plan proposes expanding water bodies from 616 to 1,813 acres, including stream widening, leading to an overall increase of 197 percent.

46. Generally, the transformation of agricultural and rural landscapes into urban areas poses risks such as habitat disruption and biodiversity loss. However, it should be noted that the agricultural lands in these areas have already transformed into fallow lands and have not been used for agriculture from 2014 to 2019, except in some areas. Although large-scale construction can result in habitat alteration, soil erosion, and reduced groundwater recharge, the agricultural lands in the project area have largely become fallow, with minimal biodiversity remaining.

47. Mitigation measures include preserving green and blue spaces and planting native species to enhance biodiversity. Topsoil up to a depth of 30 cm will be preserved and used for greenery purposes within the Capital City. Soil erosion from earthworks should be controlled by implementing appropriate stormwater drainage systems, including silt fences, sediment barriers, temporary detention and settling ponds to control runoff, and intercept channels to prevent construction runoff from entering the nearby streams. The use of fertilizers and pesticides for plantation activities should be limited and managed carefully, with workers using protective equipment to reduce environmental and health risks. Adherence to EMPs is essential for minimizing any adverse impacts. The APCRDA has committed to the NGT that no works will be carried out beyond the existing embankment towards the river. The program will include a monitoring system for assessing and managing any ecological impacts on the floodplains, with coordination with regulatory agencies and adaptive management.

¹⁰ Flood Contingency Plan of River Krishna for the Year 2012-13 in Krishna and Guntur Districts" published by the River Conservator & Executive Engineer, Krishna Central Division, Vijayawada. Irrigation and CAD Department, Government of Andhra Pradesh

3.3.2 Flood management

48. Flood management is critical in Amaravati due to its proximity to the Krishna River and the seasonal Kondaveeti Vagu. The flood management plan for the city includes the widening and deepening of streams, the creation of retention reservoirs, and the establishment of pumping stations to manage excess water during heavy rainfall (see Annex 3 for detailed description of the proposed flood works). The flood mitigation system for Amaravati is designed to manage a 1-in-100-year rainfall event (equivalent to 222 mm of rainfall in a single day) and accommodate increased runoff and flood risks resulting from urban development.

49. Effective flood management will reduce the risk of property damage, inundation, and disruption to infrastructure. However, if the drainage systems and retention reservoirs are poorly maintained, the risk of flooding could increase, particularly during the monsoon season. To mitigate these risks, the flood management plan outlines regular maintenance of stormwater drainage systems and flood control infrastructure.

50. The earth works for the proposed flood mitigation works will generate significant amounts of spoils. Proper management and disposal of these spoils are crucial to prevent environmental issues such as soil erosion and changes in surface drainage patterns, which needs to be properly reused or disposed. These spoils are expected to be used for filling low-lying areas in the capital city. However, temporary storage and designated disposal sites will need to be identified to effectively manage the large volume of material with GIIP.

3.3.3 Waste Management and Pollution Prevention

51. Construction activities in Amaravati will generate a significant amount of solid waste, including organic waste from construction sites and camps and construction and demolition (C&D) waste. Improper management of these wastes could result in substantial environmental impacts, including air, water, and soil pollution. Inefficient waste segregation and improper handling of hazardous materials can exacerbate these risks.

52. To mitigate these potential impacts, contractors are required to implement proper waste segregation at the source and manage waste efficiently. The APCRDA should utilize the existing waste management infrastructure in nearby cities such as Vijayawada and Guntur, including municipal composting, C&D disposal sites, landfill sites, waste-to-energy facilities, and hazardous waste treatment centers located in Nellore and Guntur. The APCRDA should ensure that arrangements with facility operators and vendors are in place so that contractors can use these established systems.

53. Wastewater generated from construction camps, yards, and batching plants must be treated before being discharged into nearby streams. Sedimentation ponds should be constructed to collect wastewater and allow sediments to settle. Drainage from excavation sites also needs to be properly collected and diverted to sedimentation ponds. Fuel and chemical storage areas should be adequately bunded and covered to prevent contamination of surface soils, as leaks from fuel drums pose a significant pollution risk.

54. Air pollution is another significant concern, particularly dust generation at construction sites and emissions from vehicles and equipment. To mitigate dust pollution, contractors should regularly sprinkle water at construction sites and use fogging systems to suppress airborne particles. Pollution Under Control (PUC) certificates must be maintained for all construction vehicles to minimize emissions. The APPCB established an ambient air quality station to regularly monitor the air quality to ensure compliance with national standards.

3.3.4 Occupational and Community Health and Safety Risks

55. **OHS.** Large-scale construction activities may pose significant OHS risks for workers, including physical injuries, exposure to hazardous materials, and health issues caused by dust and noise at construction sites. To mitigate these risks, the EMPs and bidding documents should outline stringent

OHS measures. Contractors must develop site-specific OHS management plans, ensuring compliance with national and international standards and good practices.

56. Mandatory safety protocols for contractors should include use of PPE, such as helmets, gloves, reflective vests, and safety boots, by all workers. Additionally, on-site first-aid facilities, regular health checkups, and emergency medical services should be provided, including ambulances and tie-ups with local hospitals. Contractors must also conduct regular site inspections, ensuring adherence to safety protocols under the supervision of OHS specialists. Worker welfare should be prioritized in labor camps, where contractors must provide basic amenities, such as clean drinking water, sanitary toilets, separate bathrooms, and nutritious food. Waste management and proper sewage treatment facilities are essential to maintain high hygiene standards. Regular health screenings should be conducted to prevent the spread of communicable diseases and ensure worker well-being. OHS measures must be regularly monitored and audited to ensure compliance, and contractors must report any incidents or near-miss situations to maintain accountability and safety.

57. **Community health and safety.** The construction activities may pose several community health and safety risks, primarily due to exposure to construction-related hazards, such as increased traffic, dust, noise, and traffic accidents. To mitigate these impacts, regular water sprinkling and the use of foggers will help control dust levels. Noise attenuation measures will be implemented around and the activities generating high noise levels will be scheduled during non-peak hours to minimize disturbance. Traffic-related risks, including congestion and accidents, should be managed by preparing and implementing traffic management plans. These plans include designating paths for each contractor, restricting construction vehicle movement to non-peak hours, avoiding night-time transportation through villages, and installing signage and safety barriers around hazardous areas such as excavation sites.

58. **Road safety.** During both construction and operational phases, road safety measures are crucial. During construction, lane closures are implemented using barriers and signs to direct traffic safely while minimizing disruption. Reduced speed limits are enforced and trained flaggers guide vehicles through construction zones. Temporary traffic calming measures, such as speed bumps and rumble strips, help slow vehicles for added safety. In the operational phase, arterial and sub-arterial roads will optimize traffic flow, while speed control measures and traffic calming are incorporated into the LPS roads. A road safety audit ensures compliance with minimum 3-star iRAP ratings (International Road Assessment Programme ratings, which assess road safety features) for enhanced safety.

59. About 15,000 to 20,000 laborers are expected to be engaged in construction activities ('P'). The interaction between construction workers and local communities raises concerns about health risks, including the potential spread of communicable diseases. A detailed assessment of impacts related to labor influx is discussed in Section 3.4.2. Contractors must ensure proper health and hygiene infrastructure, including sanitation facilities and regular medical checkups for workers. Safety precautions such as barriers around construction zones are also implemented to prevent accidents and unauthorized access to hazardous areas. Continuous monitoring of air quality, noise levels, and traffic management minimizes the impacts on community health and safety.

3.3.5 Urbanization and Integration of environmental services to existing villages

60. The integration of existing villages (under 'p') into the broader Amaravati urban framework is a key component of the city's development plan. Many villages in the region lack access to modern environmental services such as sewage treatment and waste management. The city aims to connect these villages to its infrastructure, ensuring that they benefit from urban services without losing their cultural identity.

61. The benefits of this integration include improved living standards for villagers and better environmental sustainability through access to clean water, sanitation, and waste management systems. However, delays in service integration could create inequalities, leaving some villages

underserved, resulting in poor sanitation, untreated sewage, and health risks for residents. Another concern is the unplanned growth of the villages due to the construction of houses for commercial purposes to accommodate the growing needs of the construction workers.

62. Mitigation measures include prioritizing the connection of villages to the city's environmental infrastructure and regular maintenance. The APCRDA has already engaged about 200 workers to improve sanitation in these villages. It also controls the growth in the villages by providing approvals for the construction of new buildings after ensuring that they adhere to the city development plan.

3.3.6 Demand on Resources

63. **Energy.** Amaravati's total energy requirement is estimated to reach 3,000 MW (for 'p') as the city develops. To meet this demand, the Master Plan includes connecting the city to the national grid through three 400 kV substations and purchasing power from distribution companies (DISCOMs). For the city's energy needs over the next ten years, a 400 kV substation has already been built in Amaravati, which draws power from the national grid. The Master Plan encourages renewable energy development, such as solar and biomass, and modern grid technologies, such as bidirectional meters. Underground power transmission is planned for stability and aesthetics, with high-quality infrastructure and redundancy for reliability. Demand management through energy-efficient buildings and public education is also recommended.

64. **Water.** The estimated water demand in Amaravati is 468 MLD in 15 years and 978 MLD in 30 years. To address this, water will be drawn from the Krishna River and supplied to the city through two major WTPs. The city's design includes efficient water use through measures such as dual plumbing systems and water-efficient fixtures in all housing projects. Treated wastewater from STPs will be reused for non-potable applications such as irrigation, district cooling, and fire control, thereby reducing the pressure on freshwater resources. Rainwater harvesting systems in buildings have also been proposed in the designs.

65. **Sustainability of drinking water sources.** Amaravati's proposed water supply system has been designed to ensure sustainability while safeguarding the interests of downstream users reliant on the Krishna River. Amaravati's projected water demand by 2050 is 13.92 Thousand Million Cubic Feet (TMC) per year (978 MLD). This demand will be met through water upstream of Prakasam Barrage on the Krishna River. According to the assessment in the Water Supply Plan of Amaravati, the total water inflow to the Prakasam Barrage is 191 TMC per year, with 136 TMC allocated for downstream irrigation and 15 TMC for drinking water, leaving a surplus of 40–41 TMC per /year.

66. **Construction materials.** In terms of materials, construction in Amaravati will primarily source materials from approved quarry sites under the supervision of the Department of Mines and Geology. Sustainable practices, such as incorporating fly ash and slag as substitutes for cement (up to 40 percent), will reduce the environmental impact of cement production.

3.3.7 Impact on Cultural Heritage

67. The Undavalli Caves, officially referred to as 'Rock-cut Cave Temple - Undavalli' by the Archaeological Survey of India (ASI), are located on the eastern side of the city on Undavalli Hill. As a nationally protected monument, the site is safeguarded under national heritage preservation laws, with all excavation, restoration, and maintenance activities strictly regulated within 100 m around the monument by the ASI, to ensure that its historical and cultural significance is preserved. The city's Master Plan prioritizes the protection of these heritage sites by enforcing a strict no-construction zone within 100 m of them. The EIA for the flood mitigation works indicates that the proposed widening of Kondaveeti Vagu is more than 100 m away from the temple. However, construction activities must be carefully monitored to prevent any potential damage to the monument and minimize disturbance to visitors. The bidding documents should include a 'Chance Find Procedure', ensuring that any archaeological discoveries during construction are reported to the ASI.

3.3.8 Review of Environmental Impacts from Past Construction Activities

68. In 2018, the APCRDA commissioned an institution to conduct an ex-post audit of the implementation of the EMP for the construction of 10 sub-arterial roads in Amaravati, which began in 2017. The audit aimed to evaluate the effectiveness of the EMP measures, assess their compliance with World Bank policies and national regulations, identify gaps in implementation, and provide recommendations to improve future development phases.

69. The key findings of the audit are as follows:

- **Environmental aspects.** The 2018 audit revealed several environmental issues arising from the construction activities. Key problems identified include the following:
 - **Air and noise pollution.** Construction sites generated significant dust and noise pollution due to inadequate dust control measures and equipment emissions. Noise pollution was particularly concerning near residential and sensitive areas.
 - **Waste mismanagement.** Adequate waste management practices are yet to be in place. A dedicated facility for processing C&D waste should be established for recovery and recycling of resource material in building the capital city.
 - **Impacts on natural water bodies.** Temporary structures such as bunds and paths across streams such as Pala Vaagu and Kondaveeti Vaagu need to be removed promptly before the monsoon to avoid flood risks.
- **OHS aspects.** The audit also identified several social and occupational health risks faced by workers and nearby communities:
 - **Safety violations.** There were gaps in providing PPE for workers, increasing the risk of injuries and accidents on-site. Additionally, first-aid facilities and regular health checkups were lacking.
 - **Health concerns.** Poor waste management in labor camps and insufficient sanitation facilities posed significant health risks, including the potential spread of communicable diseases. The labor influx in some areas has also contributed to community health and safety concerns.

70. **Lessons learned from past constructions.** The findings from the 2018 audit have played a pivotal role in shaping the design and implementation of the current program. Recognizing the gaps in environmental safeguards, the program has since incorporated stronger measures to ensure compliance and minimize adverse impacts. Key lessons include the following:

- **Stronger environmental safeguards.** The current program includes enhanced waste management strategies, with proper segregation, recycling, and disposal of C&D waste. Waterway management practices have been improved to prevent flood risks, with plans for prompt removal of temporary structures.
- **Improved worker safety and community protection.** Stringent OHS measures have been included in the current program, such as the mandatory use of PPE, regular site inspections, and the establishment of on-site health facilities. Community engagement efforts have also been strengthened to address social impacts and ensure more efficient resettlement processes.
- **Regulatory compliance and monitoring.** The audit underscored the need for continuous monitoring and regulatory compliance, leading to the establishment of a dedicated Environmental and Social Management Unit. This unit ensures ongoing oversight of the implementation of social and environmental plans, ensuring that the program adheres to E&S standards.

3.4 Social Effects of the Program

71. The social effects of the proposed Program are primarily positive and benefit both farmers and landless people with enhanced economic return from the returnable plots, better livelihood and living opportunities, and improved urban environmental services to the new and existing population. The key social risks emerge from (a) the need for land procurement/acquisition and resettlement necessary for Phase 1 infrastructure; (b) disruptions due to construction activities, including increased traffic and construction nuisances; (c) OHS risks to workers and local communities; (d) inadequate enforcement of labor standards; (e) labor influx requiring accommodation; (f) risks of sexual exploitation and abuse (SEA) and SH and gender-based violence (GBV); (g) lack of community participation in infrastructure design and construction; (h) poor voice and accountability mechanisms; and (i) unplanned growth in existing villages to accommodate the transient population. Some of these risks are grouped and analyzed further to understand their effects, and they are presented in the following section.

3.4.1 Land Pooling, Land Acquisition, and Involuntary Resettlement

3.4.1.1 Land Pooling¹¹

72. The LPS represents a shift away from the conventional LA process, as it allows landowners to remain in their habitations and continue holding land parcels of increased value, preserving their social ties and psychological attachment to place. The land pooling mechanism is mainly adopted for the development of the Capital City area, where the land parcels owned by individuals or groups of owners are legally consolidated by transfer of ownership rights to the Authority in return for a smaller plot of urban, serviced land (returnable plot) in the Capital City area that is of higher value than the land relinquished. A range of livelihood support measures are included, for example, an annuity, skill upgrading, health and educational schemes, and support for setting up self-employed enterprises.

73. The LPS was designed following numerous consultations with landowners on the draft Master Plan in the Amaravati City area (24 villages). The public consultations included all landowners within the Master Plan area for them to decide whether to participate in the LPS or have their land acquired under LARR.¹²

74. ACC requires approximately 53,749.49 acres of land. Of this, 15,807.91 acres consist of government and extended habitation land, while 37,941.58 acres were targeted for pooling. As of September 2024, 34,396.87 acres (90.6 percent) have already been pooled through the LPS, involving 28,740 farmers, with most of this occurring between 2016 and 2019. Only 3,551.79 acres remain to be pooled for the entire city. For Phase 1 activities, 224.45 acres (less than 1 percent) are yet to be pooled or acquired.

75. The landholding pattern of the LPS farmers shows that 76 percent own less than 1 acre of land, that is, 25,403 out of 33,489 farmers. These farmers contributed 46 percent of the total land under the LPS. Those with 1–2 acres contributed 27 percent of the total land. Table 4 presents the landholding pattern of the farmers in the ACC area who volunteered for land pooling.

¹¹ Land pooling is a process where parcels of land owned by different individuals are aggregated, typically by a government agency, redeveloped, and returned to the landowners based on certain criteria. Land pooling was introduced in India through the Bombay Town Planning Act of 1915. Since then, land being a state subject, several states have formulated and implemented their own policies on land pooling, with varied experiences. Land pooling, land readjustment, and town planning schemes have been implemented successfully in various states including Gujarat, Maharashtra, Chhattisgarh, Delhi, Punjab, and Kerala. Land pooling allows for flexibility in assigning various aspects of land management—assembly, development, and disposal—to different stakeholders, depending on their capacities and context for the best possible results. However, land pooling of this scale for Amaravati is the first of its kind in the country and the world.

¹² Payne, G. 2018. *Assessment of Land Assembly Instruments and Their Implementation*.

Table 4. Farmers' Landholding Pattern

Land Ownership (acres)	No. of Farmers	Extent of Land Pooled (acres)	% of Pooled Land (34,397 acres)	% of Total Land (37,941 acres)
0–1	25,403	15,906.2746	46	42
1–2	5,628	9,445.1194	27	25
2–5	2,236	7,118.0032	21	19
>5	222	1,927.477	6	5
Total pooled land	33,489	34,396.8742	100	91

Source: APCRDA, September 2024.

76. In Amaravati, in exchange for their land to the LPS, landowners receive a guaranteed returnable plot, between 20 and 30 percent of the original area consisting of developed land for residential use or up to 10 percent for commercial use. Landowners can choose their returnable plots to be designated for residential or commercial use or a combination of residential and commercial plots. Landowners are also entitled to choose between one returnable plot or subdividing their eligible returnable plot. Registered landowners contributing jareebu land (irrigated land) receive 1,000 square yards of urban residential land and 450 square yards of commercial land for every acre of agricultural land, while those contributing dry land receive 1,000 square yards of urban residential land and 250 square yards of commercial land for every acre contributed.

Table 5. Extent of Returnable Land Per Acre of Surrendered Land under LPS

Land		Category (Square Yards)/Acre			
		Dry Land		Jareebu/Semi-Urban land	
		Residential	Commercial	Residential	Commercial
1	Patta ^a Land	1,000	250	1,000	450
2	Assigned ^b Land				
(a)	Ex-serviceman/political sufferer	1,000	250	1,000	450
(b)	Assignments before June 18, 1954	1,000	250	1,000	450
(c)	Assignments After June 18, 1954	800	100	800	200
(d)	POT resumed lands - Sivoijamadar occupation	500	50	500	100
(e)	Un-objectionable government lands - Eligible Sivoijamadar	500	50	500	100
(f)	Objectionable government lands - Eligible Sivoijamadar	250	0	250	0
3	Yearly payment of annuity to all landowners losing land ^c for 10 years ^d	INR 30,000 per acre		INR 50,000 per acre	
4	One-time additional payment for garden such as lime/sapota/guava (INR)	100,000			
5	Agricultural laborer/agricultural tenants (residing in the LPS villages as on December 8, 2014)	INR 2,500 per month/10 years with annual adjustment linked to inflation index (paid monthly) ^d			

Note: POT = Prevention of Transfer.

a. 'Patta' is a legal document issued by the government in the name of the owner of a particular plot of land.

b. Assigned lands are those lands allotted by the government to poor landless families.

c. Those losing less than 1 acre of land will receive the annuity equivalent to 1 acre.

d. Now extended to 15 years.

77. In addition to the above, the other benefits include the following:

- Land Pooling Ownership Certificate (LPOC) Certificate with alienable rights exempting registration fee

- Annuities for the LPS farmers for a 15-year period
- Demarcation of village sites/extended habitations
- Monthly pensions for a period of 15 years to all the landless families
- One-time agricultural loan waiver up to INR 1,50,000 per family to farmers who are surrendering their lands under the LPS.
- Provision of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) wage labor/minimum salary up to 365 days a year per family
- Provision of housing to the houseless and those losing houses during development
- Skill development trainings with stipend for cultivating tenants, agricultural laborers, and other needy individuals to support alternative livelihoods
- Interest-free loans up to INR 25 lakhs to all the poor families for self-employment
- Free Education Policy and Free Health Policy as stipulated.

78. As of September 2024, about 28,740 farmers have pooled their land and received about 64,765 returnable plots, with 68 percent of them registered, and some of them have also exercised their right to sell to new buyers. With the establishment of 11 Competent Authority Offices (CAOs) in villages and an additional 3 offices only for registration, it is expected that all registration will be completed by the end of January 2025.

Land pooling benefits - the story of farmers at Lingayapalem village

(1) a farmer from Lingayapalem recalled witnessing other cities' congestion and narrow streets, which often caused frustration. When he first heard about the plans for Amaravati, he felt a surge of hope for a better-organized urban space. Trusting the vision presented by the government, his family willingly contributed 30 acres to the land pooling scheme, receiving an allotment of 45,000 square yards in return. The farmer remained curious and followed the project updates closely. Now, with the new government in place and activities resuming, he is reassured that the project is back on track. He knows the exact location of his land, including 6,000 square yards situated in a non-pooled area of Lingayapalem village. He and his family receive about 30 lakhs as an annuity every year. They are very happy as the earnings from the farm were less than the annuity or, at best, equivalent to the annuity. He recalls that at the time of land pooling, the average land rates in the village used to be about INR 2,000–INR 4,000 per square yard, which has now gone multi-folds to about INR 50,000–INR 60,000 per square yard.

(2)Another farmer from the same village who owned less than 2 acres of land and gave them for land pooling and got returnable plots. Sold one of his returnable plots received from the land pooling, and bought 5 acres of land in neighboring areas about 30 km away. This has been the story of many of the farmers who sold part of their returnable plots and bought much bigger land than the original farm elsewhere within 50–60 km and retained part of the land to enjoy further appreciation.

(3)A farmer with government-assigned landowner, given land for land pooling and received returnable plots. He has 3 children—two daughters and a son—with the support from the added benefits of land pooling, one of his daughters has completed MBBS, is doing MD (Gynecology), and getting a further stipend from the state government program; the other daughter is doing M.Tech and is employed in a government office. The son is working as a real estate agent, given emerging opportunities for land transactions in the Capital City. He mentioned that it was difficult to pay his daughter's fee had there not been any support from APCRDA.

(4)....Another woman from the community highlighted the tangible benefits of the Arogyasri scheme, a universal health insurance program that has provided crucial support to families affected by the development. Although her family falls above the poverty line, she has been able to access health care services through empaneled hospitals under the scheme.

Source: World Bank-ADB consultations with villagers in Lingayapalem village. September 23, 2024.

79. The pooled land has not been used for agricultural purposes since then, except for a few plots that were cultivated because they had been vacant for the past five years (2019–2024). These plots are now ready to be vacated as the project begins. Landowners have been allocated their new parcels with associated development rights established in the Master Plan. As part of the arrangement, the GoAP planned for a land use pattern under the LPS, allocating 30 percent for roads; 10 percent for parks, gardens, and open spaces; 5 percent for affordable housing; 5 percent for social infrastructure; and the remaining 50 percent to be distributed between the APCRDA and contributing landowners.

80. The calculation of annuity to the LPS farmers was based on net income per acre of land (separately for wetland and dry land). The farmers' annuity was initially set at INR 50,000 per acre for Jareebu/irrigated land and INR 30,000 per acre for dry land, with a 10 percent annual increase over a 10-year period. It now stands at INR 95,000 per acre for irrigated land and INR 57,000 per acre for dry land and has been extended for an additional five years, until 2029–30, without any further annual increase. All the beneficiaries under the ACC Project get free education (including graduation, postgraduation, and technical degrees [reimbursement model with government fee rates]) and free health services (with a cap of INR 25 lakh per year).

81. To encourage the remaining farmers to participate in the LPS, the GOAP introduced a new amendment (vide GO MS. No. 92, dated September 20, 2024) which offers returnable plots on a first-come, first-served basis, replacing the previous lottery system for selecting available plots. As a result, the APCRDA expects more farmers are coming forward to pool their land. Between August and September 2024, about 151 farmers consented to pool about 140 acres of land. With the establishment of CAOs in the prospective villages, it is expected that the LPS will move faster. Discussions with the APCRDA team as well as farmers and SHGs suggest that a majority of the pending land in the LPS villages is largely because of family disputes and/or title issues. Some of these issues may be resolved with the assistance of surveyors and revenue officers stationed at the APCRDA CAO at the village level. The APCRDA CAO is headed by a Deputy Collector, with a Tahsildar, two Deputy Tahsildars, two Data Operators, two Surveyors, and a Social Facilitator to address any queries from farmers and facilitate addressing land-related issues and concerns. In addition, the APCRDA's Additional Commissioner convenes an open meeting every Friday at the village level for the cluster of villages, to address any grievances, including land-related issues. This has further resulted in more farmers coming forward to pool their land, as evident from Table 6.

Table 6. Weekly Progress on LPS (August–September 2024)

S. No.	Dates	Week	No. of Farmers	Consent Received For Extension (acre)
1	05-08-2024–11-08-2024	1	48	43.513
2	12-08-2024–18-08-2024	2	18	21.445
3	19-08-2024–25-08-2024	3	17	6.7725
4	26-08-2024–01-09-2024	4	11	8.7675
5	02-09-2024–08-09-2024	5	7	12.24
6	09-09-2024–15-09-2024	6	12	9.9125
7	16-09-2024–22-09-2024	7	38	36.924
Grand Total			151	139.5745

Source: APDRDA, September 2024.

82. As of September 2024, approximately INR 1,534.74 crores have been paid to the farmers as an annuity between 2015 and 2024, and the annuity for the current year (2024–25) is being processed. Farmers' annuities are paid on or before May 1 each year. However, since 2019, the annuity for all assigned land¹³ has been withheld citing cases of transfer of assigned lands against the allotment rules, leading to an investigation by the GoAP under the POT Act. With the new government in place since July 2024 and the ACCDP progressing, the GoAP made an attempt to address the withheld annuity issue of the assigned land at the earliest in a rightful manner. CAOs are now verifying the original owners in the records, and annuity payments for assigned lands are expected to resume shortly to the righteous owners. However, a policy decision may be required before this can be fully implemented, including determining any further actions where assigned land has already been transferred.

Table 7. Compensation Paid to Landowners by Financial Year 2023–24

S. No.	Financial Year	Annuity	
		No. of Landowners	Amount Paid (INR, crores)
(2014–19)			
1	2015–16	28,631	149.44
2	2016–17	26,420	145.74
3	2017–18	25,560	156.93
4	2018–19	24,879	165.58
(2019–23)			
5	2019–20	24,336	170.42
6	2020–21	23,694	176.71
7	2021–22	23,105	185.35
8	2022–23	26,043	192.84
9	2023–24	23,915	191.73
10	2024–25	The process of payment has been initiated.	

Source: APCRDA, September 2024.

3.4.1.2 Land Acquisition

83. Given the requirement of land for the Capital City development, farmers who do not voluntarily accept the LPS will have their land acquired under the LARR Act 2013. One of the objectives of the LPS was to share the benefits of the increased land values resulting from the transition from agriculture to urban land use with landowners as well. A rough estimate by the APCRDA at the current rate (in September 2024) suggests that the LPS is a better option than the LARR. About 224.45 acres

¹³ Government land is allotted to poor citizens (mainly from SC, ST, and backward caste [BC] categories) for their livelihood purposes and non-transferable. In case of any transfer, it reverts to the government.

remain under the Phase 1 packages, which need to be procured either through the LPS mechanism or through the LA using the LARR Act 2013.

84. Although the APCRDA has been encouraging farmers to opt for land pooling, considered more beneficial, the RPF and RAPs prepared in 2018 and adopted by the GoAP are still valid. The RAPs may need to be updated to reflect current rates and any changes in alignment or land ownership, as some farmers may have pooled their land or altered ownership. The compensation package for the LA under the 2018 RPF and RAP includes the following, subject to the unit rate being updated for the current year:

- (a) Compensation is set at 2.5 times the higher of two land values: either the reference rate for land prices in government guidelines used for property registrations or the value from the top 50 percent of registered sale transactions over the preceding three-year period, significantly exceeding the 'replacement cost'.
- (b) A replacement house will be provided for each house lost in the process, with no deductions for depreciation or salvage value.
- (c) One-time resettlement allowance of INR 50,000.
- (d) Subsistence allowance of INR 3,000 per month per family for 12 months. For a Scheduled Caste (SC)/Scheduled Tribe (ST) family, an additional amount of INR 50,000.
- (e) Employment for one member/affected family or INR 5 lakh per family or INR 2,000 per month per family for 20 years.
- (f) One-time transport allowance of INR 50,000.
- (g) INR 25,000 for the construction of a cattle shed.
- (h) One-time financial assistance of INR 25,000 for artisans, self-employed, and commercial landowners.
- (i) Separate cash compensation for any land improvements such as buildings, trees, wells, and crops.
- (j) Additional benefits such as training and skill development for all affected families.

85. Landowners who chose to participate in the LPS have benefitted from the market value of their returnable plots. Although the area of returnable plots is smaller—up to 30 percent of that of the original plot—given the change of classification from rural to urban (residential and commercial) and access to infrastructure, LPS farmers have already recovered the value of their original plots. Reports indicate that as of September 2024, the market rates for land are significantly higher, estimated to range from 10 to 15 times the original price in 2015. according to estimates by the Real Estate Developers' Association of India (CREDAI), land price in the area appreciated five times between 2015 -2019 and hovered around INR40 k to INR50 k per square yard on the main roads of ACC in June 2024. Table 8 compares the benefits obtained through LA under the LARR 2013 versus those gained through the LPS.

Table 8. LA versus LPS Benefits to Farmers (INR/Acre)

	LA		LPS	
	Item	Value (INR)	Item	Value (INR)
1	Basic value	10,15,000	Annuity @ INR 50,000 per acre with increase of 10% every year	7,25,000
2	Factor value	12,68,750	Residential returnable plot (1,000 square yard × INR 50,000) (open value per square yd.)	5,00,00,000
3	Solatium 100%	12,68,750	Commercial Returnable Plot	2,70,00,000
4	12% AMV (12% of INR 12,68,750)	1,52,250	—	—
	Total (2 + 3 + 4):	26,89,750	Total (1 + 2 + 3)	7,77,25,000

Source: Rough Estimate by AP CRDA, September 2024.

Story of farmers who did not join land pooling

....A farmer having 8 acres of land, who has not yet joined the land pooling indicated his willingness to do so, provided his individual concerns are addressed, such as seeking exemption for his other house and cattle shed, which is across the road and beyond the Gram Kantam area as part of Gram Kantam area. And as and when it gets resolved, he is ready to pool all his land. However, he noted that many of his issues are policy related and would require specific solutions beyond the existing grievance mechanisms.

These farmers are open to participating in the development, but they seek tailored assurances that respect their needs.

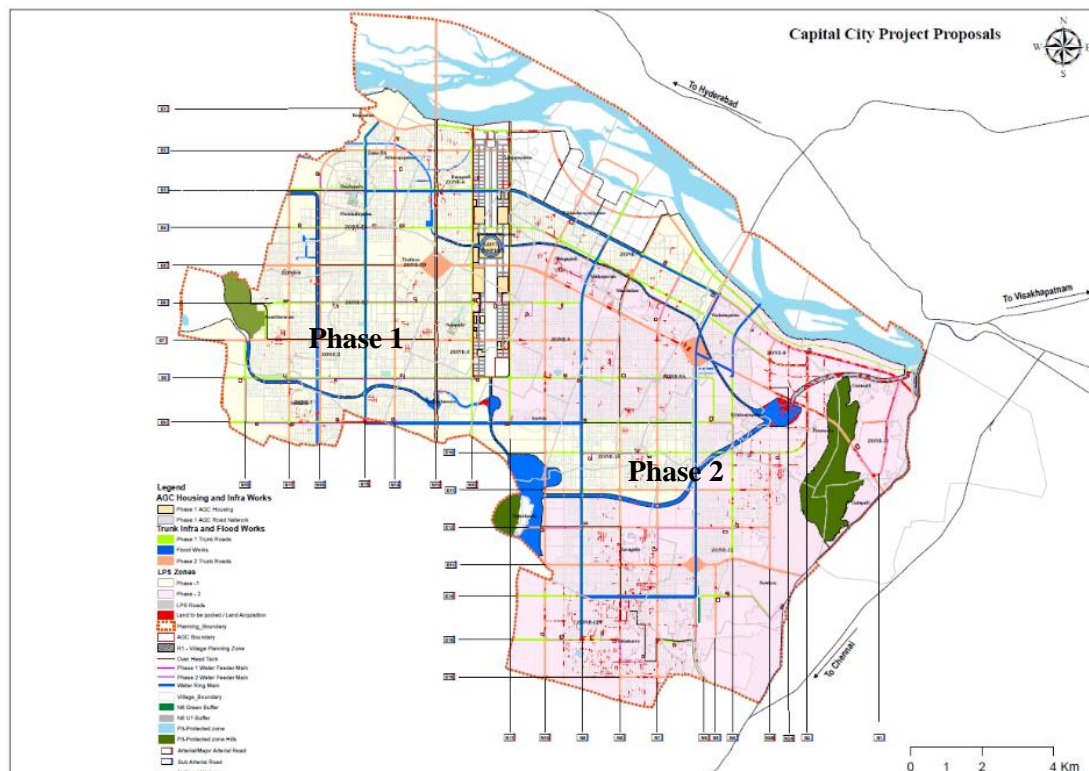
Source: World Bank-ADB consultations with villagers in Lingayapalam village. September 23, 2024.

86. As of September 2024, about 250 acres (248.36 acres) of land have been acquired—for which an award has been passed. The APCRDA is reviewing the LA status for these lands and plans to address this before the end of January 2025. In addition, 138 legal cases related to LA, covering 1404.90 acres, are pending in court at various stages. The majority of these cases are because of procedural lapses. These are largely from Phase 2 villages.

87. A rough estimate of land to be procured—either through the LPS or through LA—for Phase 1 activities is about 224.45 acres. This includes 13.49 acres for the AGC, 35.2 acres for the LPS infrastructure, and 175.76 acres for trunk infrastructure. Most of the AGC land (13.319 acres - 22 farmers) is part of the LA process initiated earlier and is under a stay order.

88. Figure 1 shows the parcels of land that need to be procured (indicated by patches in red) either through land pooling or through LA for Phase 1 and 2.

Figure 1. Parcels of Land Pending Procurement



3.4.1.3 Physical Displacement

89. The RAP for the 10 sub-arterial roads and flood mitigation activities in 2018 highlighted the need for a negotiated settlement (NS) and physical resettlement of houses and structures affected by

the planned sub-arterial roads, as outlined in the approved Master Plan for ACC Development. These 10 priority roads require private land in the village areas and will result in the physical displacement of 214 families across several villages. This includes 174 families on private lands, 38 families residing on government lands within village areas, and two tenant families.

90. As part of an earlier RAP implementation in 2018, resettlement areas were identified within the same village, allowing displaced families to relocate within a distance of less than 1–2 km. Roughly 124 out of the 214 physically displaced families agreed to move to these resettlement sites while the earlier RAP was under preparation. A resettlement colony was established for the project-displaced families from Nowluru village affected by the N4 and E14 roads. Following the consent for the NS, resettlement plots were allocated through a lottery process, resulting in 79 families receiving plots as of July 2018. Among these, 55 project-affected families on the E14 and N4 roads were accommodated in the resettlement layout prepared in Nowluru. Civic amenities, including cement concrete roads, underground drainage, drinking water, and electricity, were developed in these rehabilitation colonies, which are well-connected with the other areas of the Capital City. In addition, the APCRDA resettled some of the displaced families using the same policy. A visit to the Thulluru resettlement colony and discussions with resettled families confirmed adherence to the NS Policy (as per GO MS. No. 153 dated April 19, 2017).

91. Section 124 of the APCRDA Act 2014 empowers the authority to acquire any property by way of an NS. If the NS fails, the provisions of the LARR Act will apply in accordance with the requirements of the development plan.

92. The NS Policy was established as part of the RAP¹⁴ and is applicable only for private lands within village boundaries; these lands are not eligible for the LPS. Under the NS process, the landowners receive a package that includes land-for-land, compensation for assets, construction grant, transitional assistance, negotiation on the location of the resettlement site, time for shifting, and rental allowance for advance shifting pending construction of a new house, culminating in a formal agreement between the parties. The affected households living on government lands required for the project will receive support for alternative housing and transitional support.

93. Some of the Phase 1 packages, particularly the trunk infrastructure packages, overlap with these 10 priority roads and flood mitigation activities. As a result, the need for a NS and physical displacement will also apply to the current packages. For Phase 1 packages, about 224.45 acres of land needed to be procured. This includes 13.49 acres for the AGC, 35.2 acres for the LPS infrastructure, and 175.76 acres for trunk infrastructure. The APCRDA has already initiated the process of identifying and verifying the resettlement requirements for each of these packages. However, it may take some time to determine the exact number and type of impacts from the priority road packages and flood mitigation measures regarding resettlement requirements. The details of the Phase 1 packages are presented in Annex 5.

94. Going forward, the APCRDA needs to prepare and update Resettlement Plans for the packages in accordance with the national law, Right to Fair Compensation and Transparency in LARR Act, and its own RPF, which was approved in 2018 with updated cost norms. The process for NS is well-defined in the APCRDA Act, the RPF, and earlier RAPs. The APCRDA has extensive experience in carrying out such processes.

3.4.2 Labor Influx and Management

95. A rough estimate based on previous work in the ACC area indicates that, at peak construction, approximately 15,000 to 20,000 laborers will be engaged in ACC-related contracts. Additionally, with private sector work potentially starting around the same time, an extra 2,000 to 3,000 workers are

¹⁴ Final Resettlement-Action-Plan-for-10-Sub-Arterial-Roads, August 2018. APCRDA.

expected to be employed. This suggests a total workforce of approximately 17,000 to 23,000 during the peak construction period.

96. It is expected that as soon as the LPS infrastructure¹⁵ work progresses, many farmers will begin construction to take advantage of these developments. This is expected to add another 2,000 laborers, in addition to the ACC-related contracts and the private sector work mentioned above. This construction activity is likely to extend well beyond the current project period—possibly lasting for the next 10–15 years.

97. A significant number of laborers are expected to be interdistrict and interstate migrant workers from states such as West Bengal, Odisha, Jharkhand, Uttar Pradesh, and Bihar. Contractors are required to register these workers under the Interstate Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, and comply with its provisions. Additionally, contractors must ensure that the laborers are registered with the Labor Department.

98. The influx of laborers is likely to have adverse social impacts on the local communities, particularly as these communities are rural or semi-urban and may lack skills for specialized jobs. Hence, it is important to map and assess the skills and capacities of the existing workforce, including landless laborers, and prepare skill development plans. Furthermore, mechanisms should be established to create local job opportunities and promote the employment of local laborers by contractors.

99. There is also a need to define site-specific measures for contracts under the ACC development project before the contractors begin work and establish a Code of Conduct for workers and contractors. This code should include compliance with OHS requirements, including (a) wearing PPE in the workplace at all times; (b) ensuring nondiscrimination when interacting with the local community based on race, ethnicity, gender, religion, disability, sexual orientation, gender identity, or social or health status; (c) maintaining a respectful attitude while interacting with the local community; (d) prohibiting sexual harassment (SH), particularly toward women and children; and (e) prohibiting all forms of violence, including sexual violence and/or GBV.

100. These measures should be communicated to workers through awareness and community mobilization sessions, audiovisual material, and other methods by the contractor to ensure proper compliance, monitoring, and timely interventions. Whenever feasible, local labor, semiskilled workers, skilled personnel, and women workers should be prioritized for project work. Contractors should also undertake awareness campaigns for the laborers they employ.

101. Adequate monitoring and adaptive management will be necessary to mitigate risks arising from the potential impacts of labor influx. A site-specific Labor Influx Management Plan and/or a Workers' Camp Management Plan should be developed.

102. During the construction phase, contractors will be responsible for the construction of temporary labor camps and providing the workers with adequate facilities, including water supply, electricity, sanitary facilities, medical aid, childcare centers, and other basic amenities in compliance with the Indian Labor Laws. It is assumed that the camps will be located close to the construction site and follow the APCRDA's guidance and standards as per the Building and Other Construction Workers Welfare Cess Act 1996. Improper drainage, sanitation facilities, and SWM facilities close to labor campsites may lead to negative impacts on the surrounding environment. These issues should be carefully planned and monitored to ensure adherence to compliance standards. While these are built as part of the contractor's obligations, APCRDA and ADCL through PgMC and PMC plans to further ensure compliance through regular monitoring mechanism under the proposed Program.

¹⁵ The LPS infrastructure includes the development of road networks (collector roads and streets), stormwater drainage systems, water supply lines, wastewater management systems, power supply infrastructure, and ICT infrastructure, ensuring efficient urban services.

103. It is important that the bid and contract documents clearly outline the contractor's responsibilities for mitigating adverse impacts, making these obligations a contractual requirement. Appropriate mechanisms should be established for regular reporting and addressing noncompliance.

104. Construction activities in the proposed project may lead to the use of local roads, affecting traffic patterns and local infrastructure while increasing noise, dust, and other nuisances. This could result in conflicts with local communities. The presence of camps and camp workers may also affect these local communities. These impacts should be integrated into the tender and contract documents to ensure that the contractor is obligated to mitigate the construction-related impact on local residents.

105. Contractors and their sub-contractors must comply with all existing Indian Labor Laws, regulations, notifications, and bylaws issued by the state or central government or local authorities (refer to Annex 1). The contractor shall indemnify APCRDA and its associates against any actions taken by the Competent Authority due to contraventions, including any amendments. Suitable clauses addressing these obligations will be included in the bidding documents issued to contractors and subsequent agreements entered subsequently, before the issuance of the letter to 'proceed to work'.

106. The Project Management Consultant (PMC) for each contract will monitor and report on the progress, including E&S activities.

107. Since some construction activities will continue beyond the project period, it may be beneficial to establish labor dormitories in a decentralized manner across different areas of ACC. These dormitories could be managed by village committees or SHGs and rented out to small contractors for laborers' accommodation. Eventually, they could also be made available for rent to informal workers in the city. This approach would address various risks and issues, such as providing safe and hygienic living spaces for workers and integrating labor camp waste into city services while also creating income opportunities for SHGs and village committees.

3.4.3 Impacts on Livelihoods and Vulnerable Population

108. One of the key social issues identified is the loss of land and assets, income, means of livelihood, access to productive resources, and the loss of community assets resulting from land pooling or LA for the Capital City. This also includes the transition from an agriculture-based economy and lifestyle to an urban one.

109. A household survey conducted before the LPS in 2015 suggests that about 47 percent of households were engaged as agricultural laborers and 27 percent as non-agricultural laborers, and only about 5 percent were fully engaged in farming. However, those having other occupations are also engaged in farming. In addition, many of the agricultural laborers used leased land for cultivation. Assuming that agricultural laborers primarily either worked on someone else's farmland or rented land to cultivate, this suggests that only about half of the households were primarily dependent on agriculture. A significant proportion of families living in these villages may have been working in neighboring cities and towns such as Vijayawada and Guntur.

Table 9. ACC Area: Details of Occupation (as per Household Survey 2015)

Occupation	Households	%
Agricultural labor	17,835	47.0
Non-agricultural labor	10,331	27.2
Business/self-employed	4,395	11.6
Private job	1,919	5.1
Farming/agriculture	1,872	4.9
Pensioner	111	0.3
Government job	898	2.4

Occupation	Households	%
Elderly	598	1.6
Total	37,959	100.0

Source: APCRDA.

110. Since the implementation of LPS in 2015–16, there has been a significant shift in occupational patterns, with more people moving into alternate occupations. This is evident from various anecdotal examples:

- Consultations revealed that many households have shifted to semi-urban livelihoods, taking up petty jobs and services, trade, and sand mining (particularly those living along the river). In three to four villages, some residents continue working as agriculture laborers in neighboring villages (particularly those living in peripheral villages).
- In Amaravati, around 6,000–7,000 people work in the AP Secretariat and High Court, with an additional 2,000–3,000 people commuting daily for work or court cases. To support this influx, over 1,000 people, many of whom are local and from landless households (male and female), provide basic services such as transportation, food, and other small services to both the floating population and employees in these institutions.
- Interactions with SHG women members (of whom at least 50 percent belong to landless families) suggest that many of them, along with their husbands, have started small businesses such as eateries, shops, or roadside stalls trading in vegetables and fruits. Others have found employment in larger shops and restaurants, with some receiving skill training through earlier established programs. Around 80 percent of women who previously worked as agricultural laborers are now engaged in various other activities.
- Direct employment of the local population from ACC villages to the Secretariat, High Court, and other local institutions is about 2,600. In addition, around 3,300 individuals have become street vendors.

Table 10. Employment Generation Across Institutions

S. No.	Name of the Institution	Employment for Local People	Other Staff
1	Amritha University	65	120
2	SRM University	600	387
3	VIT University	700	400
4	NID	87	80
5	AP - Secretariat	170	4,154
6	High Court - AP	90	2,060
7	Manthena Satyanarayana Ashram	600 (90% women)	200
8	Village sanitation	270	
Total		2,582	7,401

Source: APCRDA, September 2024.

Landless Laborers' Perspective on Amaravati

The landless laborers of Lingayapalem view the development of Amaravati with a mixture of hope and anticipation, reflecting on the prosperity they once experienced during the initial construction phase and the opportunities they believe the project can bring.

One landless laborer recounted the years between 2015 and 2019 when construction activity in Amaravati was in full swing. During this time, he earned a good income by selling vegetables to workers and passersby. Describing those years with a touch of nostalgia, he said, "During those years, even if you poured two bags of

salt on the roadside, you could easily make 2,000 rupees.” Those were prosperous times for him and many others, but since the construction halted, he has struggled with employment. Now, he remains hopeful that the Capital City’s development will resume, bringing back the opportunities that once supported his livelihood.

Another landless laborer shared a similar sentiment, recalling how he used to sell tea to workers at Rayapudi junction during the peak of construction activities before 2019. He easily earned 2,000 rupees a day during this period. However, since the construction came to a halt, his income has drastically decreased. Still, he remains optimistic that once the development restarts, those days of economic opportunity will return, providing a much-needed boost for him and others in the community.

A third landless laborer invested in an autorickshaw after the land pooling, recognizing the growing demand for transportation services in the region. He now plans to purchase a four-wheeler to expand his services as the Capital City progresses. He mentioned that many other landless laborers have also bought autorickshaws and have been using them to transport passengers between villages, universities, and Vijayawada, capitalizing on the increased movement of people in the area. He mentioned that before land pooling there used to be about 20 autorickshaws in these villages, which has now increased to more than 1,000 autorickshaws. He is optimistic that the development of Amaravati will continue to provide new opportunities for individuals like him to improve their livelihoods and secure a more stable future.

A woman from a landless laborer family shared that her husband, who is a mason, used to lead a team of 20 workers during construction activities before 2019. At that time, he was earning around 90,000 rupees per month. However, since the construction slowed, his income has dropped to 30,000 rupees per month. She is hopeful that once construction activities resume, her husband will be able to return to his previous earnings, helping to improve their family’s financial situation.

Overall, the landless laborers of Lingayapalem and other villages are strongly supportive of the Amaravati Capital City project, viewing it as a critical pathway to economic stability and growth. They look forward to the resumption of construction and the return of opportunities that will help them rebuild their lives and livelihoods.

Source: World Bank-ADB consultations with villagers. September 23–24, 2024.

111. Over 25,000 students are enrolled in the institutions within the area, with approximately 18,840 living on campus (VIT University - 11,650; SRM University - 6,350; NID - 250; Amritha University - 590). A rule of these educational institutions stipulates that students living within a 20 km radius of these institutions are not provided with hostel accommodations but instead receive bus service for transportation. Apart from those commuting, students from neighboring districts, particularly those from middle- or lower-middle-income backgrounds, prefer to live in rental accommodations in nearby villages and use the bus services as they are more affordable. This has led to an increased demand for paying guest accommodations, providing local residents an additional source of income by offering these services.

112. About one-third of the employees (about 2,000) working in the Secretariat and High Court, especially the Class-3 and Class-4 employees, live in the nearby villages and rent—some live with family while many opt for shared accommodation. This has created housing demand in these villages, resulting in a 30–40 percent increase in housing stock, including the expansion of existing buildings to accommodate rentals.

..... Anticipating growth and economic opportunities also inspired some farmers to invest in the construction of housing for rental and paying guest accommodations. One farmer built a five-storied house, expecting an influx of workers and contractors associated with the Capital City’s development. Unfortunately, these accommodations have remained vacant since construction slowed. Nevertheless, he remains hopeful that as development resumes, the demand for rental spaces will return, and his property will finally serve its intended purpose. He pointed out that, in the past, many managers and senior staff of contractors preferred living outside camps with their families, which contributed to the demand for housing.

Source: World Bank-ADB consultations with villagers. September 23–24, 2024.

113. There is expected to be additional demand for accommodation in the nearby villages during the construction of the ACC, as many of the supervisory-level staff (roughly 5 percent of the total workforce, or around 800–1,000) are likely to prefer renting accommodation in the villages rather than staying in construction camps.

114. Around 21,374 landless families, identified as landless laborers working in the Capital City area, were eligible to receive a combination of livelihood restoration benefits, including (a) a pension of INR 2,500 per month per family for 10 years (increased to INR 5,000 per month as of February 2024, with the period extended to 15 years), with annual adjustments linked to the inflation index; (b) employment under MGNREGA for up to 365 days per year; (c) access to interest-free loans for setting up enterprises; (d) opportunities for skill upgrading and training; (e) provision of subsidized food; and (f) free access to medical and educational benefits at designated facilities.

115. Data from 2018 indicate that the average monthly income of landless households before the announcement of the ACC Project was approximately INR 5,000 per household (actual: INR 4,694). A subsequent survey conducted in 2018 shows that the average monthly income had increased to approximately INR 10,000 per household (actual: INR 9,636).¹⁶ This figure included the combined monthly income of both a man and a woman per household, as well as a monthly INR 2,500 pension provided by the APCRDA.¹⁷

116. A social security pension of INR 4,000 per month (covering old age, widow, and single women pension, among others) is provided to 16,061 families in the ACC area. Of these, about 5,504 landless families receive both the social security pension and the APCRDA pension.

117. Currently, around 17,176 landless families receive a monthly pension from the APCRDA. The reduction in the number of families receiving the pension (a decrease of 4,198 families) is attributed to a six-step validation process¹⁸ introduced by the government from 2018 onward.

118. **Economically weaker section (EWS) housing.**¹⁹ In 2015, a Household Survey identified around 7,000 families in the ACC area without permanent ('pucca') houses, living either in temporary structures on encroached land or as tenants. The APCRDA prepared a Detailed Project Report for 7,876 beneficiaries and received administrative approval (vide GO MS. No. 213) to build 5,024 houses in Phase 1 and 2,852 in Phase 2. All 5,024 houses in Phase 1, at eight different sites, have been completed and handed over to beneficiaries (though 247 remain vacant). These multi-story units (G+3) come in three sizes: 430 sq ft, 360 sq ft, and 300 sq ft. The 430 sq ft and 360 sq ft units were allocated based on an initial down payment of INR 1 lakh and INR 50,000, respectively, with a 20-year EMI of around INR 3,000. The 300 sq ft units were provided free of charge. However, a policy change in 2019 halted the construction of the remaining 2,852 houses planned for Phase 2.

119. With no wholistic and clear update on the current livelihood pattern of the local residents in the ACC villages, including LPS farmers and the landless laborers, the program intends to conduct an assessment to ascertain the status and to inform future strategy and action plans toward livelihood restoration.

¹⁶ Resettlement-Action-Plan-for-10-Sub-Arterial-Roads. APCRDA August 2018.

¹⁷ Payne, G. 2018. *Assessment of Land Assembly Instruments and Their Implementation*.

¹⁸ The six-step validation aims to ensure common eligibility for all categories of social security pensions and includes the following criteria: (a) total family income should be less than INR 10,000 per month in rural areas and INR 12,000 per month in urban areas; (b) age should be as per Aadhaar card; (c) total landholding of the family should be less than 3 acres of wet (or) 10 acres of dry (or) 10 acres of both wet and dry land together; (d) family should not own a four-wheeler (taxi, tractors, and autos are exempted); (e) no family member should be a government employee or pensioner; (f) monthly electricity consumption of a family dwelling unit (own/rent) should be less than 300 units per month; (g) family in municipal areas should own less than 750 sq ft of built-up area; and (h) no family member should be an income tax payee.

¹⁹ The EWS are those belonging to the unreserved category, meaning that they are not under any reserved category such as SC, ST, or (OBC) (who already enjoy the benefits of reservation), with an annual family income being less than INR 8 lakh as per the previous financial year.

3.4.4 Voice and Accountability

120. During the initial period of 2015–19, the APCRDA implemented various mechanisms to strengthen the GRM, aimed at addressing the concerns of farmers and project-affected families. Some of these mechanisms either became defunct or were dissolved after June 2019. However, the initial efforts included the following:

- (a) **Citizen's Advisory Committee.** The committee consisted of 12 members, including representatives from academia, eminent citizens (including women), and landowners/laborers from villages in the ACC area. The committee conducted regular field visits to interact with affected people, hear their grievances directly, and provide advice to the implementing agency (APCRDA/ADCL) regarding resettlement implementation and policy matters. Unfortunately, this committee was dissolved by the government in 2019 and has not met since.
- (b) **CAOs.** Initially, 26 CAOs were established, one in each village, staffed with a Deputy Collector, a Tahsildar, two Deputy Tahsildars, two Data Operators, two Surveyors, and a Social Facilitator. These offices were intended to address farmers' queries and land-related concerns. However, after 2019, the number of CAOs was reduced to five, with minimal staffing, limiting the services offered related to land or LPS. Recently, the APCRDA has taken steps to revive and set up at least 11 CAOs focusing on villages where the need for land pooling/LA is greater.
- (c) **Social Facilitators.** Since 2015, the APCRDA has deployed Social Facilitators in each of the 25 Gram Panchayats (each Gram Panchayat is roughly a village). These Social Facilitators are responsible for mobilizing farmers for the LPS and addressing other issues such as pensions, land-related issues, skill development, sanitation, farm-related, and so on). Currently, only 15 Social Facilitators (nine male, six female) remain in service.

121. In 2019, the then government unilaterally announced that the state would have three capitals instead of Amaravati as the sole capital. This triggered widespread protests from farmers who had given up their land for the ACC development, as they were promised developed returnable plots by the government. The government's attempt to control the protest with force led to violent clashes, resulting in a breach of trust. The farmers, feeling betrayed, turned to legal action to resolve their grievances. The protest continued for 1,631 days, until it finally ended on June 12, 2024, with the election of a new government that had initially proposed Amaravati as the state capital, signaling a return to the original plans for the Capital City.

Figure 2. Farmers' Protests



Stories of Support in Favor of Amaravati Capital City Development

.....A farmer from Lingayapalem, who had once grown three crops a year on his fertile land, shared how he and many others gave their land willingly when the Chief Minister called for land pooling. Their belief in the vision of Amaravati as a flourishing capital motivated their decision. This farmer is steadfast in his support for the project and urges institutions such as the World Bank to provide loans to help realize the dream of the

Capital City. He believes the development will benefit the entire region and elevate the local community's standard of living.

.....A farmer said that although some farmers felt apprehensive during the initial call for land pooling, particularly small farmers, they trusted the Chief Minister and contributed their land to the project. However, after significant progress was made from 2014 to 2019, they were hurt by the subsequent halt in development. Now, with the return of the former Chief Minister, they feel hopeful once again.

.....A farmer in Rayapudi further demonstrates their strong belief in the project's success. They brought in construction equipment such as cranes with the hope of renting them out to contractors once construction resumes. Four cranes were seen in Rayapudi, highlighting the farmers' optimism and proactive efforts to contribute to the construction activities.

In conclusion, despite delays and challenges, the farmers of Lingayapalem, Rayapudi, and neighboring villages remain united in their support for the Amaravati Capital City project. They are eager to see the project move forward and are hopeful that financial assistance from institutions such as the World Bank will help make this vision a reality, benefiting not only them but also the wider region. Their readiness to adapt, invest, and participate demonstrates a strong commitment to the project's success.

Source: World Bank-ADB consultations with villagers. September 23–24, 2024.

122. Each village has a Gram Sachivalayam (also known as Village Secretariat), a system initiated by the previous government in AP in 2019 to decentralize administration and provide access to services and welfare programs from all government departments in one place. The GoAP, through its Gram Sachivalayam and Ward Sachivalayam (GSWS) Department, regularly appoints Village Secretariat staff on an outsourcing basis to deliver these services. Each Village Secretariat has about 10 staff members, including an Engineering Assistant, Welfare and Education Assistant, Village Surveyor, Digital Assistant, Village Horticulture Assistant, Auxiliary Nurse and Midwife (ANM)/Ward Health Secretary, Village Revenue Officer, Woman Police, and Junior Lineman. The new government plans to restructure this system and restore the role of Gram Panchayats to the forefront. There is an expectation that some key staff from the Village Secretariat will remain and support the functioning of the Gram Panchayats.

123. This Village Secretariat system was introduced to improve governance and accelerate service delivery to citizens. This includes services such as payment of property taxes, registration for welfare schemes, grievance filing, as well as mapping and monitoring of services. A visit to the Village Secretariat suggests an active set of staff are involved in tasks such as identifying and distributing social security and the APCRDA pensions. They serve as the first point of contact for villagers for any government services and complaints.

124. Given the farmers' long struggle in favor of the ACC (many of them participated in the 2019–24 protests in support of land development), discussions with these farmers indicate a need for an apex committee at the city level that includes farmers. Reintroducing a city-level advisory and monitoring committee such as the earlier Citizen Advisory Committee model—with participation from farmers, landless, women, and civil society, and the APCRDA—will be crucial going forward. This committee could serve as a forum to voice farmers' concerns to the government and monitor ACC operations on a monthly or quarterly basis.

3.4.5 Grievance Redress Management

125. The APCRDA has an effective and robust GRM in place, and its management is committed to ensuring that the system functions properly. The GRM has elaborate institutional arrangements for grievance redress, providing citizens with multiple avenues for submitting and registering complaints. From the APCRDA Commissioner to various department heads and community facilitators at the village level, officials are actively involved in receiving, recording, and resolving grievances.

126. **Public Grievance Redress Management System (PGRMS)** is a statewide single-window online portal for receiving grievances and suggestions, covering all government departments. It includes a toll-free number (1902) dedicated exclusively to receiving grievances. Grievances related to ACC are

routed to the APCRDA, and the progress of each case is monitored by the Commissioner at the organizational level and the Chief Minister of AP at the state level during regular review meetings. Citizens can track the progress of his/her application online or via the toll-free number. A dedicated call center has been set up to register and provide information on the status of grievance applications. If grievances are not resolved within a certain time frame, they are escalated to higher authorities. During August and September 2024, 176 grievances were received (158 from the Capital City and 18 from the Capital Region), and of them, 158 were redressed (142 from the Capital City and 16 from the Capital Region). These grievances are mainly related to the sanction of pensions, housing loan eligibility, mutation in revenue records, LPS plot registrations, greenery development, and infrastructure.

127. **APCRDA's public domain.** The APCRDA also offers a dedicated space on its website for submitting grievances online, which are then redirected to the appropriate department heads or Competent Authorities in the villages, including ACC. The Education and Data Secretary at the CAO assists walk-in citizens in registering complaints. The well-developed system offers registration, acknowledgment, tracking, monitoring, and timely reminders based on the service level agreement time frame. Grievances are officially closed with digital signature of the responsible officer, to ensure accountability. The mechanism also includes grievance audits and feedback collection from complainants.

128. **APCRDA's unit-level grievance system.** Finally, citizens who would like to meet the APCRDA officials in person and/or are not able to use the PGRMS or APCRDA's public domain system, can meet the APCRDA officials at various levels (from the APCRDA Commissioner to Competent Authorities at the unit level) and communicate their grievances verbally or in writing. Additionally, the APCRDA's Additional Commissioner convenes an open meeting every Friday, which is attended by all Competent Authorities. This weekly meeting is similar to the Collector's weekly public grievance redress meetings that have been successfully held in the State of AP for several years.



129. **Right to Information (RTI) Act implementation.** A designated RTI officer is responsible for receiving and disposing of the RTI applications.

130. In addition to the above mechanism, the APCRDA had a few other channels for grievance redressal and is being revived: (a) the Mana Amaravati App and (b) Public Information Centers (PICs) at the CAO.

- (a) **Mana Amaravati App.** The APCRDA has also developed a mobile app 'Mana Amaravati', which provides information on every aspect of the implementation of the APCRDA's activities and registers grievances (with the backbone being the APCRDA portal). The 'Mana Amaravati' application integrates 20 services such as finding information about plots, various social benefits, job opportunities, zoning regulations, master plans, e-Encumbrance, and Meebhoomi options. Users can view LPS layouts, access the Development Permissions Management System (DPMS), and book an appointment for plot registration.
- (b) **PICs** are planned to be revived and established along with the CAOs in 11 villages within the ACC with information brochures and documentation regarding the project, as well as information regarding the various GRM channels. PICs are permanently staffed with community facilitators who are often village residents who have been trained by the APCRDA and are available to address questions, register complaints, and reach out to the APCRDA officials. These PICs will not only function as the frontline of information dissemination but also serve as places where project-affected people can register

grievances or queries. Grievances received through PICs are registered first in grievance log books and then entered into the APCRDA's unit-level grievance system.

3.4.6 Gender equality, SEA/SH issues

131. The development of the ACC is based on the Master Plan prepared. The plan is built on people's vision for a happy, sustainable, and livable city. The socioeconomic infrastructure for the city has been planned considering the needs of the elderly, differently abled, women, and children. The Master Plan is gender sensitive in the following ways:

- (a) Amaravati is driven by the tenets of inclusive growth and high living standards for all. It is planned with 5-10-15 principles to set livability benchmarks for the city—that is, no more than 5 minutes to emergency facilities, 10 minutes to recreation and open spaces, and 15 minutes to work. Each township (about 1 km × 1 km in size) will be equipped with education and health centers, as well as other basic facilities. The proximity of these services will permit quick and easy accessibility by women.
- (b) The city will be primarily powered by IT-enabled systems, which will offer smart solutions to improve people's lifestyles while increasing the efficiency in the use of public resources. As part of this exercise, an integrated command and control center is proposed to be set up, offering 24×7 security based on CCTV surveillance systems. With an emergency response time of under 10 minutes and an extensive security system, the city will create a safer environment for women.
- (c) Amaravati aims to facilitate urban mobility through an extensive public transportation system. The easy accessibility and availability of an efficient public transport system permit women to travel safely around the city. The Master Plan for Amaravati envisions the integration of all 29 habitations by roads, green corridors, dedicated walkways, and light emitting diode (LED) streetlighting. This will ensure that areas in the city are well-connected and not developed in isolation.

132. The gender-sensitive approaches adopted by the APCRDA include (a) targeting programs that empower women with skills required for employment in the city; (b) promoting gender equity in employment including equal pay, safe working conditions, and support for women entrepreneurs; (c) developing city planning and ensuring well-lit streets, safe public transportation, and accessible infrastructure that caters to the needs of women, children and the elderly; (d) enhancing social infrastructure, particularly schools, day care centers, and hospitals, with a focus on providing gender-sensitive services; and (e) implementing transit-oriented development aiming to improve commuting convenience by prioritizing the creation of a gender-sensitive public transport system.

133. The SHG movement in AP is strong, which is also reflected in ACC villages with a strong and large number of SHGs (2,427 SHGs, with 25,319 members—and together have accessed more than INR 100 crores per annum through links with the National Bank for Agriculture and Rural Development [NABARD] and other banks.

134. Of the 2,881 candidates who received skill training from the APCRDA, 2,094 were women. The APCRDA also promotes women-owned and women-led enterprises, which was evident from the discussions with SHG members. It is also important to note that the APCRDA pension is prioritized to be given in the name of the woman of the house. Similarly, the houses built for landless families are also registered in the names of women.

135. The RAP for the arterial roads prepared by the APCRDA in 2018 identified the gender gaps: (a) livelihood gaps for women include a lack of alternative employment opportunities due to the absence of suitable skills; (b) women receive lower daily wages than men, because they are less organized in groups/committees and thus have lower bargaining power; (c) women have lower literacy rates; (d) a large proportion of agricultural laborers were women who find it difficult to get job in the changing

urban setting; (e) women face long travel to avail MNEREGA works; and (f) there are awareness, capacity, and financial literacy gaps among women.

136. Potential risks regarding women's safety and security that may arise in the Phase 1 project interventions include (a) enhanced exposure to harassment and sexual violence for economically displaced female landless workers while traveling to work and (b) SH at the construction sites. Given that the project entails significant construction and movement of male workers, it may exacerbate risks of GBV in the communities near construction sites and temporary housing for workers. However, in the earlier construction activities before 2019, no major GBV-related issues were reported, as corroborated with women SHG members and local police officers of the area during consultation.

....A police officer in Tullur mentioned that before 2019, around 20,000 laborers were working in the area, with some renting houses in Tullur. The homeowners collected identification documents from these workers as a precautionary measure. He also noted that during the construction period, no incidents of crime and sexual exploitation or abuse (SEA) or sexual harassment (SH) were reported.

Source: World Bank-ADB consultations with Local Mandal level officials. September 23, 2024.

137. The SHGs/village-level committees along with the Mahila Police person from the Village Secretariat can play an important role in mitigating GBV-related issues. Also, these committees can periodically monitor the labor camps in their areas for any such issues. They need to be further trained by local NGOs working on GBV to understand the nuances and forward links for mitigating GBV risks.

138. The Code of Conduct for laborers should also have a section on gender and GBV and a mechanism for reporting and seeking support. The Gender Specialist at the APCRDA/PgMC/PMC, with additional support from resource persons (from local NGOs and maybe master trainers from SHGs/federations), can help regularly sensitize laborers on gender and GBV aspects.

139. The APCRDA, ADCL, and local educational and other institutions shall ensure functional internal complaint committees (ICCs) in their institution and create awareness among staff (and students where applicable). These shall be linked to referrals such as One-Stop Centers (OSCs) at Vijayawada or Guntur that have been set up by the Women and Child Development Department.

4 ASSESSMENT OF ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM, CAPACITY AND PERFORMANCE

4.1 Assessment of Institutional Capacity and Gaps

4.1.1 Implementation Arrangement

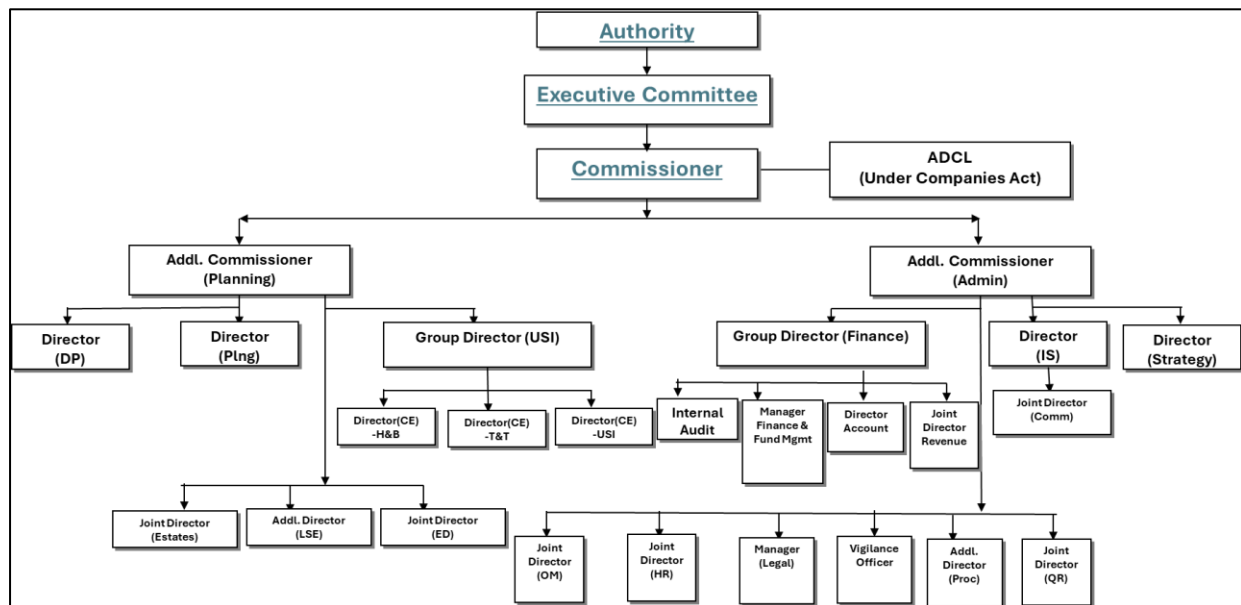
4.1.1.1 Amaravati Capital City Planning and Execution

140. The Program will be managed by the APCRDA, led by the Commissioner APCRDA. The APCRDA, established by the 2014 Act, oversees the planning, management, and implementation of ACC development, and is chaired by the GoAP Chief Minister. The APCRDA is supported by the ADCL, a corporate project implementation entity established by a GO and supports the implementation of infrastructure-related works. Provision of urban services, including O&M of most of the newly built infrastructure, will be the responsibility of the future ACC local government and related utility companies. However, until such entities are established, the APCRDA will be responsible.

141. As per GO No. 81 of the Municipal Administration and Urban Development Department (2015), the APCRDA is constituted with departments such as (a) the Planning Department, (b) the Urban Services and Infrastructure Department, (c) Estates and Environment Department, (d) Administration Department, and (e) Finance and Accounts Department. These five departments are further divided into 21 divisions and 42 sections, with a total of 778 posts. Of these, only about 278 are filled as of August 2024.

142. The APCRDA organogram is as shown in Figure 3.

Figure 3. APCRDA Organogram



143. For the proposed program, the APCRDA will establish a Project Management Unit within the existing structure, incorporating the necessary expertise. This will include setting up an Environmental and Social Management Division (ESMD), which will be further supported by a PgMC with expertise in E&S aspects. Though the ESMD will be housed in the APCRDA, it will also be responsible for the E&S activities and compliances by the ADCL. The PMCs hired by both the APCRDA and ADCL will play a critical role in overseeing and managing each major infrastructure works contract. While the PgMC will operate at the program level, facilitating coordination among all PMCs, planning activities, and developing a common digital monitoring and evaluation (M&E) framework, the PMCs will focus on contract-level management. Their role includes ensuring timely, quality execution of works, with a

specific focus on technical, environmental, social, financial, and contract management aspects, aligning with the broader reporting and decision-making needs of the APCRDA and ADCL.

4.1.1.2 APCRDA

Existing Landscape and Environmental Wing of APCRDA

144. The APCRDA has a dedicated Landscape and Environment Wing responsible for overseeing environmental planning, monitoring, and compliance in the development of the ACC. This unit is headed by an Additional Director with forestry and horticulture experience and includes eight environmental positions such as one Senior Environment Planner, two Associate Environment Planners, four Assistant Environmental Planners, and one Environmentalist. Currently, the wing operates with seven staff members, including one environmental specialist, but recruitment for two additional environmental positions is ongoing to enhance capacity. The team's responsibilities include obtaining statutory environmental clearances, integrating environmental norms into the city's design, and ensuring compliance with EMPs and regulatory requirements.

145. During the previous construction phase (2017–19), the wing had five environmental staff and collaborated with PMCs and contractors to oversee contractor compliance. The wing conducted regular inspections and provided technical expertise to manage environmental risks such as air and water pollution, waste management, health and safety in the construction sites, and compliance with ECs and EMPs.

146. With ongoing recruitment and strengthened capacity, the APCRDA plans to continue to focus on robust environmental monitoring systems, including real-time data collection, while ensuring transparency and accountability. The unit also plays a key role in flood management and water conservation, overseeing STPs and flood control infrastructure. The unit ensures that environmental and safety measures are included in all project agreements and tender documents. This unit however will be reorganized into the proposed ESMD (see Recommendations).

Program Management Consultants

147. The PgMCs will play a vital role in ensuring the effective implementation of E&S safeguards in Amaravati's infrastructure projects. They coordinate with the PMCs and contractors, ensuring adherence to EMPs, compliance with statutory regulations, and timely project delivery. They also monitor key performance indicators (KPIs) and maintain functional efficiency across various stakeholders, ensuring that projects align with the APCRDA's objectives.

148. The proposed PgMC staff includes an Environmental Specialist, a Geohydrologist and Flood Management Expert, an Energy Efficiency Specialist, a Gender and Community Management Specialist, a Livelihood and Skill Development Specialist, and an OHS Specialist.

Contractors

149. Each contractor engaged in construction work/package by the APCRDA will have an Environmental, Health, and Safety (EHS) specialist to implement EMP and OHS clauses in the bidding documents. The contractor will submit the contractor's EHS or ESMP plan before the start of the construction for the approval of the APCRDA.

Project Management Consultants

150. For each construction package, the APCRDA will engage PMCs to oversee contractors, ensuring compliance with E&S safeguards and providing technical expertise in implementing EMPs. Each PMC appoints an EHS specialist who works closely with the PgMCs and APCRDA.

The Environmental Management Regulatory Authority

151. The Environmental Management Regulatory Authority (EMRA) was established within the APCRDA in March 2016 as per the requirement of the EC condition to oversee environmental

management in Amaravati's Capital Region. Chaired by the Additional Commissioner of the APCRDA, its members include the Director of the Landscape and Environment Wing as Member Convenor, the Chief Engineer of Utilities (Flood Management), the Chief Engineer of Infrastructure, and the Director of Planning. EMRA monitors environmental compliance across projects and addresses gaps. It meets monthly and can co-opt technical experts as needed. The authority collaborates with the PMCs, third-party quality management consultants, and design consultants to ensure that projects meet environmental standards, advising relevant departments on corrective measures where necessary.

Gaps in Implementation Capacity

152. The current focus of the Landscape and Environment Wing has primarily been on horticulture development since construction activities were halted in 2019. To strengthen the wing's capacity, the vacant positions, particularly those for environmental specialists, should be filled. The wing has heavily relied on PMCs, and the knowledge from previous construction projects has not been institutionalized. Since consultants are only engaged during construction, and city development is expected to continue for another 20 to 30 years, there is a need to establish a dedicated ESMD. The ESMD should consist of separate Environmental and Social Units, each headed by a Director. Given that the current environmental staff is mid-level, elevating leadership to a Director level will ensure that their concerns are adequately represented and heard in decision-making processes related to the project. EMRA should also resume its activities. One of the four contracts reviewed does not include an EHS specialist as the key personnel.

153. On the social aspects, the key areas that require technical expertise include livelihood and skill development, labor management, gender, and setting up grievance management units.

4.1.1.3 Implementation Mechanism for LPS/LA/Negotiated Settlement Policy

154. The APCRDA has a well-defined policy and procedure (RPF) for LPS, LA, and/or NS and resettlement. At the APCRDA level, the Land Unit is headed by a Special Grade Deputy Collector and supported by two Tahsildars as land and resettlement officers. It has 11 CAOs in villages headed by a Deputy Collector-level officer and a well-resourced team.

155. **Implementation mechanism for LPS.** The process includes several steps and various agreements and consultations. The key steps include notification of the LPS, holding of consultations and hearing objections/suggestions, inviting of landowners to participate in the LPS, execution of development agreement, formulation of redevelopment schemes, allotment of redeveloped plots as per the entitlement, and registration of redevelopment plots in favor of landowners who surrendered land to the APCRDA. As per Section 57(4) of the APCRDA Act 2014, the LPOC shall be the conclusive evidence of the title of the property in respect of the reconstituted plot/land and makes the landowner eligible for transfer of rights of the property following the provisions of the Registrations Act 1908. The issuance of LPOC is an equivalent step of payment of compensation and other benefits entitled under the LARR Act 2013.

156. **Implementation mechanism under the LARR Act 2013.** A Social Impact Assessment (SIA) study is the first step for LA under the LARR Act 2013 to document the impacts, assess the LA requirements, and conclude that the benefits of the project outweigh the social costs and adverse social impacts. The lands required for the construction of the Capital City Development Project would be provided through the LPS/LA/NS Policy by the CAO at the village level. Given that the RPF is already prepared and approved by the GoAP, the RAPs for Phase 1 need to be prepared and/or updated.

157. **Implementation mechanism under NS Policy.** Land required in village settlement zones, not covered by the LPS, for infrastructure projects such as roads or metro lines within the R1 zone will follow an NS process. Section 124 of the APCRDA Act 2014 allows the Authority to acquire any property through an NS. If the NS fails, the provisions of the LARR Act 2013 will apply as per the requirements of the development plan.

- (a) Once the negotiating committee and displaced family reach an agreement on the package offered by the District Collector, the agreed assistance will be formalized in the negotiated agreement.
- (b) The NS Policy is estimated to provide compensation that is not lower than what is stipulated under the LARR Act. For land lost in village sites or habitations, affected individuals are offered land in a developed rehabilitation center as an alternative; this option, however, is voluntary.

158. Interested individuals may choose the NS Policy instead of LA. The Competent Authority representing the APCRDA will facilitate this process through a negotiating committee constituted by the District Collector. This committee will consist of land administration and technical experts as members. Compensation and assistance under the negotiated policy include the following:

- (a) Land-to-land compensation for the footprint area of houses or house sites, excluding common areas
- (b) Land-to-land compensation for non-agricultural land, offered with an as-is-use condition
- (c) Two times the estimated value of the house or structures, calculated as per persons with disabilities norms, without deducting depreciation and allowing for salvage to cover the Resettlement Plan cost
- (d) Construction costs for alternative houses or shops, as per GoAP norms.

159. Individuals without formal legal rights to their houses will be rehabilitated under affordable housing schemes of the GoAP, with compensation for the structures' value.

4.1.1.4 ADCL

160. The ADCL will be responsible for implementing trunk infrastructure and flood mitigation works. The ADCL plays a crucial role in managing the environmental aspects of Amaravati's infrastructure development, particularly through its Urban Greenery and Forestry Wing. This department is responsible for planning, developing, and maintaining parks, green corridors, and other urban greenery projects. Similar to the APCRDA, it hires contractors and PMCs for each construction package.

161. The ADCL does not have any environmental staff in the Urban Greenery and Forestry wing, as its current focus is only managing the green spaces in the city. During the previous construction phase (2017 to 2019), the ADCL had two environmental staff. However, the ESMD under the APCRDA will ensure the ADCL's E&S compliance and may assign some of the ESMD staff to the ADCL for day-to-day coordination.

4.2 Legal and Regulatory System

162. The legal framework for E&S systems is adequate and backed by a set of comprehensive laws, regulations, technical guidelines, and standards, that apply nationwide and to AP.

163. The government enacted the APCRDA 2014 to declare the New Capital Area for the State of AP and establish the APCRDA and formulated the Andhra Pradesh Capital City LPS F&I Rules 2015. The APCRDA Act 2014 is an umbrella act and provides for planning, coordination, execution, supervision, financing, funding, and promotion and securing of the planned development of the Capital Region, undertaking the construction of the new Capital Region development area, undertaking the construction of the new capital for the State of AP and managing and supervising urban services in the new capital areas.

164. The environmental legislation at the national and state levels for the conservation and management of the environment and pollution control are well-defined and in place and so is the institutional structure for environmental management. Therefore, procedures and clearances

required for environmental protection are well-defined. The existing legislation also helps minimize or mitigate possible adverse impacts on natural habitats, archaeological sites, and cultural resources.

165. Detailed applicable regulations for Amaravati development are provided in Annex 1, along with the APCRDA requirements to implement these regulations. The key regulations are given. The Ministry of Environment, Forest, and Climate Change (MoEF&CC), along with the Central and State Pollution Control Boards (CPCB and SPCBs), forms the regulatory framework for environmental compliance. Other relevant bodies include state environment ministries, MoEF&CC regional offices, and state forest/wildlife departments. Adherence to environmental standards set by these bodies is mandatory. Implementing agencies, consultants, and contractors must understand and follow these regulations.

4.2.1 EIA Notification 2006 and Further Amendments

166. The EIA Notification of 2006 and its amendments are essential for regulating environmental compliance for development projects in India. This notification requires specific projects to obtain environmental clearance (EC) before any construction or land preparation, except for land acquisition. Projects are categorized into three types: A, B1, and B2, based on their environmental impact and scale.

167. Category A projects with a significant environmental footprint must undergo a detailed EIA process, including public consultation, before receiving EC from the MoEF&CC. Category B1 projects also require an EIA but are evaluated at the state level by the State Environmental Impact Assessment Authority (SEIAA). Category B2 projects, generally smaller in scale, do not require an EIA but certain projects specified in the EIA Notification must prepare an EMP outlining the measures for mitigating environmental impacts.

168. The ACC Project is classified as a Category B1 project under the 'Townships and Area Development' category, necessitating both an EIA and an EMP. The APCRDA has complied by preparing these reports and obtaining EC from the SEIAA.

169. Individual activities within the project may require separate ECs based on their classification. Building projects with a built-up area between 20,000 and 150,000 m² fall under Category B2, requiring only an EMP. In contrast, projects exceeding 150,000 m² are classified as Category B1, necessitating both an EIA and an EMP. The APCRDA has prepared EIA and EMP reports for all Category B1 building projects and EMPs for Category B2 projects to ensure compliance.

170. In addition to building projects, the development includes road construction and SWM activities. National and state highways are the only road projects requiring EC; thus, proposed roads in Amaravati are exempt. While the Common Municipal Solid Waste Management Facilities (CMSWMF) require EC, stand-alone waste management projects are exempt unless integrated facilities are developed, which would require an EIA and EC.

4.2.2 Environmental Clearance for the Amaravati and Its Validity

171. The APCRDA prepared an EIA for the ACC Project in 2015 and obtained EC from the SEIAA in October 2015. This EC is valid for 10 years, with a possible one-year extension until October 2026, plus an automatic one-year COVID-19 extension. The APCRDA must apply for a further extension to the SEIAA before the expiration date in 2026, extending validity until October 2027, with guidance from the SEIAA on required documentation.

172. To date, the APCRDA has prepared six EIA/EMP reports and 11 EMP reports for key projects,²⁰ including priority roads, the Chief Minister's Office, High Court, and various housing and office complexes. A total of 15 ECs²¹ have been obtained for subprojects related to Amaravati's development, covering key structures such as the Legislative Assembly Building, High Court, Secretariat Housing, and the Chief Minister's Office, among others.

4.2.3 Appeal Against EC and NGT Verdict

173. In 2015, a group of appellants approached the National Green Tribunal (NGT), seeking to overturn the EC granted for the ACC Project. Their concerns included the risk of flooding due to the proximity of Kondaveeti Vagu, potential environmental pollution from construction activities, and social impacts on local communities. On November 17, 2017, after a thorough review, the NGT upheld the EC and recommended additional control measures and further studies on flood management, which were conducted by the APCRDA and integrated into a detailed flood management plan, subsequently submitted to the NGT-appointed committees.

4.2.4 Other Statutory Clearances and Permits Required for Project Implementation

174. Various permissions, clearances, and authorizations must be obtained from Competent Authorities during the design and construction phases of subprojects. The specific requirements will depend on factors such as the location, type, size, and scope of each subproject. A summary of the key statutory permits that may be needed is provided in Annex 2.

4.2.5 Relevant Social Laws and Regulations

175. The APCRDA Act 2014 provides the overarching legal and regulatory provisions for undertaking any development scheme through the LPS in the ACC area. The LPS is mainly adopted for the development of the Capital City area, where the land parcels owned by individuals or groups of owners are legally consolidated by transfer of ownership rights to the APCRDA, which later transfers the ownership of returnable plots back to the landowners for undertaking the development of such areas. In addition, where required, the LA through eminent domain is governed by the Right to Fair Compensation and Transparency in LARR Act 2013 and its provisions and the AP Amendment Act of April 2018 (Act 22/2018). Three land assembly mechanisms are being used to assemble the land needed for the development of the Capital City: (a) LPS; (b) NSs; and (c) LA through eminent domain, following the provisions of the LARR Act 2013. The APCRDA may acquire any movable or immovable property by purchase, exchange, gift, lease, mortgage, or NS as per Section 124 of the APCRDA Act 2014. Any land required in the development plan shall be deemed to be the land needed for a public purpose as defined under the LARR Act 2013.

176. The key legislations that guide the social aspects under the program are mentioned below. The existing legislative framework is adequate to ensure social sustainability and inclusion of marginalized and vulnerable population including the SC and ST population, labor welfare, and gender

²⁰ The APCRDA has, so far, prepared six EIA/EMPs and 11 EMPs reports: (a) EIA and EMP for 10 priority roads; (b) EIA and EMP of the ACC; (c) EIA and EMP of Chief Minister's Office; (d) EIA and EMP of Heads of Department (HOD) staff offices; (e) EIA and EMP of High Court Building Project; (f) EIA/EMP Happy Nest Project; (g) EMP of flood mitigation works; (h) EMP of Interim Government Complex; (i) EMP of Gazetted officers housing Type I & II Office Complex; (j) EMP of Service Sector Office Complex; (k) EMP of Secretariat Housing; (l) EMP of MLA and MLC Housing project; (m) EMP of Infrastructure Sector Office Complex; (n) EMP of Industry Sector office complex; (o) EMP of Assembly building; (p) EMP of All India Services (AIS) Housing; and (q) EMP for Group D Staff Housing Project

²¹ The APCRDA obtained 15 ECs for the following subprojects related to the development of Amaravati: Greenfield Capital City - Amaravati, Interim Government Complex, Group-D Staff Housing Project, Legislative Assembly Building Project, MLA/MLC Housing Project, Gazetted Officers Type - I & II Housing Project, Secretariat Staff Housing Project (NGO Apartments), AIS Officers Housing Project, High Court Building Project, HOD Staff Housing Project, Infrastructure Sector Office Complex, Industry Sector Office Complex, Service Sector Office Complex, Honorable Chief Minister's Office Complex, and Amaravati Happy Nest.

and inclusion but requires strengthening of institutional capacity for better compliance. A summary of the key social legislations and provisions assessed is presented in Annex 1.

4.3 Environmental and Social Management System Assessed Against Core Principles

4.3.1 Core Principle 1: Program E&S Management System

177. This principle ensures that programs promote E&S sustainability by systematically identifying and managing E&S risks. A detailed comparison of the borrower system against the core principles is given in Annex 10, and a summary of these findings is provided in this section.

178. **Assessment of the existing systems.** The environmental and social management systems in place for ACC largely comply with established legal and regulatory frameworks. These frameworks include the Environmental Protection Act (1986); EIA Notification (2006); and state-specific laws such as the Andhra Pradesh Water, Land, and Trees Act (WALTA). ECs for the proposed program activities are already in place.

179. However, a review of four bidding documents for previous works revealed key gaps in the implementation of environmental safeguards. The documents lacked explicit EMPs, and the Bills of Materials (BOMs) for environmental management were inconsistently applied. While environmental clauses referencing the ECs were included, the EMPs were not directly attached to the bidding documents. This highlights the need for stronger integration of the EMPs into the procurement process to ensure compliance during construction activities.

180. Key planning elements and gaps

- **Legal and regulatory framework.** Amaravati is governed by a comprehensive legal framework. While the EC for Amaravati is in place, it needs to be extended before its expiry in 2026. The EMPs should be directly incorporated into the bidding documents. The APCRDA's institutional capacity for effective E&S management needs to be strengthened to ensure proper implementation of mitigation measures and adherence to regulatory requirements.
- **Early screening of potential impacts.** The ESMF and EIA have been in place early identification of E&S risks. Future assessments should consider updated amendments to EIA guidelines and ensure continued alignment with national regulations and GIIPs.
- **Consideration of alternatives.** The Master Plan incorporates strategic alternatives to minimize impacts on forests and natural water bodies. Detailed flood mitigation designs, vetted by external committees, have considered alternatives.
- **Cumulative impacts.** Cumulative impacts, particularly concerning water resources and flood management, have been factored into the program's design. Although transboundary impacts are not relevant due to the program's localized nature, attention to long-term urbanization effects is necessary.
- **Mitigation measures.** Existing EMPs identify mitigation strategies for various environmental impacts and risks. However, mitigation measures for some of these impacts such as waste management and wastewater treatment, were not adequately covered in the existing EMPs. Strengthening EMPs with Standard Operating Procedures (SOPs) and ensuring they are included in bidding documents is critical to improving their effectiveness. Adequate budgetary measures for implementation of the EMP should also be included in the bidding documents. Gaps are also identified in the Contractor Environmental and Social Management Plans (C-ESMPs) of previous construction works.
- **Stakeholder engagement and grievance redress.** The APCRDA has engaged in extensive stakeholder consultations and has an effective and robust GRM in place.

181. **Operational significance of differences.** While the program aligns with key regulatory requirements, significant gaps in the EMP implementation could lead to E&S risks during construction,

especially regarding waste management, water pollution, and air quality. The lack of uniform BOQ items related to environmental safeguards and the generic nature of existing EMPs indicate a need for more rigorous oversight and site-specific mitigation strategies. However, the APCRDA's commitment to establishing a dedicated ESMD is a positive step toward addressing these gaps. Additionally, incorporating detailed SOPs and ensuring regular progress reports will strengthen E&S management throughout the program's life cycle.

182. **Client's commitment to addressing gaps.** The APCRDA has shown a clear commitment to addressing identified gaps by taking steps such as establishing a dedicated ESMD and improving the bidding documents and integrating EMPs into bidding documents. By focusing on capacity building, strengthening environmental safeguards, and enhancing stakeholder engagement, the APCRDA aims to effectively manage these gaps. Further, the enhanced monitoring and reporting will ensure that Amaravati's development aligns with the requirements of Core Principle 1.

183. In summary, while the existing systems provide a solid foundation, there are actionable gaps that need to be addressed to fully align with Core Principle 1. Through the commitment to institutional strengthening, capacity building, and stronger integration of environmental safeguards, these gaps can be effectively managed.

4.3.2 Core Principle 2: Natural Habitat and Physical and Cultural Resources

184. This section evaluates the program's consistency with Core Principle 2, which focuses on the protection of natural habitats and cultural resources.

185. Key planning elements and assessment

- **Screening for adverse effects on biodiversity and cultural resources.** The EIA for Amaravati included comprehensive screening for potential impacts on biodiversity, particularly around critical areas such as the Krishna River and the forests on Undavalli Hill. No notified eco-sensitive areas or endangered species are present within the Capital City's development zone. Buffer zones have been established around important natural features, such as water bodies and forests, to minimize impacts. Additionally, cultural heritage sites, such as the Undavalli Rock Caves, have been identified early in the planning process. Measures, such as enforcing a 100 m no-construction zone, were adopted to protect these culturally significant areas.

Gap. While no significant impacts on biodiversity or cultural heritage have been identified, there is a need for ongoing monitoring and adaptive management of these sites to ensure that any emerging risks are addressed effectively.

- **Protection, conservation, and rehabilitation of natural habitats.** The Amaravati Master Plan designates 30 percent of the city's land for green and blue spaces, including parks, water bodies, and forested buffer zones. These areas are intended to promote biodiversity and maintain ecological balance. The Master Plan includes tree planting programs, the creation of new water bodies, and the enhancement of existing forested areas. The APCRDA's Landscape Wing and ADCL's Urban Greenery and Forestry Department play crucial roles in maintaining these natural buffers. Additionally, plans are under way to install a continuous water quality monitoring station in the Krishna River to track environmental health.
- **Avoiding conversion or degradation of critical habitats.** The city's development is on land that has been used for agriculture for decades, with no significant natural habitats within the urban development area. There will also be no construction or development on the active floodplains of the Krishna River, in the area between the existing embankment and the river. Green infrastructure and landscaping form key strategies for minimizing the environmental footprint.

Gap. Continued attention to long-term management of natural resources near the Krishna River is required, particularly to ensure that flood mitigation works do not inadvertently harm these ecosystems.

- **Mitigation of adverse effects on cultural property Undavalli Rock Caves,** a nationally protected monument, is a central concern. A no-construction zone of 100 m has been enforced around the caves to prevent damage from construction activities. Additionally, a 'Chance Find Procedure' is in place to manage unexpected archaeological discoveries during construction.

Gap. There is a need for regular monitoring to ensure that ongoing construction activities, particularly flood mitigation works near Kondaveeti Vagu, do not negatively affect the caves. Enhanced coordination with ASI is required to ensure that the monument remains protected from construction-related vibrations and other potential risks.

186. **Operational significance of differences.** The program largely aligns with Core Principle 2, particularly in its approach to protecting natural habitats and cultural resources. However, gaps in ongoing monitoring, adaptive management, and coordinated protection efforts could lead to risks, particularly as construction progresses. These risks, if not mitigated, could result in long-term environmental degradation or damage to these resources.

187. **Client's commitment to addressing gaps.** The APCRDA has demonstrated a strong commitment to addressing the identified gaps by incorporating buffer zones, reforestation plans, and protective measures for cultural heritage sites. The establishment of a dedicated ESMD, combined with improved coordination with the ASI, will further ensure the protection of Amaravati's natural and cultural assets. Regular monitoring of environmental and cultural resources, along with adaptive management, will be essential for maintaining long-term sustainability.

188. In summary, the program is generally consistent with Core Principle 2, but stronger monitoring, adaptive management, and inter-agency coordination will be crucial to effectively mitigate potential environmental and cultural risks.

4.3.3 Core Principle 3: Public and Worker Safety

189. This section evaluates the program's alignment with Core Principle 3, which emphasizes the protection of public health and worker safety, especially in the context of large infrastructure projects involving hazardous materials and processes.

190. Key planning elements and assessment

- **Community and worker health and safety.** The EMPs and bidding documents include OHS plans that focus on safeguarding the health and safety of workers involved in construction activities. Contractors are required to provide PPE to all workers, conduct regular safety inspections, and implement safety audits. Child and forced labor are strictly prohibited, and compliance with labor standards is monitored by the APCRDA. These measures aim to ensure a safe working environment for workers while minimizing risks to public safety.

Gap. EMPs prepared in 2015 and 2017 did not sufficiently address OHS risks and broader community health and safety concerns, such as GBV and SEA. To address these gaps, there is a need to develop SOPs outlining specific measures to manage OHS and community safety risks. These SOPs should be incorporated into the updated EMPs and included in bidding documents to ensure comprehensive risk management.

- **Management of hazardous materials.** The EMPs include provisions for the safe handling, storage, and disposal of hazardous materials generated during construction activities. Contractors are required to store hazardous materials in covered, bunded areas and

follow national waste management regulations for safe transportation and disposal. These practices are meant to minimize risks associated with hazardous substances.

Gap. While there are licensed hazardous waste management facilities and vendors approved by the AP SPCB, the APCRDA should actively engage with these facilities to ensure that contractors use these facilities. Better coordination between contractors and licensed vendors is necessary for effective waste management.

- **Integrated Pest Management.** Integrated pest management practices are being promoted in Amaravati's green spaces, focusing on reducing the use of chemical pesticides. Native plant species that are naturally resistant to pests are planted to minimize the need for chemical interventions, thereby reducing environmental and health risks.

Gap. PPE must be provided to all workers applying pesticides or fertilizers. Chemical containers should be disposed of as hazardous waste through licensed vendors to prevent contamination.

- **Training for handling hazardous chemicals.** The EMPs emphasize the importance of training workers involved in handling hazardous chemicals, ensuring that they are aware of safe practices for the production, storage, transportation, and disposal of these substances.

Gap. Capacity-building programs need to be strengthened for both the APCRDA and ADCL staff, as well as for contractors and workers, to reduce risks associated with hazardous materials. This includes training on international guidelines for handling, transporting, and disposing of hazardous substances.

- **Risk management in hazard-prone areas.** The flood management plan for Amaravati includes measures such as pumping stations, deepening streams, buffer zones, embankments, and stormwater drains to mitigate flood risks. The area is in seismic zone III, meaning it faces moderate earthquake risks, and all structures are required to use earthquake-resistant technology to ensure safety.

Gap. Flood risks during the construction phase remain a concern, especially before flood mitigation works are fully completed. The APCRDA should prioritize protecting workers from natural hazards during this period by implementing protective measures, including disaster preparedness and coordination with local disaster management authorities. This will help ensure that workers are not exposed to unnecessary risks from natural disasters.

191. **Operational significance of differences.** While the program includes several important measures for protecting public and worker safety, significant gaps remain, particularly in addressing OHS risks, GBV/SEA concerns, and hazardous materials management. If these gaps are not addressed, they could lead to heightened risks for both workers and local communities, including exposure to hazardous substances and labor-related risks. The current flood resilience measures are sound but require additional focus during the construction phase to protect workers.

192. **Client's commitment to addressing gaps.** The APCRDA has shown a commitment to addressing these gaps by incorporating OHS-risk assessment, stronger safety measures, ensuring the inclusion of SOPs in updated EMPs and bidding documents, develop KPIs aligned with good international industry practices (GIIP), enhanced worker training, monitoring and reporting mechanism, including periodic audits and follow up of corrective measures, if any. It has also indicated a willingness to improve its coordination with hazardous waste management facilities and licensed vendors to ensure compliance. Capacity-building programs for workers and contractors are a priority to ensure safe handling of hazardous materials and compliance with OHS standards.

193. In summary, while the current systems generally align with Core Principle 3, stronger safeguards, enhanced worker safety protocols, and improved management of hazardous materials are essential to ensure full compliance and minimize risks to public and worker safety.

4.3.4 Core Principle 4: Land Acquisition and Resettlement

194. **Key planning elements and assessment.** The land procurement process for the ACC has shifted from conventional LA methods to a more humane approach, emphasizing the preservation of landowners' social ties and psychological attachment to their land. The LPS allows landowners to retain land parcels of increased value while receiving returnable urban plots and livelihood support measures, including annuities and skill development. The GoAP implemented this through the LPS F&I Rules under the APCRDA Act 2014, notified on January 1, 2015.

195. As of August 2024, the GoAP has successfully pooled 34,389.79 acres, achieving 90.6 percent of its target, with about 28,000 farmers participating. Approximately 99 percent of the land required for Phase 1 construction has been secured through the LPS, leaving only 1 percent potentially needing acquisition.

196. The LARR Act 2013 guides the process, complemented by amendments in 2018. The RPF aligns with World Bank principles, outlining the procedures and benefits associated with land acquisition.

Operational Significance of Differences

197. Although a small portion of land may require acquisition through NSs due to infrastructure passing through existing village areas, the GoAP has already established relevant policies (GO MS. No. 153 and GO MS. No. 420) aligned with World Bank resettlement policies. These will be applied to any future needs under the Phase 1 packages.

Client's Commitment to Addressing Gaps

198. While no specific gaps have been identified in the current land procurement and resettlement policies, the institutional mechanisms require strengthening. Key areas for enhancement include the following:

- Strengthening the E&S unit within the APCRDA, including the ADCL.
- Enhancing village-level institutions and CAOs.
- Improving the GRM, which is currently being established.

199. **Summary.** The existing policy and procedures for land procurement—whether through the LPS, traditional acquisition, or NSs—are comprehensive. However, updates are necessary to address inflation and apply these adjustments in the preparation of RAPs and updating previous RAPs where applicable.

4.3.5 Core Principle 5: Rights and Interests of Indigenous People

Key Planning Elements and Assessment

200. In the ACC area, SC comprise about 31 percent and STs about 4.6 percent of the total population. The predominant tribes include Yerukulas, Yenadi, and Nayaks/Lambadis. Many ST families are landless, having received land patta in the 1970s and 1980s, and primarily occupy marginal areas of villages. While their occupations align with those of SCs and other poor households, some have progressed to roles as traders and small contractors.

201. The APCRDA has prioritized the needs of vulnerable groups, including SCs, STs, and women, establishing mechanisms for systematic identification and support. The APCRDA identified 857 vulnerable landless households from a total of 21,374 through criteria such as household composition, disabilities, chronic illnesses, and reliance on the APCRDA pensions.

202. To support these households, the APCRDA has implemented several measures:

- Expanding access to government social security schemes
- Providing targeted skill training aligned with job opportunities
- Developing a job dashboard for employment information
- Ensuring safe public transportation options for women
- Increasing employment opportunities under MGNREGA
- As of September 2024, 838 of the identified vulnerable households receive both the APCRDA pensions and social security pensions, while nine households have secured employment and another nine have purchased land.

203. The 2015 household survey indicated that about 7,000 families in the ACC lacked permanent housing, residing in temporary structures on encroached land. In response, the APCRDA prepared a Detailed Project Report for 7,876 beneficiaries, receiving administrative sanction to construct 5,024 houses in two phases. All Phase 1 units, ranging in size from 300 to 430 sq ft, have been completed and allocated, though approximately 247 units remain vacant.

Gaps Identified

204. Despite these actions, the assessments and identification efforts from 2015 to 2018 are outdated, lacking current data on the occupation and livelihood status of the LPS farmers, landless laborers, and other vulnerable groups. As urbanization trends have shifted since then, it is essential for the APCRDA to conduct a comprehensive socio-economic study to update the understanding of current occupations, livelihoods, and skills of marginalized populations, including women.

205. **Operational significance of differences.** The program largely aligns with Core Principle 5 as it addresses the needs of the landless and vulnerable population including those from SC and ST communities and women.

206. **Client's commitment to addressing gaps.** While the APCRDA has made significant strides in identifying and supporting vulnerable households, ongoing efforts must focus on collecting updated data and tailoring interventions to meet the evolving needs of SCs, STs, and other marginalized groups. Addressing these gaps is crucial for ensuring the rights and interests of indigenous people are upheld in the context of Capital City development.

4.3.6 Core Principle 6: Social Conflict

Key Planning Elements and Assessment

207. The interventions of the ACC Program aim to enhance institutional capacity and systems for sustainable growth, ensuring that social conflicts are not exacerbated. The program is designed to be inclusive, with no anticipated exclusion of any groups based on caste, religion, or geography.

208. However, it is essential to acknowledge the significant social unrest that occurred in 2019 when the previous government announced a shift from a single capital in Amaravati to three capitals for the state. This unilateral decision prompted demonstrations from farmers who had contributed land for the capital's development. They demanded the return of developed plots as promised. Attempts by the government to suppress the protests led to violent confrontations, resulting in a loss of trust in the administration. The protests lasted for 1,631 days and concluded on June 12, 2024, with the election of a new government supportive of Amaravati as the capital.

209. Throughout this period, approximately 120 cases were filed against around 3,000 protesters. The new government is currently reviewing these cases for potential settlements.

210. **Operational significance of differences.** The program largely aligns with Core Principle 6 the Program interventions are designed to improve institutional capacity and promote growth without exacerbating social conflicts or excluding groups based on caste, religion, or geography.

Client's Commitment to Addressing Gaps

211. The new government has expressed a commitment to settling the grievances of farmers and restoring trust in the land pooling process. There is a focus on enhancing dialogue with affected communities and stakeholders to ensure their concerns are addressed proactively. The review of police cases against protesters signifies a step toward reconciliation.

5 CONSULTATIONS WITH KEY STAKEHOLDERS AND DISCLOSURE

5.1 Stakeholder Consultation

5.1.1 Stakeholder Consultation Process by APCRDA

212. According to the APCRDA, extensive stakeholder consultations have been conducted throughout the planning and implementation phases of the ACC development. Since 2014, thousands of consultations have taken place, ranging from informal, door-to-door conversations to large, organized meetings with hundreds of participants. These consultations were held with local communities, farmers, landowners, environmental experts, and government officials. The APCRDA set up PICs in each village to facilitate continuous, on-demand consultations, with information provided in English and Telugu.

213. Consultations were carried out during significant milestones, such as the preparation and notification of the Master Plan and the rollout of the LPS. Stakeholder feedback during these consultations led to revisions in entitlement matrices, livelihood restoration packages, and compensation plans for landowners. Regular grievance redress meetings were also held to address concerns about LA and development. In addition, the APCRDA conducted consultations for the SIA process under the LARR Act 2013.

214. Further, stakeholder workshops were organized for the preparation of safeguards instruments, including the ESMF and RAPs, with specific focus group consultations for vulnerable groups. The APCRDA's communication campaign, involving print, media, and online platforms, supported these efforts.

5.1.2 Stakeholder Consultation During Preparation of ESSA

215. During the ESSA process, apart from detailed consultation with the APCRDA and ADCL staff, stakeholder consultations were conducted with stakeholders from Venkatapalem, Lingayapalem, Mandadam, Thullur, Undavalli, Penumaka, and Nidamaruru during August – October 2024. These consultations involved participants from various groups, including farmers (both who have pooled land and those who have not), landless laborers, SHG women, and other community representatives. Consultations were also undertaken with (a) village-level functionaries such as Village Secretariat staff, (b) CAOs, (c) officials from line departments such as the Women and Child Development Department, (e) EWS housing beneficiaries, (f) farmer associations/groups, (g) civil society members and community-based organizations, and (h) landless households that were resettled during 2018–19.

216. Table 11 presents the key discussions with each of the stakeholder groups and are mainly related to land procurement, resettlement, risks associated with the influx of labor, the implementation of social and livelihood restoration measures, gender- and GBV-related risks, the responsiveness of grievance redress system, and so on. Details of these consultations are summarized in Table 11, and the feedback received from these consultations is reflected in the previous chapters.

Table 11. Consultation Details

Date and Location	Participants	Consultation Topics
September 12, 2024, at Venkatapalem Village	About 30 participants - farmers and landless laborers	<ul style="list-style-type: none"> Voluntary land pooling and annuity payments to farmers Concerns regarding the land pooling and LA and its effects on the local communities Pensions to landless laborers and their current occupational status Returnable plots and farmers Annuity, pension, and other benefits Involvement of women SHGs

Date and Location	Participants	Consultation Topics
		<ul style="list-style-type: none"> • Labor influx and its associated challenges • Livelihood restoration measures • Situation in Amaravati when there were floods in Vijayawada in early September 2024 • GRM • Social infrastructure development in villages
September 12, 2024, at Thallayapalam, Mandadam Village	About 25 participants - women SHG members coming from farmers, landless laborers' households	<ul style="list-style-type: none"> • Annuity, pension, and other benefits received • Changes in income and livelihood post land pooling • Skill training • New opportunities • Labor and employment • Labor influx and associated challenges • Gender- and GBV-related issues • Village institutions and social governance • Any concerns related to city development
September 12, 2024, at EWS housing complex	EWS housing recipients - 5 houses - landless laborers, women-headed households, and single women households	<ul style="list-style-type: none"> • Current occupation, income, and employment • Support received from the APCRDA/GoAP • Pension and other benefits received • EWS housing allotment and payment terms • Facilities at the EWS housing complex and perception
September 23, 2024, at Lingayapalem	About 50 participants - farmers who provided land for the pooling, assigned landowners, farmers who are yet to provide land for pooling, landless laborers, women, and SHGs members	<ul style="list-style-type: none"> • Voluntary land pooling in Amaravati for the development of the Capital City • The challenges faced by farmers who gave up their land for the projectprogram • The government's efforts to ensure fair compensation and benefits to farmers and landowners • The importance of providing infrastructure and facilities in returnable plots • The situation and concerns of landless laborers due to the development • Ongoing construction activities and the progress of Capital City development • The need for efficient handling of urban planning and management for Amaravati's future growth • The role of various government officials and their commitment to addressing farmers' concerns • Changes in income, occupation, and livelihoods • Benefits received for health and education and its impact • Emerging opportunities for employment • Labor influx and related issues
September 23, 2024, at VIT University	Vice Chancellor	<ul style="list-style-type: none"> • Details of the courses offered and current strength of students • Employment provided to local villagers • Growth of the university • Water supply and sanitation status of the university

Date and Location	Participants	Consultation Topics
September 24, 2024, at Thullur CRDA office	About 25–30 participants - representatives of Joint Action Committee (JAC) of farmers, landless laborers, and women, SHGs members coming across from different villages in Amaravati city development area	<ul style="list-style-type: none"> Challenges related to Amaravati's Capital City development Discussion on LA and pooling for the program Concerns of farmers and landowners about compensation and benefits Infrastructure development, including roads and public services The socioeconomic impacts of the program on local communities The status of returnable plots and allocation to stakeholders Implementation of resettlement and livelihood restoration for displaced families Review of the program progress since 2019, focusing on benefits for local stakeholders Grievances and transparency in handling community concerns
September 13 and 24, 2024 at Mandadam and Thullur	Competent Authority Officers	<ul style="list-style-type: none"> Existing set up and roles Record keeping and accessing information Grievances handling procedures and transparency in handling community concerns
September 24, 2024, at Thullur CRDA office	About 20 participants - women SHG members of Thullur village	<ul style="list-style-type: none"> Changes in income and livelihood post-land pooling Skill training Entrepreneurship, employment, and new opportunities Labor and employment Labor influx and associated challenges Gender- and GBV-related issues Grievances handling Community issues and concerns
September 24, 2024, at Thullur CRDA office	Thullur Mandal Officers	<ul style="list-style-type: none"> Existing setup and roles Land pooling and LA-related activities Record keeping and accessing information Grievances handling procedures Community concerns Perceived labor influx and related challenges including crime rates and GBV-related issues - experience from the past
October 1, 2024, at Thullur CRDA office	About 15 participants including community members, farmers, landless laborer	<ul style="list-style-type: none"> Challenges related to Amaravati's Capital City development Discussion on LA and pooling for the program Annuity, pension, and other benefits Concerns of farmers and landowners about compensation and benefits Infrastructure development, including roads and public services The socioeconomic impacts of the program on local communities The status of returnable plots and allocation to stakeholders

Date and Location	Participants	Consultation Topics
		<ul style="list-style-type: none"> Implementation of resettlement and livelihood restoration for displaced families Grievances redress mechanism Social infrastructure development in villages
October 1, 2024, at Thullur CRDA office	Consultation and visit to the Resettlement colony	<ul style="list-style-type: none"> Annuity, pension, and other benefits received Process of resettlement, including resettlement plots and benefits Infrastructure development in a resettlement colony Overall perception about the resettlement process GRM
October 19, 2024, at Thullur CRDA office	Consultation with farmers – both LPS and non-LPS from Undavalli, Penumaka, Nidamaru, and Lingayapalem	<ul style="list-style-type: none"> Challenges related to Amaravati's Capital City development Discussion on LPS and reasons for farmers not participating in LPS Concerns of farmers and landowners about compensation and benefits Infrastructure development, including roads and public services The socioeconomic, livelihood impacts of the program on local communities The status of returnable plots and allocation to stakeholders Grievances and transparency in handling community concerns

217. Figure 4 provides some photographs of the consultations during preparation of the ESSA.

Figure 4. Photographs during Consultations



Consultations with key stakeholders (August 23, 2024)



Consultation with women in EWS colony (August 23, 2024)



Consultation with farmers at Venkatapalem Village (September 12, 2024)



Consultation with SHG members at Thallayapalam, Mandadam Village (September 12, 2024)



Consultation with farmers, landless laborers, women SHG members at Lingayapalem (September 23, 2024)

Consultation with Joint Action Committee (JAC) of Farmers, landless laborers, women (September 24, 2024)

తీసుకురానున్నట్లు చెప్పారు. ఏదైనా పరిశ్రమ ఏర్పాటు కాకపోతే ఎంతగానూ ప్రాచురించే ప్రాంతం అని తెలిపారు. కోరతాం అని తెలిపారు.

రాజధానిలో పర్యటించిన ప్రపంచ బ్యాంకు బృందం

• వివిధ నిర్మాణాల పరిశీలన

తూర్పు, పశ్చిమ: ప్రపంచ బ్యాంకు సభ్యుల బృందం రాజధాని అవతారిలో గురువారం పర్యటించింది. ఈ సందర్భంగా బీజేపీ, గృహ, ఎమ్మెల్యే ఎమ్మెల్యే, ఆలయాల సర్కిల్ ఉత్తరం, విద్యాభ్యాస, తుల్య, మంత్రాల నిధాన సమన్వయం, నిర్మాణ, వైద్య, సహకార, సీనియర్స్ రహదారి పరిశీలించింది. మండలంలో సాంకేతిక ప్రాంతం నీటి కార్యాలయాన్ని బృంద సభ్యులు సందర్శించారు. రాజధానిలో టౌన్ సమీక్షలు విధాన, సీనియర్ బ్యూరో సభ్యులు ఇచ్చే వార్త కోలు, రాజధానిలో టౌన్ రేస్

సేవలకు ఇచ్చే సేవలకు సైతం రిటర్నుల్లో పాటు గురించి తెలుసుకున్నారు. మండలంలో రాజధానిలో మాట్లాడుతున్న ప్రపంచ బ్యాంకు బృందం

మండలంలో రాజధాని సైతం, సైతం మాట్లాడుతున్న ప్రపంచ బ్యాంకు బృందం

News clippings of consultation at Venkatapalem village from local newspaper.



Consultation with JAC of Farmers, landless laborers, women (September 24, 2024)



Consultation with JAC of Farmers, landless laborers, women (September 24, 2024)



Consultation with women SHG members at Thullur village (September 24, 2024)



Consultation with women SHG members at Thullur village (September 24, 2024)



Visit to EWS housing colony (September 24, 2024)



Visit to EWS Housing Colony (September 24, 2024)



Consultation with community members, farmers, and landless laborers at Thullur village (October 01, 2024)



Visit to the Resettlement site (October 01, 2024)



Consultation with farmers – both LPS and non-LPS from Undavalli, Penumaka, Nidamarru, and Lingayapalem (October 19, 2024)



Consultation with farmers – both LPS and non-LPS from Undavalli, Penumaka, Nidamarru, and Lingayapalem (October 19, 2024)



News clippings in the local newspapers on consultations during September 23–24, 2024.



5.2 Summary of Multi-stakeholder Consultation Workshop

218. A multi-stakeholder workshop will be organized before appraisal, involving participants from all key stakeholder groups, including representatives from various implementing agencies, officials from other key departments, civil society organizations, and academia to seek their feedback and

suggestions on draft ESSA. The ESSA report will be revised/updated based on the suggestions and feedback received during the multi-stakeholder workshop.

5.3 Disclosure

219. The draft ESSA will be disclosed in-country on the APCRDA and the World Bank's websites, before appraisal of the Program, to serve as the basis for discussion and receipt of further feedback and comments. The draft ESSA will be further revised based on feedback and comments, including from the multi-stakeholder workshop. The final ESSA report will be redisclosed before negotiations.

6 RECOMMENDATIONS AND ACTIONS

6.1 Exclusion of High-Risk Activities

220. The Program will exclude activities that do not align with the World Bank policy on eligibility requirements for PforR financing. The Program will not finance any high-risk activity that may have significant adverse environmental and/or social risks/impacts, particularly associated with significant LA and resettlement, potential loss or conversion of natural habitats, significant pollution or other significant externalities, and major changes in resource use. The exclusion criteria will be applied to the packages/subprojects that will lead to

- (a) Significant LA and physical displacement;
- (b) Significant conversion or degradation of critical habitats or important cultural heritage sites;
- (c) Large-scale changes in natural resources and designated forest areas and/or key biodiversity areas. During implementation, it will be necessary to ensure that all such activities remain excluded from the World Bank financed program; and
- (d) Civil works not commencing in the portions where the LPS/LA process is incomplete.

6.2 Recommendations and Actions

6.2.1 DLIs/DLRs Actions

221. The recommendations aim to capture key aspects of the following in DLI 1 and corresponding DLR.

Establishment of an Environmental and Social Management Division²² (ESMD) within the APCRDA

Objective. Establish a dedicated ESMD within the APCRDA to oversee E&S management in all aspects of the program activities.

Role. The Unit will be responsible for implementing, monitoring, and ensuring compliance with all the applicable environmental, OHS and social safeguards of the Program. This will include coordination with contractors and various program stakeholders to ensure environmental sustainability and social inclusion throughout the program's life cycle.

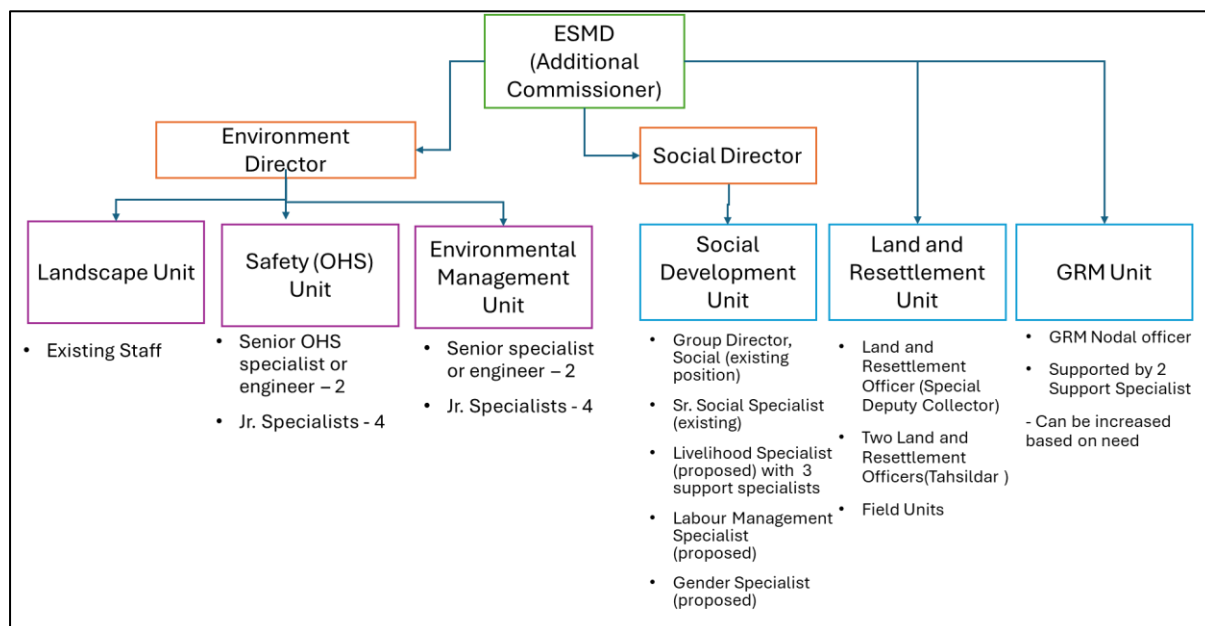
Structure and staffing of the division. The proposed ESMD structure, shown in Figure 5, includes the following under the Environment vertical: a Landscape Unit with all the existing staff, a Safety Unit with four OHS staff, and an Environmental Management Unit with four environmental staff. The environmental and OHS staff will be assigned to oversee the APCRDA and ADCL projects based on project needs. They will work in close coordination with the procurement, contract, and engineering departments, as well as contractors, supervision consultants, and EMRA. This ensures streamlined governance and strict compliance with environmental regulations.

Under the Social vertical, there will be three teams: a Social Development Team, a Land and Resettlement Team, and a GRM Cell. The Land Resettlement Team will be headed by Revenue Officers and will lead the land procurement and resettlement activities. The GRM Cell will cut across all departments of the APCRDA and report directly to the Additional Commissioner. It will be supported initially by a GRM Nodal Officer and two support staff and may be extended to four support staff as required. The Social Development Team will oversee the implementation of livelihood, skill building, labor management, gender- and GBV-related activities, among others. The LARR Unit will oversee the land procurement (LPS/LA) and resettlement and rehabilitation.

²² Calling it as Division, given it will have many smaller units within it such as the Landscape Unit, Land and Resettlement and Rehabilitation (R&R) Unit, Social Development Unit, GRM Unit, and so on.

For the ESMD, the existing Landscape and Environment Unit, Land and R&R Unit, and GRM teams will be reorganized into the ESMD.

Figure 5. Proposed ESMD Structure



Strengthening E&S monitoring. The APCRDA will develop and use a functional ICT platform for E&S monitoring and ensure timely submission of its semiannual E&S reports. The E&S compliance monitoring system will monitor and follow up on compliance with E&S requirements associated with the Program for construction contracts above INR 50 crores. The systems will include standard procedures, roles and responsibilities, user profiles, and digital solutions to deliver on such functions. The system will allow systematic collection and integration of data across trunk, neighborhood, flood infrastructure, and building contracts; monitor performance and potential deviations; and facilitate early resolution of any deviations.

Appoint qualified PgMCs and PMCs. The APCRDA will appoint consultants for the program and subprojects with qualified experts on E&S aspects. The PgMC will plan activities at the program level; coordinate interactions across all the PMCs; and establish a common digital M&E framework and set of tools for real-time reporting and decision-making by the APCRDA and ADCL, covering all technical, environmental, social, financial, and contract management aspects for the program. The PMCs will carry out similar activities at the contract level to ensure the timely and quality execution of works. Their staffing will reflect the skills required for the corresponding assignments, including OHS and community health and safety. The PgMCs and PMCs will be responsible for integrating climate actions across the implementation of the entire expenditure program. The PgMCs and PMCs will ensure that all interventions within their scope adhere to the sustainable design guidelines.

Foster participation with a gender focus to develop communities. Participatory mechanisms are in place to guide city and township developments and solicit inputs for livability and livelihood outcomes, especially for women and low-income groups. This would include at least four for the following initiatives: (a) appoint a Gender Specialist as part of the Social Development Unit at the APCRDA for gender inclusion and community participation in the planning and designing of community infrastructure and public space; (b) revive the Citizen Advisory Committee advising the APCRDA Board, including women and youth members, as well as representatives from farmers, business owners, community leaders, educational institutions, and NGOs representing landless and workers; (c) establish active village-level community groups with local representatives, fostering exchanges on program progress and challenges between implementing agencies and the villagers; (d) create Residents' Welfare Associations with women representatives at government housing and public

housing complexes to improve the O&M; and (e) improve the existing communication channels and grievance redress systems to create both physical and digital platforms to share ideas and suggestions across diverse groups (communities, vulnerable groups and individuals with diverse interests) with a target of more than 1,000 active users monthly. To ensure meaningful participation, selected mechanisms will include sub-mechanisms offered specifically for women and low-income groups, promoting their representation across mechanisms.

Align skill training programs with the local population's involvement in upcoming construction and maintenance activities and other urban services. The skill training program should align with emerging needs for construction and maintenance jobs including urban services.

Revive Citizen Advisory Committee with members from all stakeholder groups including farmers, landless laborers, women, and youth, as well as representatives from farmers, business owners, community leaders, educational institutions, and NGOs representing landless and workers.

6.2.2 Program Actions

Preparing and Updating Resettlement Plans as per National Laws and APCRDA's already approved internal R&R policies

Objective. Of the eight AGC packages, three require land procurement; of the 10 LPS packages, 6 require some amount of land procurement; and of the 20 trunk infrastructure and flood mitigation packages, 15 require some amount of land procurement ranging from less than 1 acre to a maximum of 56 acres for each package. While it is expected that most of it will be procured using the LPS, there may be a requirement for LA in a small number of cases. Also, given that some of the trunk infrastructure and flood mitigation work may require the land within the Gram Kantam area, there may be some resettlements.

Actions. The RPF, notified vide GO MS. No. 320 issued on September 19, 2018, is still valid. The required RAPs will need to be prepared/updated, including updating unit rates adjusted for inflation and updated cost norms, as per the national LARR Act and the approved RPF. The process for NS is clearly outlined in the APCRDA Act, the RPF, and earlier RAPs. The APCRDA will update and disclose the RPF before negotiations, ensuring that the update and preparation of resettlement plans are completed before the award of works contract.

Prepare Standard Operating Procedures

Objective. Prepare SOPs to address the current gaps in EMPs to manage key construction-related environmental and OHS risks that were not adequately covered in existing EMPs, such as waste management, wastewater treatment, traffic management, OHS, labor influx, and GBV/SEA risks. The SOPs will be implemented by the contractors. The key aspects of these SOPs will include the following:

- **Waste management.** Establish coordination with existing waste management facilities, such as composting centers, C&D waste sites, and hazardous waste management facilities in Vijayawada, Guntur, and nearby cities. Devise a mechanism to ensure that these facilities are used by contractors for waste disposal, with monitoring to ensure compliance.
- **Wastewater treatment.** Include treatment methods such as sedimentation ponds to manage wastewater from construction sites. Implement pH correction measures for wastewater generated from batching plants and ensure the use of oil-water separators to handle wastewater containing oils and other contaminants.
- **Traffic management.** Ensure that traffic management plans minimize impacts on local communities and maintain smooth traffic flow in cities affected by construction activities. Coordinate with local authorities to develop detour plans and traffic schedules that reduce congestion and disruption to residents.

- **OHS.** Ensure that contractors comply with international and national OHS standards, including those related to construction site safety, equipment handling, and worker welfare. Implement OHS management procedures, including risk assessments, training programs, and emergency response plans to safeguard workers and communities.
- **Labor influx and GBV/SEA risks.** Address risks associated with labor influx, including potential social conflicts, and implement measures to mitigate GBV and SEA. Develop a response and reporting mechanism for handling any incidents related to GBV/SEA, with clear communication and accountability structures in place.
- **Post-construction environmental monitoring.** Ensure that the program maintains its environmental performance after becoming operational, with continuous M&E of key environmental indicators.

Strengthening Environmental and OHS/E&S Clauses in Bidding Documents

Objective. Standardize and strengthen environmental clauses across all bidding documents to ensure uniformity in environmental and OHS compliance.

Actions. The APCRDA will include the following EHS and OHS conditions including cost implications in the bidding documents:

- Past performance of the contractor on E&S aspects, including SEA and GBV
- E&S staff with the contractor
- Mitigation measures to address construction impacts
- Code of Conduct for the contractor's personnel
- Management strategies and implementation plans (MSIPs) to manage the E&S risks
- A C-ESMP with site-specific management plans, including an OHS plan
- Labor Management Procedures.

Each of the above conditions is elaborated in Annex 11, which will be reviewed and updated by the APCRDA and will be included in the bidding documents.

Create a socioeconomic baseline covering LPS farmers and landless households to assess current livelihood practices. Develop a current socioeconomic baseline for labor and LPS farmers who are all included in the annuity and pension programs using the skill census survey. This will further feed into the preparation of (a) livelihood action plans and (b) skill development plans.

Implement LPS benefits as per the APCRDA Act and Rules including support to local population in establishing enterprises. Implementation of the LPS benefits will include support for establishing enterprises. As capital development accelerates and the demand for various essential needs increases, local people may want to start suitable enterprises to take advantage of the demand for goods and services and may look for capital to start enterprises.

Capacity building of the ESMD staff. The ESMD staff needs a comprehensive capacity-building program in E&S management. This capacity building will focus on enhancing the skills and knowledge of engineers, E&S specialists, and project managers involved in the city development. The APCRDA will prepare a detailed Capacity Building Plan outlining the specific training modules, timelines, and responsibilities for implementation. This plan will also ensure that staff are equipped to handle emerging E&S challenges and comply with regulatory requirements. This initiative will further strengthen the APCRDA's and ADCL's capacity to manage E&S risks effectively and promote sustainable development in the program.

Setup mechanism for resolving grievances, particularly for the annuity related to assigned land.

Prioritize infrastructure in villages. Implement the APCRDA's policy to upgrade basic infrastructure in the existing villages on a priority basis and to integrate them with the city, fostering trust and aligning development goals.

6.3 Summary of Recommendations

Table 12. Recommendations Integrated into DLIs

Sl.No.	Recommendations	Responsibility	Timeline	Means of Verification
1	Establishment of an Environmental and Social Management Unit/Division (ESMD) within APCRDA	APCRDA	Before December 31, 2025)	Aligned with DLI 1/ DLR 1.2
2	Environmental and Social Monitoring	APCRDA	Continuous	Aligned with DLI 1/ DLR 1.3
3	PgMC and PMC to have adequate qualified E&S staff	APCDRA and ADCL	Before December 31, 2025	Aligned with DLI 1/ DLR 1.1
4	Skill development and employment from ACC villages for women and youth in construction and urban services jobs	APCDRA and ADCL	Continuous	Aligned with DLI 4
5	Strengthening community participation with gender focus through reviving Citizen Advisory Committee, Village Level Committees	APCRDA	Before December 31, 2025	Aligned with DLI 6

Measures for Inclusion in the Program Action Plan (PAP). The recommendations for the PAP are provided in Table 13:

Table 13. PAP Recommendations

Sl.No.	Recommendations	Responsibility	Timeline	Means of Verification
1	Prepare RAPs for Phase I packages as per GoAPs RPF and LARR 2013 Act.	APCRDA	Before the contract award	RAP prepared and disclosed
2	Prepare SOPs to strengthen EMPs	APCRDA and ADCL	Before June 30, 2025	SOPs prepared and adopted for implementation including addressing risks like waste management, OHS, labor influx, and GBV/SEA

3	Strengthen Environmental and OHS/E&S clauses in the bidding documents	APCRDA and ADCL	Before Issuance of Bidding Document	Bidding documents to be standardized and available on APCRDA website with OHS/E&S clauses, and contractor performance indicators including E&S staffing, bill of quantities for EMP implementation, and review mechanisms.
4	Create a socio-economic baseline covering LPS farmers and landless households for assessing current skills and livelihood profiles for preparing and implementing livelihood action plans and this to be monitored through annual sample studies .	APCRDA	Baseline survey and livelihood action plan by June 30, 2025 and thereafter monitoring study reports every year by December 31 starting 2026.	Socio-economic baseline and annual monitoring reports shared
5	Implement LPS Benefits as per the APCRDA Act and Rules	APCRDA	Continuous	Biannual reports as part of Program reports
6	Annual orientation programs for E&S teams to improve capacities on E&S aspects	APCRDA	Continuous	Programs delivered and reports shared
7	Resolve grievances related to assigned land farmers.	APCRDA	Continuous	Share updates through bi annual reports
8	Implement APCRDA's policy to upgrade basic infrastructure in existing villages on a priority basis	APCRDA	December 31, 2027	Village infrastructure upgraded as planned
9	Fill in Social Facilitators positions for all villages	APCRDA	June 30, 2025	Recruited and reported

ANNEXES

Annex 1: Review of Applicable Legal and Regulatory Framework

A. Environmental Policies, Rules, and Regulations

The MoEF&CC and the pollution control boards (CPCB and SPCBs) together form the regulatory and administrative core. Other ministries/statutory bodies/departments responsible for ensuring environmental compliance and granting various clearances include the state ministry/Department of Environment, regional offices of the MoEF&CC, and state forests/wildlife departments. A brief of the likely applicable rules and regulations is described in the subsequent sections.

The standards included in the various legislations will have to be adhered to. To meet these legal requirements on environmental risk management, the implementing agency along with its appointed consultants and contractors will have to know the regulatory requirements. However, gaps exist with respect to the enforcement of the regulations as contractors in many cases fail to effectively adopt and implement EMP measures.

Table A1.1. Environmental Laws, Policies, and Their Relevance

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
Environment Protection Act (EPA) 1980 and its subsequent amendments	The EPA is an umbrella act that coordinates and supplements the existing laws related to specific types of pollution, such as the Water Act, 1974 and the Air Act, 1981. It also overrides any inconsistent provisions in other laws. The EPA empowers the Central Government to take all necessary measures to prevent and control environmental pollution, such as setting standards, issuing directions, creating authorities, and imposing penalties. The EPA covers various aspects of environmental protection, such as water, air, land, noise, hazardous substances, and coastal zones. It also provides for public participation and access to information in environmental matters.	Various notifications for environmental protection and environmental standards published by the Central Government under this act are to be followed for this project.	APCRDA has taken ECs for the Capital City project per EIA Notification published under this act. Further, through the implementation of EMPs, APCRDA ensures that the pollution due to the project activities is within the standards for air quality, water quality, and noise level published under this act.
Air (Prevention & Control of Pollution) Act 1981, Rules of 1982 and amendments	This is popularly known as Air Act. The projects with the potential to emit air pollutants into the atmosphere have to obtain CTE under Section 21 of the Air Act from SPCB before	Building projects with built-up area more than 20,000 m ² are categorized as orange category by Andhra Pradesh Pollution Control Board (APPCB). Further, hot mix plants to	APCRDA has obtained CTE for the overall Capital City project and 13 individual building projects with built-up area more than 20,000 m ² . CTO has been obtained

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
	<p>starting implementation and Consent to Operate (CTO) before commissioning the project. The occupier of the project/facility has the responsibility to adopt necessary air pollution control measures for abating air pollution. For issuing Consent to Establish (CTE) and CTO under Water Act and Air Act, CPCB has developed certain criteria for categorization of industries as red, orange, green, and white based on their pollution potential. CPCB has also prepared an indicative list of industries under each category. Based on the CPCB guidelines, SPCBs have published the list of industries under the abovementioned four categories. If an industry falls under red, orange, or green category, it has to apply for CTE first and later for CTO.</p>	<p>be installed for the road projects are also categorized as orange category by APPCB. Hence, these activities should obtain CTE and CTO from APPCB under the Air Act.</p>	<p>for one building project which has been completed.</p> <p>APCRDA has to obtain CTE and CTO for new building projects with built-up area more than 20,000 m².</p> <p>Contractors have to obtain CTE and CTO for the hot mix plants to be installed for the road projects.</p>
Water (Prevention and Control of Pollution) Act 1974, Rules of 1975, and amendments	<p>This is popularly known as Water Act. Any component of a project with the potential to generate sewage or trade effluent will come under the purview of this act, its rules, and amendments. Such projects have to obtain CTE under Section 25 of the act from the SPCB before starting implementation and CTO before commissioning. The Water Act also requires the occupier of such projects to take measures for abating the possible pollution of receiving water bodies. For issuing CTE and CTO under Water Act and Air Act, CPCB has developed certain criteria for categorization of industries as red, orange, green, and white based on their pollution potential. CPCB has also prepared an indicative list of</p>	<p>Building projects with built-up area more than 20,000 m² are categorized as orange category by APPCB. Hence, building projects should obtain CTE and CTO from the APPCB under the Water Act.</p>	<p>The APCRDA has obtained CTE for the overall Capital City project and 13 individual building projects with built-up area more than 20,000 m². CTO has been obtained for one building project which has been completed.</p> <p>The APCRDA has to obtain CTE and CTO for new building projects with built-up area more than 20,000 m².</p>

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
	industries under each category. Based on the CPCB guidelines, SPCBs have published the list of industries under the abovementioned four categories. If an industry falls under red, orange, or green category, it has to apply for CTE first and later for CTO.		
Noise Pollution (regulation and control) Rules 2000 and amendments	These rules specify the ambient air quality standards regarding noise for industrial areas, commercial areas, residential areas, and silence zones. These rules put restrictions on the use of loudspeakers/public address system and sound producing instruments. These rules also put restrictions on the use of horns, sound emitting construction equipment, and bursting of firecrackers.	Construction activities of the project should meet the noise standards. Sound emitting construction equipment shall not be used or operated during nighttime in residential areas and silence zones.	The APCRDA should enforce the requirements of these rules through the implementation of EMP.
Advisory Note on Septage Management, 2013 & National Urban Faecal Sludge and Septage Management Policy, 2017	Development of a septage management sub-plan as part of City Sanitation Plan Recognition of fecal sludge and septage management as a sanitation solution. Recommends septage management as an essential component for citywide sanitation. Focused on areas with no sewers, emphasis on the need for onsite and offsite sanitation systems to exist in tandem.	Applicable for the management of septage generated within the existing villages of the Capital City with no sewers.	The APCRDA shall arrange mechanism to ensure that licensed operators collect and dispose sewage at designated STPs. Septage management facility (FSTP) should be developed in the city.
Construction and Demolition Waste Management Rules, 2016	These rules set out requirements to be followed for management of C&D wastes by waste generators depending on quantity of C&D wastes generated by them. Every waste generator shall segregate C&D waste and deposit it at a collection center or hand it over to the authorized processing facilities. Ensure that there is no littering or deposits to	Applies to all wastes resulting from construction, remodeling, repair, and demolition of any civil structure of the Capital City project	Contractors of the Capital City projects have to follow these rules during construction works. If the APCRDA establishes C&D waste management facilities under the project, it should meet the requirements of these rules and APCRDA should obtain authorization from SPCB under these rules.

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
	prevent obstruction to the traffic or the public or drains.		
Solid Waste Management Rules, 2016	These rules provide the requirements for managing solid waste by ULBs and waste generators, to be followed for collection, storage, and transport for onward treatment and disposal. The compliance with these rules ensures safer EHS conditions.	<p>These rules specify the waste generators to segregate the waste at source into wet, dry, and special waste.</p> <p>SWM projects with capacity greater than 5 tons per day (TPD) will require authorization under the Rules from SPCBs. ULB or the operator of the ULB should submit application for authorization to SPCB. Measures for prevention and control of environmental pollution are to be included in the application. The ULB has to submit an annual report on SWM to SPCB in the specified format. This report involves information on certain pollution control measures adopted, especially for sanitary landfills.</p>	<p>Contractors of the Capital City project have to segregate the waste at source and hand over the waste to the waste collectors engaged by the APCRDA.</p> <p>The APCRDA has to obtain authorization for SWM projects with capacity greater than 5 TPD from the APPCB.</p>
Wildlife Protection Act 1972 and amendments	This overarching act provides protection to wild animals, birds, and plants; it addresses matters connected with habitat protection; processes to declare protected areas; regulation of wildlife trade; constitution of state and national board for wildlife, zoo authority, tiger conservation authority; and penalty clauses and other important regulations.	<p>Diversion of forest land or any restricted activity within a protected area or its notified eco-sensitive area will require clearance from the National Board for Wildlife or from the Chief Wildlife Warden of the state, depending on the nature of the activity. No subprojects that fall under protected areas or eco-sensitive zones of protected areas would be considered under the proposed PforR.</p>	No actions to be taken by the APCRDA as no protected areas or eco-sensitive zones of protected areas are present near Amaravati.
Forest (Conservation) Act, 1980 & Forest	Enacted to help conserve the country's forests. It strictly restricts and regulates the de-reservation of forests or use of forest land for non-forest	No subprojects falling within designated forest areas will be considered under the proposed PforR.	Forest areas are located within ACC area. The APCRDA has to ensure that no subprojects are falling within forest areas. If any

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
Conservation Rules	purposes without the prior approval of the Central Government. To this end, the act lays down the prerequisites for the diversion of forest land for non-forest purposes.		activity requires diversion of forest land, the APCRDA has to obtain forest clearance from MoEF&CC through the AP Forest Department.
Biological Diversity Act 2002 & Biological Diversity rules 2004	An act to provide for conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge as well as for matters connected therewith or incidental thereto.	No subprojects which fall under any critical biodiversity rich area, national parks, wildlife sanctuaries, conservation reserves, community reserves, biosphere reserves, world heritage sites, and other forest areas would be considered under the PforR.	Forest areas are located within ACC area. The APCRDA has to ensure that no subprojects are falling within forest areas. If any activity requires diversion of forest land, the APCRDA has to obtain forest clearance from MoEF&CC through the AP Forest Department.
Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016, and amendments	These rules encourage the reduction of hazardous waste generation and promote its recycling and reuse. They also specify strict guidelines to ensure optimum waste management with regard to transportation, storage, and disposal of waste.	Contractors who generate hazardous and other wastes covered in the schedules of these rules are required to obtain an authorization from SPCBs, maintain monthly and annual records (as per formats specified in these rules), provide a safe storage area to store such wastes, and dispose of the waste in an environmentally sound and legally acceptable manner. Per these rules, hazardous wastes should be disposed of in treatment, storage, and disposal facilities (TSDFs) for hazardous wastes.	The APCRDA has to ensure that hazardous wastes are managed by the contractors as per the provisions of these rules by implementing the EMP.
E-waste management and handling rules 2011	To manage the e-waste but not covering lead acid batteries and radioactive wastes.	E-waste generated in the Capital City should be disposed of per the provisions of these rules.	The APCRDA should collect and dispose of the e-waste generated in the Capital City as per the provisions of these rules during the operation phase.
Ancient Monuments and Archaeological Sites and Remains Act, 1958 and Ancient	This act is for the protection of archaeologically important sites and monuments. The amendment act designates areas within 100 m from the 'protected property' as	It is to be ensured that no project facilities are located within the prohibited area of any monument protected by ASI. Permissions/no	The APCRDA has to ensure that no subprojects are falling within the prohibited area of Undavalli caves. If any activity is to be located

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010	'prohibited area' and beyond that up to 200 m as 'regulated area', respectively. No development activity (including building, mining, excavating, and blasting) is permitted in the 'protected area' and development activities likely to damage the protected property are not permitted in the 'regulated area' without prior permission of ASI.	objection certificate (NOC) from the ASI is to be obtained in case any activity under the Capital City project is located within the prohibited area or regulated area of any protected monument. The Undavalli caves located within the ACC area is a monument protected by ASI.	within the regulated area of Undavalli caves, the APCRDA has to obtain NOC from ASI.
The scheduled tribes and other traditional forest dwellers (reorganization of forest rights) Act 2006	The main objective of the act is to recognize the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources for livelihood and habitation.	Forest dwellers or tribal people use forest produce for their livelihood. They live in forest areas in 'tribal hamlets'. The act shall be applicable if any of the subprojects is likely to affect such communities. However, no activities are proposed within forest areas located within the Capital City.	Not applicable
Andhra Pradesh Water, Land and Trees Act - 2002 (APWALTA - 2002)	Objectives of this act are to promote water conservation and tree cover, protect and conserve water sources and land, and regulate the exploitation and use of ground and surface water.	Permission for cutting of trees needs to be taken for the project under WALTA Act 2002 from the designated officer.	The APCRDA should take permission from the designated officer before cutting any trees in the project area. For every tree to be cut, two trees need to be planted.
Public Liability Insurance Act 1991	The main objective of this act is to provide for damages to victims of an accident which occurs as a result of handling any hazardous substance. The act applies to all owners associated with the production or handling of any hazardous chemicals.	Contractors handling hazardous substances should take this insurance.	The APCRDA should ensure that contractors are taking this insurance.
Explosives Act 1984 & Explosive Rules 2008 (for storage of diesel, bitumen)	Safe transportation, storage, and use of explosive material	Applicable for contractors if they store petroleum products. Wherein applicable, license would be required from Petroleum and Explosives Safety Organisation for storage of petroleum products exceeding 45,000 L in bulk.	The APCRDA should ensure that contractors take this license if applicable.

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance for Environmental Management	Actions Taken or to Be Taken by Implementing Agencies to Address These Requirements
The Mines and Minerals (Development & Regulation) Act 1957	The act provides for the development and regulation of mines and minerals under the control of the union.	All quarry materials for the project are to be procured from licensed mining areas only. Ensure that appropriate measures are in place to address environmental, social, health, and safety risks and impacts from quarry exploitation.	The APCRDA should ensure that quarry materials are procured from approved licensed mining areas..
Andhra Pradesh Minor Minerals Concession Rules 1966	For grant of mining permit for quarrying of any minor minerals by any agency for any project/works, request shall be made to the Competent Authority.	Permissions for sand mining from the riverbed and for opening a new quarry	The APCRDA should ensure that contractors obtain materials from approved quarries only.

The existing regulatory framework on environmental aspects, forest, designated protected areas, and pollution control acts and rules has satisfactory provisions to manage the environmental impacts of the proposed Program. While the systems are in place, the enforcement needs to be further strengthened. To further strengthen the environmental safeguard compliance, an ESMD with adequate environmental specialists has been proposed.

B. Social Policies, Rules, and Regulations

B1. Land Procurement Related Policies, Rules, and Regulations

The GoAP, in the exercise of powers conferred under Sub-Section-5 of Section-43 of the APCRDA Act, 2014, directed APCRDA to undertake a development scheme through LPS in the Capital City area. The State Government notified the LPS applicable in Capital City area for acquiring lands for the construction of Capital City Development Project. The LPS is mainly adopted for the development of the Capital City area where the land parcels owned by individuals or groups of owners are legally consolidated by transfer of ownership rights to the APCRDA, which later transfers the ownership returnable plots back to the landowners for undertaking the development of such areas.

Land acquisition is governed by a legal framework consisting of the LARR Act 2013, the APCRDA Act 2014, and the Andhra Pradesh Amendment Act of April 2018 (Act 22/2018). Three land assembly mechanisms are being used to assemble the land needed for the development of the Capital City: (a) LPS; (b) NSs; and (c) LA through eminent domain, following the provisions of the LARR Act 2013. Efforts were made from the early conceptual phase of the Capital City to minimize resettlement of residents of the 25 villages as much as possible. The Master Plan incorporates all villages in the final plan of the Capital City area. It makes provisions for upgrading village infrastructure and connectivity such that they are comparable with the rest of the city. Land assembly within villages is limited to that of land required for infrastructure upgrading (for example, rights-of-way, widening of roads). The LPS is not applicable within villages, where the only relevant land assembly instruments are NSs and LA through the LARR Act 2013.

The APCRDA may acquire any movable or immovable property by purchase, exchange, gift, lease, mortgage, or the NS as per Section 124 of the APCRDA Act, 2014. Any land required in the development plan shall be deemed to be the land needed for a public purpose within the meaning of the LARR Act 2013.

LPS. The land pooling mechanism is mainly adopted for the development of the Capital City area wherein the land parcels owned by individuals or groups of owners are legally consolidated by transfer of ownership rights to the Authority in return for a smaller plot of urban, serviced land (returnable plot) in the Capital City area that is of higher value than the land relinquished. Additionally, they receive a range of livelihood support measures including, among others, an annuity, skill upgrading, and support for setting up self-employed enterprises. For the above purposes, the GoAP had prepared and adopted the LPS F&I Rules under APCRDA Act 2014 and was notified by GO MS. No. 1 on January 1, 2015.

As a result of consultations and before the start of the LPS in 2015, adjustments were made to its design to reflect feedback from residents of the Capital City area. Some of the most significant revisions to the LPS that resulted from direct consultation with beneficiaries include (a) differentiated compensation levels for dry and wet lands (Jareebu lands), when initially a unique package (compensation) has been proposed for all land types, independent of land crop yield; (b) treatment of five semi-urban areas in the Capital City area, where it was agreed to add the land in these areas to the Jareebu category, for compensation purposes; (c) compensation of non-titled occupants of government lands, as per entitlement matrices; (d) demarcation of habitations within village jurisdictions, which was agreed among stakeholders in the different villages, following a consultation process; (e) methodology for returnable plot lottery, which was adjusted to incorporate suggestions from beneficiaries; and (f) exemption from capital gains tax arising from first sale of returnable plots, if the land is sold within the first two years after registration, a provision that was approved and incorporated in the union budget since 2017.

LA: The GoAP adheres to the Right to Fair Compensation and Transparency in LARR Act 2013 (and further amendments) and follows the procedures as laid out in the above act and the rules. Following the LARR Act 2013, and with some additional provisions in 2018, the GoAP had notified the RPF vide GO MS. No. 320 issued on September 19, 2018, which is well aligned with the World Bank core principles.

NS. Section 124 of the APCRDA Act 2014 enables the Authority to acquire any property by way of the NS, and in cases where the NS fails, the provisions of the LARR Act would apply in accordance with the requirements of the development plan. Given that some of the trunk infrastructure passes through existing village habitation area (notified as R1 zone under the Amaravati Master Plan), where the LPS does not apply, there will be a requirement to procure a small amount of land through the NS and may need some resettlement. The GoAP has already developed policies and issued GOs (GO MS. No. 153 and GO MS. No. 420) as part of the earlier World Bank's engagement during 2016–18.

B2. Labor-related Legislations

This program offers the opportunity to strengthen environmental performance by introducing the international best practices during the project preparation and implementation stages. The identified gaps in the subsequent sections will need to be addressed in the context of the program activities.

Table A1.2. Labor Laws Applicable to the Program

Name of the Law/ Regulation	Relevant Provisions of the Law	Relevance to the program
Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996	It regulates the employment and conditions of service of building and other construction workers and provides for their safety, health, and welfare.	This will be applicable for all building or other construction works under the project that employ 10 or more workers.
Workmen Compensation Act, 1923	It provides for payment of compensation by employers to their employees for	Construction workers will be involved in the subprojects.

Name of the Law/ Regulation	Relevant Provisions of the Law	Relevance to the program
	injury by accident, that is, personal injury or occupational disease.	
ESI Act, 1948 (Employees State Insurance Act, 1948)	Employees State Insurance Act provides for health care and hospitalization benefits for construction workforce.	Construction workers will be involved in the subprojects.
Inter-state Migrant Workers Act, 1979	It protects workers whose services are requisitioned outside their native states in India. A contractor who employs or who has employed five or more inter-state migrant workmen needs to obtain registration under this act.	Construction workers will be involved in the subprojects.
The Child Labour (Prohibition & Regulation) Amendment Act, 2016	It prohibits employment of children in specified hazardous occupations and processes and regulates the working conditions in others.	There should not be any child labor (less than 14 years) in any project activity and adolescents (above 14 and less than 18 years) in any hazardous activity.
Building and Other Construction Workers Welfare Cess Act, 1996	An act to provide for the levy and collection of a cess on the cost of construction incurred by employers.	Subprojects will involve construction workers.
Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act 2013 (POSH Act)	It mandates every organization with more than 10 employees to constitute an ICC in the prescribed manner to receive and address complaints of any form of SH from women in a time-bound and highly confidential manner.	Applicable to all implementing agencies
Contract Labour (Regulation & Abolition) Act 1970	To provide proper and habitable working conditions. To regulate the functioning of the advisory boards. To lay down the rules and regulations regarding the registration procedure of the establishments employing contract labor.	Applicable to all implementing agencies
Payment of Wages Act, 1936	Lays down by what date wages will be paid, when it will be paid, and what deductions will be made from the workers' wages, if any	Applicable to all implementing agencies
Payment of Gratuity Act, 1972	Gratuity is payable to an employee under the act on meeting certain conditions on separation, provided an employee has completed 5 years of service with the employer.	Applicable to all implementing agencies
Employees Provident Fund and Miscellaneous Provision Act, 1952	Provides for monthly contributions by the employer as well as by workers, with a provision for the return of pension as a lump sum (principal and interest accrued) at the end of his/her service term	Applicable to all implementing agencies
Maternity Benefit Act, 1951	Provides for maternity leave for women during pregnancy and after giving birth as well as some other benefits to women employees in case of medical recommendation for bed rest or miscarriage, and so on.	Applicable to all implementing agencies

Name of the Law/ Regulation	Relevant Provisions of the Law	Relevance to the program
Payment of Bonus Act, 1965	Provides for payments of annual bonus, subject to a minimum of 8.33% of wages and a maximum of 20% of wages	Applicable to all implementing agencies
The Bonded Labour System (Abolition) Act 1976 Bonded Labour System (Abolition) Rules 1976	Provides for the abolition of bonded labor system, with a view to prevent economic and physical exploitation of the weaker sections of the people and for all matters connected therewith or incidental thereto	Applicable to all implementing agencies
The Trade Union Act, 1926	Lays down the procedure for registration of trade union of workers and employers. The trade unions registered under the act have been given certain immunities for civil and criminal liabilities.	Applicable to all implementing agencies
Draft Code on Wages	The code repeals four laws and now applies to all employees and all establishments. Wage limits for applicability have been removed (as opposed to earlier laws). The employees include skilled, unskilled, operational, supervisory, manual, administrative, managerial, clerical, and technical workers. The unorganized sector workers have been brought under the purview of the code. The code also specifies that the rates of wages shall be revised every 5 years.	Applicable to all implementing agencies
Draft Code on Social Security	The Code on Social Security, 2020, subsumes nine central labor laws with the goal of extending social security to all employees and workers either in the organized or unorganized or any other sectors.	Applicable to all implementing agencies

India has also ratified six out of the eight core/fundamental International Labour Organization (ILO) Conventions. The international conventions ratified by the country are briefly described in Table A1.3.

Table A1.3. International Labor Law Convention

S. No.	International Labor Law Convention	Stipulation/Terms and Conditions
	Forced Labor Convention, 1930 (No. 29)	Prohibits all forms of forced or compulsory labor, which is defined as "all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily." The convention also requires that the illegal extraction of forced or compulsory labor is punishable as a penal offence and that ratifying states ensure that the relevant penalties imposed by law are adequate and strictly enforced.
	Abolition of Forced Labour Convention, 1957 (No. 105)	Prohibits forced or compulsory labor as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social, or economic system; as a method of mobilizing and using labor for economic development; as a means of labor discipline; as a

S. No.	International Labor Law Convention	Stipulation/Terms and Conditions
		punishment for having participated in strikes; and as a means of racial, social, national, or religious discrimination
	Equal Remuneration Convention, 1951 (No. 100)	Lays out the principles for equal remuneration for work of equal value and addresses gender discrimination
	Discrimination (Employment and Occupation) Convention, 1958 (No. 111)	Prohibits all discrimination and exclusion on any basis including of race or color, sex, religion, political opinion, national or social origin in employment and repeal legislation that is not based on equal opportunities
	Minimum Age Convention, 1973 (No. 138)	To ensure the effective abolition of child labor and to raise progressively the minimum age for admission to employment or work. India has ratified this convention with a minimum age of 14 years.
	Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, 1999 (No. 182)	Prohibition and elimination of the worst forms of child labor, including slavery, forced labor and trafficking in human beings. It prohibits the use of children in conflicts, prostitution and pornography, illegal activities such as drug trafficking, and dangerous work.

B3. Other Applicable Social Policies, Rules, and Regulations

Table A1.4. Applicable Social Policies, Rules, and Regulations

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance
Constitution of India (Articles 15, 16 and 46)	The Indian Constitution (Article 15) prohibits any discrimination based on religion, race, caste, sex, and place of birth and contains a clause allowing the union and state governments to make special provisions for the advancement of any socially and educationally backward classes of citizens or for the SCs and STs. Article 16 refers to the equality of opportunity in matters of public employment. Article 46 directs the state to promote with special care the educational and economic interests of the weaker sections of the people, particularly of the SCs and the STs and also directs the state to protect them from social injustice and all forms of exploitation.	The provisions under the Constitution ensure the access, equity, and inclusiveness of the vulnerable groups in the Program.
Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act 1989 and further Amendments 2018	To prevent atrocities against SCs and STs. The objectives of the act clearly emphasized the intention of the government to deliver justice to these communities through proactive efforts, enabling them to live in society with dignity and self-esteem and free from fear or violence or suppression by the dominant castes. With the reported misuse of the act, in August 2018, the Parliament of India passed the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Amendment Bill, 2018, to bypass the ruling of the Supreme Court of India, laying down procedures for arrests under the act.	This law promotes equity by safeguarding the rights of SC and STs and so is relevant to the Program.

Name of Law/Policy	Relevant Provisions of the Act/Policy	Relevance
The Rights of Persons with Disabilities Act, 2016	The act categorically provides for access to inclusive education, vocational training, and self-employment of disabled persons without discrimination and further states that buildings, campuses, and various facilities are to be made accessible to persons with disabilities and their special needs are to be addressed.	The Program will enhance participation and placement outcomes among disadvantaged groups including persons with disabilities
The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act 2013	Protects women workers from sexual harassment and abuse of power at their workplace and provides for constituting an ICC in every organization employing 10 or more workers, including women, to look into complaints of sexual harassment. It provides guidance on redressal against such complaints, including its internal investigation in a time-bound manner.	Recognizes the need for legal protection of women workers against abuse, exploitation in all government institutions.
National Policy for Women, 2016	The policy articulates various mandates for the holistic empowerment of women in the country. It includes various areas such as health, education, livelihoods, access to social protection, and protection from violence and discrimination at the core of its provisions. The policy's mandate seeks to guide governance and policy-making practices across departments at the national and state level.	Guides inclusion and accessibility provisions and overall women's empowerment and SEA relevant to the Program.
The Equal Remuneration Act, 1976, Employee Compensation Act, 1923 and 2009 , Personal Injuries (Compensation Insurance) Act, 1963, The Minimum Wages Act, 1948, Payment of Wages Act, Maternity Benefit Act, 1961	Provide equal remuneration to men and women workers, prevent discrimination against women in matters of employment, ensure employers compensate workman's spouse/dependent children in case of injury at workplace, and provide mandatory worker insurance by employers against such liability.	Prevents gender discrimination in employment and provides for employee welfare, including social assistance against any incident/accident.

Annex 2: Key Statutory Clearances for Construction

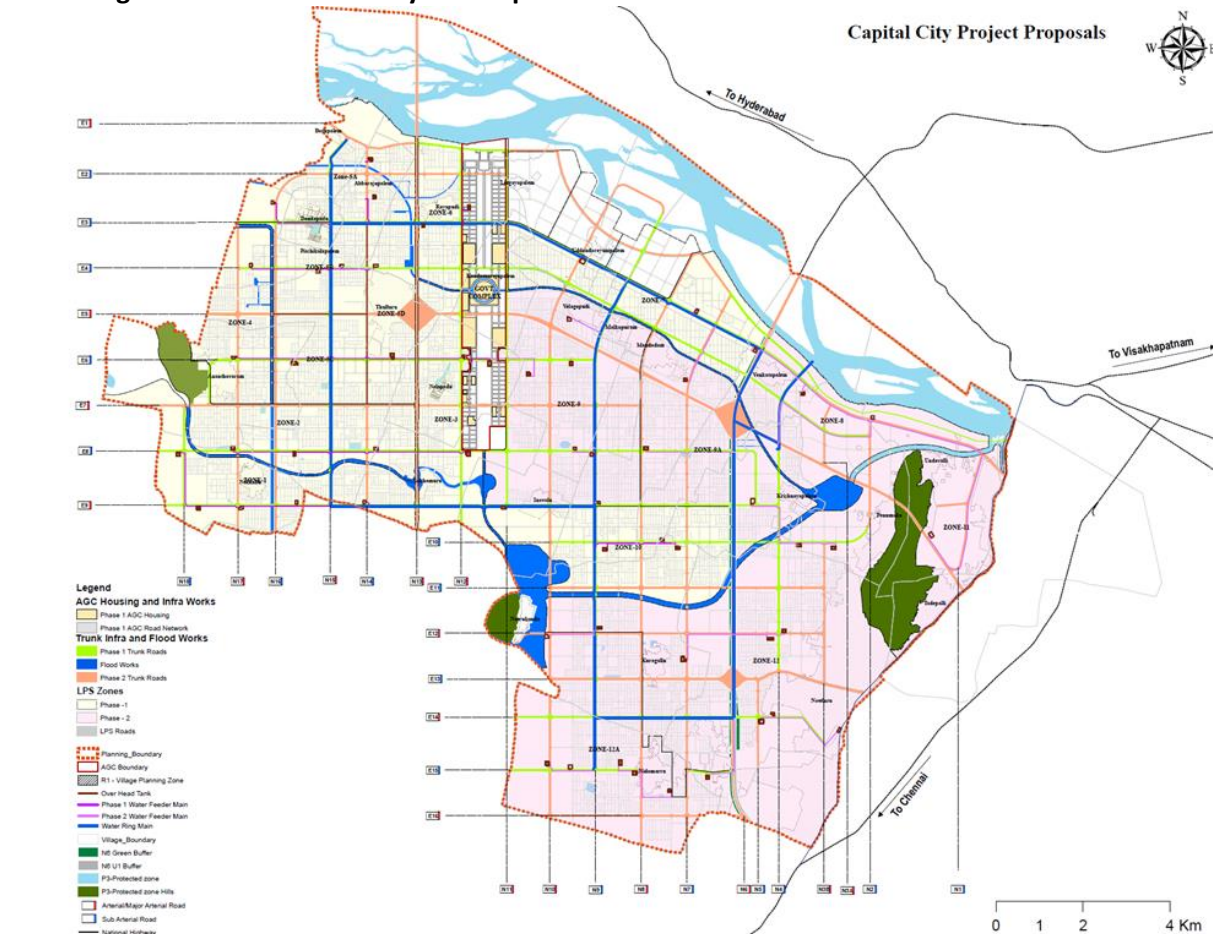
S. No.	Clearance/Authorization	Relevant Act	Competent Authority	Responsibility
1	EC for new building projects with built-up area more than 20,000 m ² .	EIA Notification 2006	SEIAA	APCRDA
2	EC for establishing integrated SWM facility (if any)	EIA Notification 2006	SEIAA	APCRDA
3	EC for sand mining, stone quarrying and excavation of ordinary earth from borrow areas	EIA Notification 2006	SEIAA	Contractors should obtain these material from approved quarries
4	CTE and CTO for new building projects with built-up area more than 20,000 m ²	Air (Prevention & Control of Pollution) Act 1981, Rules of 1982 and amendments; Water (Prevention and Control of Pollution) Act 1974, Rules of 1975, and amendments	APPCB	APCRDA
5	CTE and CTO for hot mix plants	Air (Prevention & Control of Pollution) Act 1981, Rules of 1982 and amendments; Water (Prevention and Control of Pollution) Act 1974, Rules of 1975, and amendments	APPCB	Contractors
6	Authorization to establish C&D waste management facility (if any)	Construction and Demolition Waste Management Rules, 2016	APPCB	APCRDA
7	Authorization to establish SWM facilities with capacity greater than 5 TPD	Solid Waste Management Rules, 2016	APPCB	APCRDA
8	Forest clearance for diversion of forest land (if any)	Forest (Conservation) Act, 1980 & Forest Conservation Rules	MoEF&CC	APCRDA
9	Authorization for handling and storage of hazardous waste	Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016, and amendments	APPCB	Contractors
10	NOC for construction activities within regulated area of archaeologically protected monument (Undavalli Rock Caves)	Ancient Monuments and Archaeological Sites and Remains Act, 1958 and Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010	ASI	APCRDA

S. No.	Clearance/Authorization	Relevant Act	Competent Authority	Responsibility
11	Tree cutting permission	Andhra Pradesh Water, Land and Trees Act 2002	Designated officer	Contractor
12	License for storage of explosive materials	Explosives Act 1984 & Explosive Rules 2008	Petroleum and Explosives Safety Organization	Contractors
13	License for sand and rock mining	The Mines and Minerals (Development & Regulation) Act 1957; Andhra Pradesh Minor Minerals Concession Rules 1966	Andhra Pradesh Mines and Geology Department	Contractor procure materials from authorized quarries
14	PUC certificate for construction vehicles	Central Motor Vehicle Act 1988	Transport Department	Contractor/APCRDA
15	Employing labor/workers	The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996	Labor Department	Contractor
16	Fire safety clearance	National Building Code State Fire Prevention and Fire Safety Act/Rules Public Safety Standards of India	State Fire Department	Contractor
17	Electrical safety	Indian Electricity Act, 1910 re-enacted in 2003. Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010	Chief Electrical Inspector	Contractor

Annex 3: Key Infrastructure Activities Proposed Under Phase 1 of the Program

A map of Amaravati highlighting the location of Phase 1 activities covered under the Program is shown in Figure A3.1. The urban infrastructure supported by the Program consists of the following components: (a) trunk (primary city) infrastructure, which includes the main road network, WTPs, urban mobility systems, and flood mitigation works; (b) neighborhood LPS infrastructure, which provides comprehensive services for livelihood, such as local roads, water supply, wastewater management, stormwater drainage, sewage systems, power, and ICT networks; (c) flood mitigation works; and (d) building works. The major activities under Phase 1 are outlined as follows.

Figure A3.1 Amaravati City Development Plan - Phase 1 in Yellow and Phase 2 in Pink



- **Infrastructure.** Construction of arterial and sub-arterial roads as well as collector roads from townships to sub-arterial roads and streets in the townships, along with streetscapes, public transport services, landscaping, and road reserve demarcation.
- **Flood management infrastructure.** Mitigation of urban flooding through widening and deepening of the Kondaveeti Vagu and Pala Vagu along with construction of three retention reservoirs and a gravity canal from Kondaveeti Vagu to the Krishna River to divert the flood flows.
- **Utility corridors.** Development of utilities such as water supply, electricity, sewerage, and drainage systems. These corridors are strategically placed along major roads, ensuring that all utility lines, including electrical, telecommunication, and water supply networks, are laid underground.

- **Water supply infrastructure.** Construction of WTPs, transmission mains, and distribution centers in the Seed Capital Area.
- **Wastewater Infrastructure.** Construction of waste WTPs and the necessary transmission and distribution infrastructure.
- **Power supply infrastructure.** Installation of underground power networks connecting to external power grids.
- **LPS infrastructure.** The LPS infrastructure works will include the development of road networks (collector roads and streets), incorporating stormwater drainage systems, water supply lines, wastewater management systems, and power supply infrastructure, ensuring efficient urban services and ICT Infrastructure.

A. Trunk Infrastructure

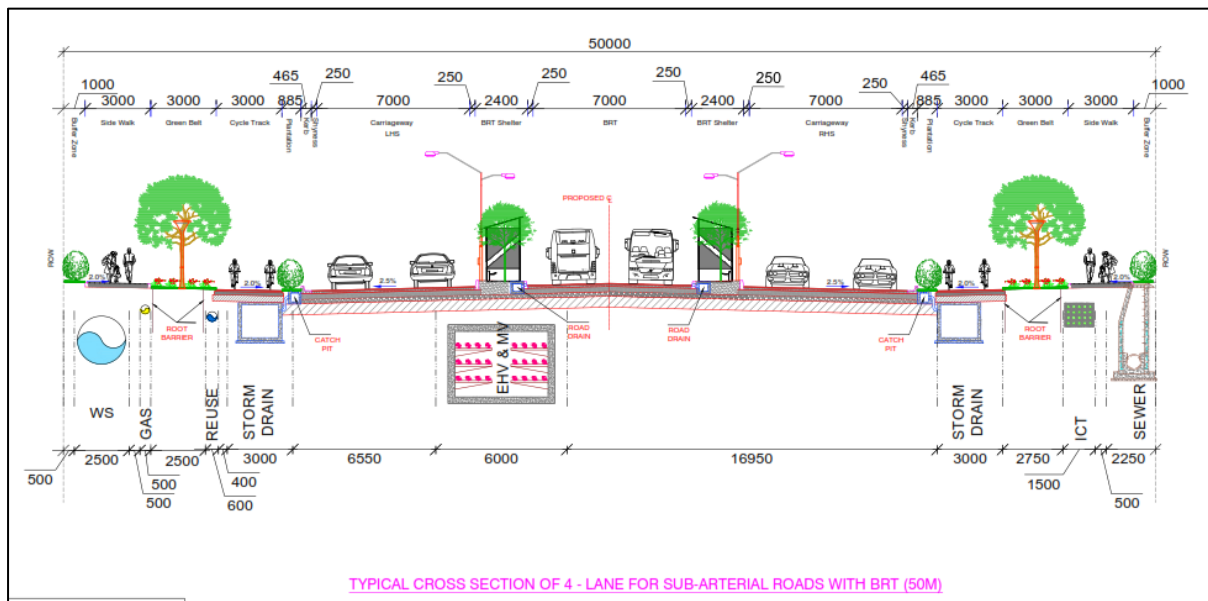
Road network. The ACC development plan includes the creation of a world-class road network as part of its trunk infrastructure. The proposed grid network is designed to ensure efficient transportation and mobility within the city, consisting of 34 roads, totaling approximately 320 km. This includes **arterial roads** (92 km), which serve as the main transit corridors connecting key areas and transport hubs, and **sub-arterial roads** (155.5 km), which provide primary access to township development zones and support the arterial network. Additionally, **collector roads** are planned to manage traffic at the neighborhood level, ensuring local accessibility.

The trunk roads, totaling 298 km, are essential for ensuring smooth transportation throughout Amaravati, serving as the primary routes for both people and goods. These roads will also integrate critical infrastructure such as stormwater drainage, water supply pipelines, and utility corridors for power and ICT systems, ensuring that the city's utilities are incorporated into the road network. The proposed road network for the Program covers 111 km, as detailed in Table A3.1, with a typical cross-section shown in Figure A3.2. The road design supports efficient, multi-modal transportation, featuring a 4-lane vehicle roadway, 3 m wide sidewalks on both sides, and 3 m wide dedicated cycle lanes. At the center, the road includes dedicated Bus Rapid Transit (BRT) lanes. To enhance the urban environment, green belts and tree plantations are incorporated along both sides of the road, providing shade and improving air quality.

Table A3.1. Details of Trunks Roads under the Program

S. No.	Road No.	Type of Road	Right-of-Way (m)	Road Length (km)	Bridges
1	E1	Arterial/Sub-arterial	50	9.20	—
2	E3	Sub-arterial/Arterial	60	14.47	2
3	E6	Sub-arterial	50	9.85	—
4	E8	Sub-arterial	50	14.95	3
5	E9	Arterial	50	14.11	2
6	E14	Sub-arterial	50	7.36	—
7	N6	Major Arterial	60	Utilities	—
8	N9	Sub-arterial	50	13.16	2
9	N11	Sub-arterial	50	8.66	1
10	N12	Arterial	50	8.63	2
11	N15	Arterial	50	8.51	2
12	N18	Sub-arterial	50	2.30	—
		Total		111	14

Figure A3.2. Typical Cross-Section of 50 m Sub-Arterial Roads



B. Flood Mitigation Works

The flood mitigation works for Amaravati encompass a comprehensive set of measures designed to address the city's flood risks, particularly those arising from its flat terrain and seasonal streams, including Kondaveeti Vagu and Pala Vagu. These streams cause floods during heavy rains and inundate several parts of the city area during heavy rains. A pumping station with a capacity of 150 m³ per second has been installed and commissioned to mitigate flooding. The pumping station has proved to be effective in protecting the city area during the recent floods in August 2024. The following key interventions are proposed in the Program:

- **Widening and deepening of Vagus.** Kondaveeti Vagu (19.85 km) and Pala Vagu (16.70 km) will be widened and deepened to improve water flow and reduce flooding risks. This enhancement will also support future navigational and tourism purposes.
- **Gravity canal.** Construction of gravity canal (7.82 km) to divert flood waters from Kondaveeti Vagu to the Krishna River.
- **Flood pumping stations.** Additional pumping stations will be installed in southern zones to manage excess water during monsoons, particularly when water levels exceed the capacity of natural drainage systems.
- **Retention reservoirs.** Construction of three retention reservoirs at **Krishanyapalem** (with a storage of 0.1 TMC in 90 acres of land with 1.7 m height of embankment), **Sakhamuru** (0.03 TMC, 50 acres, no embankment), and **Neerukonda** (0.4 TMC, 400 acres, 2 m) to capture excess rainwater, aid in flood control, and navigational support. Sakhamuru reservoir is proposed for ornamental purpose without any control structures while others are regulated by controlled and uncontrolled spill ways. These reservoirs will also be developed with a **Blue & Green** concept for integrated ecological benefits.

C. Water Supply Works

Amaravati's projected population growth will significantly increase the demand for water, with a requirement of 478 MLD in 15 years and 978 MLD by 2050. To address this, the Program includes the construction of key water infrastructure, starting with WTP-1. The WTPs will follow a modular approach, initially having a capacity of 190 MLD, with an additional 190 MLD WTP to be added after 5 years to cover the remaining 15-year demand. The scope of work for WTP-1 involves the construction of intake wells, raw water pumping mains, a WTP with a 190 MLD capacity, clear water pumping

mains, 7 cushion tanks, and 8 semi-underground reservoirs. These components will ensure a reliable supply of treated water for the city's growing needs. Although the current Program is focused on Phase 1, all the designs for water, wastewater, storm drainage and water reuse were carried out for the entire city looking into its future needs comprehensively. The water distribution network will include the following:

- **Raw water pumping mains.** A 2.10 km and 0.56 km pipeline for raw water transmission.
- **Clear water reservoir.** A semi-underground reservoir with a 64 million litres capacity for storing treated water.
- **Clear water pumping station.** Equipped with **13 pumps** for efficient water transmission.
- **Ring main.** A 45.28 km circular water distribution network ensuring equal distribution throughout the city.
- **Feeder mains.** A 57.84 km pipeline to transport water from the ring main to various water distribution centers.

D. LPS Infrastructure Works

The city area was divided into 24 layouts, with the plan to develop smart, integrated infrastructure across these layouts. The area was further divided into 13 LPS zones, each intended to receive state-of-the-art infrastructure.

Within the selected LPS zones, the Program will ensure that urban design facilitates the gradual integration of land parcels with three critical types of amenities:

- **Sustainable urban infrastructure.** This includes resilient roads with pedestrian-friendly sidewalks, reliable power supply, potable water systems, wastewater management, and effective stormwater drainage. The infrastructure will be evaluated based on the availability of completed trunk or neighborhood services adjoining each parcel. Additionally, there will be a focus on ensuring access to essential public services, such as primary schools within a 2 km radius and health subcenters within 5 km, thereby fostering convenient access to education and health care.
- **Green public transport infrastructure.** This entails providing access to environment-friendly, low-emission public transport options, including green buses, electric vehicles, or other sustainable transport systems. The goal is to reduce carbon footprints while promoting eco-friendly mobility options across the area, ensuring that residents can easily and efficiently connect to broader urban centers.
- **Parks and blue/green accessibility.** Each parcel will have access to upgraded and well-maintained parks with integrated blue (water-related) and green (vegetation-related) features. These parks will serve as vital recreational spaces and improve environmental quality, offering cooling, flood control, and aesthetic benefits. Residents will be able to reach these parks within a walkable distance of 1 km, promoting outdoor activity and a healthier lifestyle.

Details of the proposed LPS infrastructure are given in Table A3.2 and cross-sections of streets are shown in Figure A3.3. A typical township design is shown in Figure A3.4.

Table A3.2. LPS infrastructure Works Proposed in the Program

S. No.	Zone Number	Internal Roads and Streets, km	STPs (number and capacity)
1	Zone 1	68.13	1 STP, 16.00 MLD
2	Zone 2	79.66	1 STP, 16.00 MLD
3	Zone 3	60.26	1 STP, 20.57 MLD
4	Zone 5B	57.06	No STP

5	Zone 5C	51.37	No STP
6	Zone 5D	36.8	1 STP, 39.50 MLD
78	Zone 6	35.23	1 STP, 16.00 MLD
	Total	388.51	5 STPs 108 MLD

Figure A3.3. Cross-Sections of Trunk Infrastructure

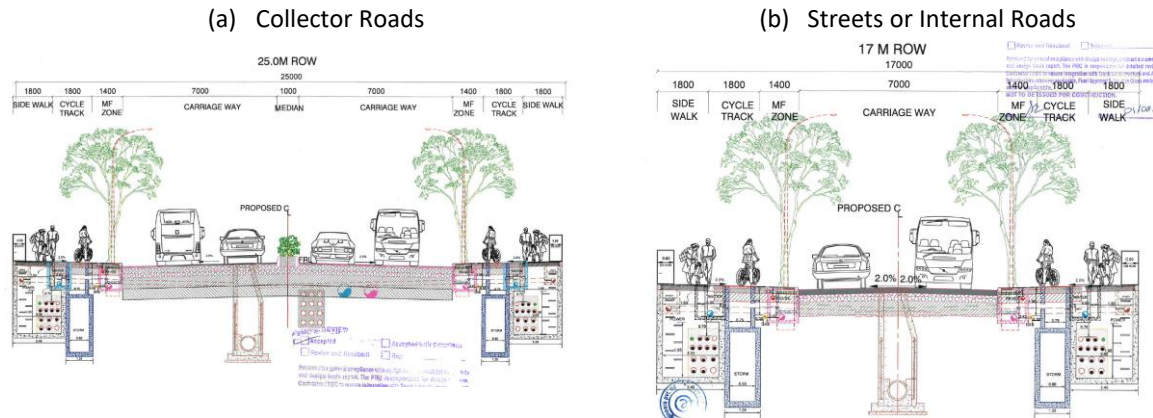
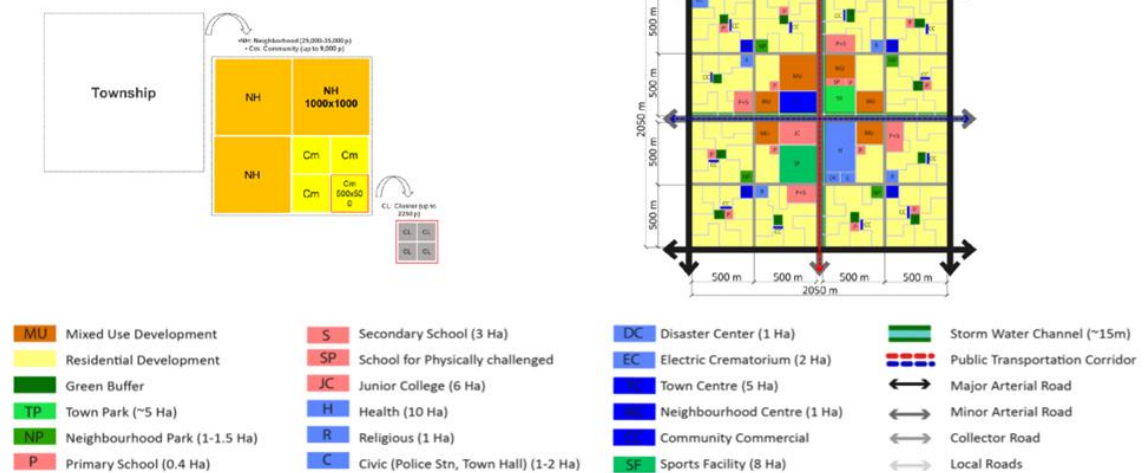


Figure A3.4. Township Design

Area: 400 ha (or 4 km²) : Population: 1,00,000 to 1,60,000



E. Building Works

The proposed building works for Amaravati include several multistorey apartment complexes designed for various groups. The NGO apartments will consist of 21 towers, each with 12 floors, covering a total area of 3,563,640 sq ft, while the GO TY-1, TY-2, and Group D apartments will also feature 21 towers, each with 12 floors, spanning 2,724,080 sq ft. Both projects include podium works, electrical systems; heating, ventilation, and air conditioning (HVAC); fire protection; lifts; and finishing works.

Annex 4: Summary of World Bank's Earlier Engagement in ACC Development

The World Bank engaged in its first program of Amaravati building through the 'ASIIDP (P159808)' during 2016–18. This was, however, dropped after the GoI withdrew its request. That was a Category A IPF project with investment support to subprojects under the categories of city roads, flood mitigation, sewerage management, and SWM.

A. E&S Documents Prepared and Disclosed

During the preparation of ASIIDP in 2016–18, the following documents related to E&S risk mitigation were prepared and disclosed.

Table A4.1. Amaravati Project (ASIIDP): Disclosed Safeguards Documents

Document	Prepared By	APCRDA Disclosure Date	World Bank Disclosure Date	Document Type	Remarks
EIA and EMP for 10 Priority Roads	APCRDA	April 18, 2018	April 20, 2018	Environmental Assessment	
RPF	APCRDA	August 4, 2018	August 9, 2018	Resettlement Plan	GO MS. No. 320 issued on 19-09-2018
ESMF	APCRDA	August 16, 2017	August 18, 2017	Environmental Assessment	GO MS. No. 320 issued on 19-09-2018
ESSA - Executive Summary	World Bank	—	August 14, 2018	Board Report	
EIA and EMP for Flood Mitigation Works	APCRDA	August 14, 2018	August 16, 2018	Environmental Assessment	
RAP for 10 sub-arterial roads	APCRDA	August 31, 2018	September 2, 2018	Resettlement Plan	
RAP for Flood Mitigation Works	APCRDA	August 31, 2018	September 3, 2018	Resettlement Plan	

In addition, several studies were conducted to evaluate and analyze the LPS in Amaravati:

1. **Independent Evaluation of Land Pooling Scheme in the Capital City 'Amaravati' 2017.** This report, prepared by the Administrative Staff College of India in Hyderabad, assesses the LPS implemented by the APCRDA.
2. **Case Study: Incentivizing Land Pooling - Amaravati, India.** Authored by Yu-Hung Hong, this case study explores the mechanisms and incentives associated with the land pooling process in Amaravati, focusing on its effectiveness and outcomes.
3. **Assessment of Land Assembly Instruments and their Implementation 2018.** Commissioned by the World Bank and conducted by Geoffrey Payne, this assessment examines the various land assembly instruments used in the ACC Development Project, evaluating their implementation and effectiveness.

These studies contribute valuable insights into the land pooling process, its challenges, and its successes in the context of Amaravati's development.

B. Brief Review of E&S Document Prepared and Disclosed

For the ASIIDP, the E&S documents were prepared in line with the World Bank's Operational Policy (OP) 4.01 and 4.12, which governs environmental assessments and involuntary resettlement. These documents aimed to identify and manage potential E&S risks associated with the Program.

ESMF. The ESMF outlines policies and procedures for minimizing and managing E&S risks in accordance with World Bank safeguards. It serves as a guiding document for field staff and contractors to assess and mitigate these risks effectively. The ESMF also emphasizes capacity building, public consultation, and monitoring. Key environmental issues identified include the following:

- **Conversion of agricultural land.** Large areas of agricultural land, particularly fallow land, were converted for non-agricultural use in the project.
- **Flooding.** Parts of the project area, especially near the Kondaveeti Vagu, are prone to flash floods, requiring effective flood management.
- **Protection of water bodies.** Several small water bodies used for irrigation were present in the area. Conservation of these bodies was a key environmental concern, as required by the EC for the project.
- **Labor influx.** Provisions for labor welfare and safe working conditions, including adequate facilities at labor camps, proper sanitation, waste management, health checkups, and PPE.
- **E&S staffing.** Environmental management responsibilities have been assigned to key staff within the APCRDA and ADCL, involved in project management, design, planning, implementation, supervision, and monitoring. To ensure compliance with environmental management requirements under the ASIIDP, dedicated environmental specialists will be appointed in both agencies. Additionally, the PgMC/PMC firms must include an environment expert in their teams to assist the APCRDA/ADCL. Training workshops will be organized for staff and contractors to enhance capacity in environmental management. Furthermore, community awareness programs are planned to educate local populations on environmental responsibilities and safeguards.

Priority Roads EIA and EMP. The EMP for the 10 priority roads identified significant impacts, including the removal of 849 trees, excavation of 4.8 MCM of soil, and loss of 17.65 acres of water spread across 39 water bodies. Other concerns include dust generation, vehicular emissions, and land degradation at borrow sites. The EMP outlines key mitigation measures such as planting 88,973 trees, safely disposing of excess spoil and construction waste, providing cross-drainage measures, using energy-efficient street lighting, and sourcing materials only from authorized quarries. Pollution control standards for vehicles and proper siting of plants are also emphasized.

Flood Mitigation EIA and EMP. The EMP addresses the impacts of enhancing the flood-carrying capacity of Kondaveeti Vagu and Pala Vagu. Key environmental impacts include the removal of 529 trees, topsoil loss (0.475 MCM), and disposal of 38.20 MCM of spoil. Other issues identified include land degradation, noise, air pollution, and impacts on cultural sites. The EMP outlines mitigation measures such as transplanting 106 trees, planting 45,000 trees, controlling soil erosion, using permitted quarries, and conducting regular environmental monitoring. Construction vehicles must meet pollution standards, and safety measures should include maintaining canals and preventing oil spills.

RPF and RAPs. RPF vide GO MS. No. 320 issued on 19-09-2018 is well aligned with the World Bank Core Principles. Based on the RPF, RAPs were prepared for the proposed investments in 2018 and were also notified vide GO MS. No. 320 issued on 19-09-2018. This included RAP for (a) the 10 sub-arterial roads and (b) flood mitigation measures and laid out the detailed process of land acquisition and benefits that needed to be followed for the ACC area. While the RPF followed the LARR Act 2013,

it further added provisions to align with World Bank safeguard requirements which were accepted and adopted by the GoAP and APCRDA.

C. World Bank Inspection Panel Cases

Between October 2016 and May 2017, the World Bank Inspection Panel received two complaints related to the Proposed Amaravati Sustainable Infrastructure and Institutional Development Project (ASIIDP) (Project ID: P159808). The first Request was submitted in October 2016²³ alleging that they were likely to suffer harm as a result of the World Bank's failures or omissions concerning environmental and social impacts related to a land-pooling scheme being used to acquire land for the capital city. The panel conducted due diligence and concluded that at that stage it was not possible to comment on the plausibility of whether a Bank failure has had, or threatens to have, a material adverse effect on the Requesters, and hence, did not register the request. However, the Panel noted that in the future as the project progresses and as new evidence becomes available, the Panel would be in a position to reassess the existence of a plausible link between a Bank-supported project and the alleged harm.

A second Request for inspection was received on May 25, 2017,²⁴ submitted by the landowners from the area designated for the construction of ACC in AP, alleging harm from the LPS used to assemble the land required for the city, as well as from other project activities, alleging harm to their livelihoods, environment, and food security, and a lack of consultation due to the Bank's non-compliance with its E&S policies in preparation for the proposed project. The Panel registered the Request on June 12, 2017, and subsequently received a Management Response to the Request on July 21, 2017.

- A Panel team visited India from September 12-15, 2017, and met with the Requesters and other potentially affected community members, farmers who support the LPS and their representatives, representatives of the World Bank Country Office, officials from the Ministry of Finance and the APCRDA, as well as civil society representatives. The Panel submitted its report and recommendations to the Board on September 27, 2017, recommending investigating the alleged issues of harm and related potential non-compliance with Bank policies, especially relating to involuntary resettlement.
- On November 27, 2017, Bank Management submitted an addendum that offered clarifications, an update on project preparation, and additional actions to "complement and clarify" the actions presented in its July 21, 2017 response. With the review of the addendum, the Panel expressed satisfaction with the Management response and the actions proposed in providing an opportunity for the Bank to address the Requesters' concerns and to introduce measures to ensure that the project's preparation is in compliance with Bank policies and procedures, and the Panel deferred its recommendations for up to six months as to whether an investigation was warranted.
- In the Management Response, the Bank has committed to a set of proposed actions to address the concerns of the requesters as part of the preparation of the Project. During April and June 2018, the Panel also received regular communications from the Requesters, who raised several concerns, including issues of accessibility and responsiveness of the Grievance Redress Mechanism and the establishment of the Citizen Advisory Committee. The Board on December 12, 2017, approved the Panel decision to defer its recommendation and to report back to the Board in the next six months.
- The Panel also met with Bank Management several times in April to June 2018, to better understand the implementation of its proposed actions and the overall development and progress of the project and additionally conducted an initial review of project documents and

²³<https://www.inspectionpanel.org/panel-cases/proposed-amaravati-sustainable-capital-city-development-project>

²⁴<https://www.inspectionpanel.org/panel-cases/amaravati-sustainable-infrastructure-and-institutional-development-project-p159808>

assessment studies. During this same period, the Panel also received regular communications from the Requesters who raised several concerns, including issues of accessibility of project information, responsiveness of the Grievance Redress Mechanism, representation and establishment of the Citizen Advisory Committee, and adequacy of livelihood restoration measures. The Panel also noted from the Management updates that several actions to address the Requesters' concerns are underway and require more time to be completed. The Panel was of the view that there was a need to await further progress on the assessment studies and other actions to be able to assess the implementation of Management's commitments to address the allegations of harm and Bank non-compliance raised in the Request for Inspection, and on June 26, 2018, proposed a second deferral of its recommendation for nine months or when Management authorized the appraisal of the proposed project, whichever arose earlier.

- Following the second deferral, the Panel maintained frequent communication with the Requesters and received additional documentation reiterating their earlier concerns. The Panel also met several times with Bank Management to better understand the implementation of its proposed actions and the overall development and progress of the project and additionally conducted an initial review of project documents and assessment studies.
- On March 29, 2019, the Panel submitted to the Board its Third Report and Recommendation and recommended carrying out an investigation into the alleged issues of harm and related potential non-compliance with the livelihood restoration requirements of the Bank's Involuntary Resettlement Policy.
- While making the recommendation, the Panel also acknowledged the many positive steps taken by Management in the previous 18 months to address issues of concern and included (a) the clarification by Management that all resettlement and land acquisition mechanisms applied to land within the Bank-financed project are subject to the Bank's Involuntary Resettlement Policy; (b) noted that the inclusion of all 21,374 landless laborer households in the capital city areas as people affected by the Bank project also stood out as highly significant; and (c) recognized that the project, with a land pooling scheme at a scale not previously experienced anywhere in the world, may establish a model for the future for similar initiatives elsewhere; however, based on its analysis of available information, the Panel stated it had remaining concerns about the Bank's due diligence and project design in relation to livelihood restoration requirements of the Bank's Involuntary Resettlement Policy, and the considerable risks of a rural-to-urban transition at a large scale, and noted that the alleged serious harms could only be fully ascertained in the context of an investigation.
- The Board was scheduled to meet to discuss the Panel's recommendation to investigate on July 23, 2019. However, on July 15, 2019, Bank management informed the Board that the Bank had been formally notified by the Government of India that it had withdrawn its request for financing of the project. Following this information, on July 16, 2019, the Panel updated its recommendation in the Third Report and Recommendation not to investigate because the project was no longer under consideration by the Bank. On July 23, 2019, the Board approved the Panel's updated recommendation.

Annex 5: Land Acquisition and Resettlement for Phase 1 Packages

For Phase 1 packages, about 224.45 acres of land needed to be procured. This includes 13.49 acres for AGC, 35.2 acres for LPS infrastructure, and 175.76 acres for trunk infrastructure. APCRDA has already initiated the process of identifying and verifying the resettlement required under each of the packages. APCRDA strategies and actions for completing the land procurement and resettlement include the following:

- **Stakeholder engagement and awareness campaign about LPS advantages**
 - **APCRDA** will initiate consultations with landowners and farmers in the first week.
 - **Benefit communication:** Clearly articulate the advantages of the LPS over compensation as per the LARR 2013. Land Acquisition Act.
- **Negotiation and settlement**
 - Utilize Amaravati's Negotiation Settlement Policy to negotiate fair agreements wherever resettlement is necessitated.
 - **Compensation packages:** Provide equitable compensation and support to affected parties.
- **Support and monitoring**
 - **Dedicated team:** 11 dedicated teams comprising Deputy Collectors, Tahsildars, Deputy Tahsildars, Village Surveyors, Education Secretaries, and computer operators to aid this process.
 - **GRM:** Dedicated APCRDA GRM platform to tackle the specific grievances related to the LA.
- **Final acquisition and registration**
 - **Execute agreements:** Finalize and sign LA agreements.
 - **Title transfer:** Ensure timely registration and transfer of land titles by establishing 11 new registration offices.
- **LA as the last resort.** This instrument will be utilized as a last resort to acquire the land.

Figure A5.1. AGC Packages

S. No	Name of the Work	Cost of Balance works	GST	PMC Charges	Other Statutory provisions	Total	Pending LA
1	MLA/AIS Housing	279.81	50.37	6.60	27.98	364.76	-
2	NGO Housing	620.95	111.77	14.65	62.09	809.47	-
3	NGO Housing External Infrastructure	291.46	52.46	6.88	29.15	379.94	-
4	GO Housing	486.89	87.64	11.49	48.69	634.71	0.17
5	GO Housing External Infrastructure	132.65	23.88	3.13	13.27	172.93	-
6	AGC Infra E1 to E4	470.00	84.60	11.09	47.00	612.69	10.68
7	AGC Infra E4 to E6	480.00	86.40	11.33	48.00	625.73	-
8	AGC Infra E6 to E8	450.00	81.00	10.62	45.00	586.62	2.65
	Total	3,211.76	578.12	75.80	321.18	4,186.85	13.49

Figure A5.2. Trunk Infrastructure and Flood Mitigation Works

Sl No.	Package	Name of Work	Estimated Cost (Rs. in Crs)					LA/LPS Pendency (in Acres)	O&M for 2 Years (Opex)	USD (Mn)
			Civil Works (Capex)	GST	PMC	Other Provisions	Total			
1	Package 1	E1 / Karakatta (From Flood	435.33	79.13	10.83	59.35	584.64	1.63		69.6

Sl N o.	Packag e	Name of Work	Estimated Cost (Rs. in Crs)					LA/LPS Pende ncy (in Acres)	O& M for 2 Year s (Ope x)	USD(Mn)
			Civil Work s (Cap ex)	GST	PMC	Other Provisi ons	Total			
		pump station to N6 road)								
2	Package 2	E1 / Karakatta (From N6 to N7 & N11 to N13 road)	252.66	46.07	6.30	34.60	339.63	3.09		40.4
3	Package 3	E3 (PH-1)	415.47	68.11	7.83	44.66	536.07	1.73		63.8
4	Package 4	E6	296.03	53.02	8.21	33.88	391.14	0.15		46.6
5	Package 5	E8	293.07	50.28	6.67	38.37	388.39	5.10		46.2
6	Package 6	E9	341.05	61.30	13.79	22.64	438.78	16.82		52.2
7	Package 7	E14	235.34	42.70	5.59	32.64	316.27	2.07		37.7
8	Package 8	N6 (Utilities Only)	203.62	33.71	3.83	19.60	260.76	2.01		31.0
9	Package 9	N9	244.31	44.90	6.11	34.94	330.26	1.58		39.3
10	Package 10	N11	382.64	69.13	9.28	47.56	508.61	4.58		60.5
11	Package 11	N12	361.73	66.48	9.04	51.74	488.99	2.35		58.2
12	Package 12	N15	342.51	60.86	7.47	42.71	453.55	1.52		54.0
13	Package 13	N18	59.62	10.90	1.48	9.24	81.24	0.00		9.7
14	Package 14	Water Treatment Plant (WTP) & Other Allied Works	359.58	65.03	8.99	45.60	479.20	0.00	39.75	57.0
15	Package 15	Water Distribution Centres - 15Nos	171.85	31.20	4.30	22.45	229.80	0.00		27.4
16	Package 16	Palavagu - 16.70Km Kondaveetiva gu - 23.60 Km Sakhamuru Reservoir - 0.03 TMC	399.13	49.09	8.70	45.43	502.35	56.29		59.8
17	Package 17	Gravity Canal - 7.83km Krishnayapal	299.13	36.59	6.71	34.52	376.95	39.80		44.9

Sl No.	Package	Name of Work	Estimated Cost (Rs. in Crs)					LA/LPS Pendency (in Acres)	O&M for 2 Years (Opex)	USD (Mn)
			Civil Works (Capex)	GST	PMC	Other Provisions	Total			
		em Reservoir - 0.10TMC								
18	Package 18	Neerukonda Reservoir 0.40 TMC	517.31	63.86	11.20	10.91	603.28	0.00		71.8
19	Package 19	Green Buffer for Vagus	145.00	17.40	3.60	18.06	184.06	37.04		21.9
20	Package 20	Flood Pumping Station at Undavalli (7500 Cusec)	390	70.20	9.75	50.70	520.65	0.00		62.0
		TOTAL (Rs. in Crs)	6145.37	1019.96	149.68	699.60	8014.61	175.76	39.75	954.12

Figure A5.3. LPS Infrastructure Works

Sn o	Name of Work	Length in Kms	Estimated Cost INR in Crores					Total LA pending in Acres
			Civil Works (Capex)	GST	PMC	Other Statutory provisions	Total	
1	LPS Zone-1A	68.13	309.38	55.69	6.19	30.94	402.20	8.520
2	LPS Zone-1B		428.44	77.12	8.57	42.84	556.97	
3	LPS Zone-2A	79.66	440.70	79.33	8.82	44.07	572.92	6.565
4	LPS Zone-2B		317.57	57.16	6.35	31.76	412.84	
5	LPS Zone-3A	60.26	346.73	62.41	6.94	34.67	450.75	1.311
6	LPS Zone-3B		318.55	57.34	6.37	31.86	414.11	
7	LPS Zone-5B	57.06	503.96	90.71	7.56	50.40	652.63	0.212
8	LPS Zone-5C	51.37	530.00	95.40	8.34	53.00	686.74	-
9	LPS Zone-5D	36.8	527.12	94.88	7.91	52.71	682.62	9.345
10	LPS Zone-6	35.23	393.23	70.78	7.79	39.32	511.12	9.253
	Grand Total	388.51	4,115.68	740.82	74.84	411.57	5,342.91	35.206

Annex 6: Details of Land Pooled and Farmers Across Villages

Table A6.1. Percentage of Land Pooled in 2019 versus 2024

S.No.	Village	Planned Extent for LPS	Land Pooled till 2019			Land Pooled in 2024		
			Extent (Ac.)	No. of Farmers	% Pooled	Extent)(Ac.)	% Pooled	No.of farmers
1	Krishnayapalem	1423.9061	1394.63	967	97.94	0.0997	0.01	1
2	Nowlur-1	1328.1128	1245	1852	93.74	0.8044	0.06	1
3	Nowlur-2	1629.05	1470.98	2262	90.30	3.393	0.21	5
4	Kuragallu-1	1619.04	1418.33	1680	87.60	1.868	0.12	2
5	Kuragallu-2	1473.5	1443.86	1360	97.99	0	0.00	0
6	Nidamaru-1	1260.36	1018.71	1465	80.83	2.2678	0.18	3
7	Nidamaru-2	1240.8172	976.32	1371	78.68	0	0.00	0
8	Undavalli	1127.109	320.93	520	28.47	2.9986	0.27	5
9	Penumaka	1645.458	1084.59	1342	65.91	0.0828	0.01	1
10	Tadepalli-1	25.53	0	0	0.00	0	0.00	0
11	Borupalem	384.03	383.95	420	99.98	0.0047	0.00	0
11	Abbarajupalem	731.35	729.22	663	99.71	0.0025	0.00	0
12	Dondapadu	269.45	254.79	284	94.56	0	0.00	0
12	Pitchakalapalem	820.49	809.47	592	98.66	5.4386	0.66	4
13	Inavolu	1056.145	1053.27	1108	99.73	0	0.00	0
14	Rayapudi-1	1801.76	1420.52	1489	78.84	84.07	4.67	88
15	Rayapudi-2	634.285	617.8	680	97.40	0	0.00	0
15	Kondamarajupalem	824.7	805.2	721	97.64	0.41	0.05	1
16	Lingayapalem	1174.805	1056.98	760	89.97	0	0.00	0
16	Uddandarayunipalem	625.12	533.76	452	85.39	7.83	1.25	7
16	Malakapuram	463.595	438.84	369	94.66	0	0.00	0
17	Nekkallu	1270.62	1224.36	1112	96.36	8.86	0.70	8
18	Nelapadu	1322.92	1298.85	1028	98.18	0.08	0.01	1
19	Sakhamuru	1522.8784	1500.94	1592	98.56	2.3309	0.15	2
20	Thullur-1	1446.7434	1384.39	1308	95.69	2.32	0.16	2
21	Thullur-2	1786.41	1772.54	1513	99.22	0	0.00	0
22	Velagapudi	1869.6617	1759.44	1403	94.10	0.986	0.05	1
23	Venkatapalem	1450.865	1368.45	1258	94.32	0.2344	0.02	1
24	Mandadam-1	1677.782	1582.73	1089	94.33	4.3421	0.26	3
25	Mandadam-2	1986.15	1902.06	1553	95.77	0	0.00	0
26	Ananthavaram	2048.94	2010.2	1623	98.11	0.4	0.02	1
Total		37941.5836	34281.11	33836	90.35	128.8235	0.34	138

Annex 7: List of Individuals/Officials Consulted during ESSA Preparation

- Sri. Bhaskar Katamneni, IAS, Commissioner, APCRDA
- Sri. G.Surya Sai Praveen Chand, IAS., Additional Commissioner, APCRDA
- Sri Mallarapu Naveen, I.A.S., Additional Commissioner, APCRDA
- Sri. N. Sateesh Babu, Director - Strategy & Environment, APCRDA
- Dr. P. Krishna Mohan, Group Director - Social Development, APCRDA
- Smt. B.L.N. Rajakumari, Special Grade Deputy Collector - Lands, APCRDA
- Sri. Borra Srinivasa Rao, Deputy City Development Officer, APCRDA
- Sri. G. Praman Kumar, Associate Planner, Environment, APCRDA
- Sri. Ch. Naga Venkat, Deputy Executive Engineer, APCRDA
- Sri. K. V. Satya Pravan Kumar, Deputy Executive Engineer, APCRDA
- Sri. Avvaru Srinivas, Senior Engineer, ADCL
- Smt. K. Krishna Gayathri, Community Mobilizer, APCRDA
- Sri. P. Naresh Kumar, Econometrician, APCRDA
- Sri. K. Rohit Kumar, Assistant Executive Engineer, APCRDA
- Sri. K. Vishnu Vardhan, Executive, Lands, APCRDA
- Sri. R. Nageswara Rao, Senior Planner, APCRDA
- Sri. A. Ravi Teja, Executive – GIS, APCRDA
- Sri Hari Prasad - Additional Director, Landscape and Environment, APCRDA
- Sri Praman Kumar – Associate Planner, APCRDA
- Sri PBN Kumar - Assistant Conservator of Forests, APCRDA
- Sri Bhaskar - Additional Director, Procurement, APCRDA
- Sri R. Nageshwara Rao - Principal Planner, APCRDA
- Sri A. Srinivas - Senior Infrastructure Engineer, ADCL
- Sri Srinivas Reddy - Senior Infrastructure Engineer, ADCL
- Sri Pavan - Senior Infrastructure Engineer, ADCL
- Sri Prabhakar - Chief Engineer, ADCL
- Sri Krishnaiah IAS - Chairman, APPCB
- Sri Sarvanan IFS - Member Secretary, APPCB
- Sri Rajashekar - Joint Chief Environmental Engineer, APPCB
- Sri Prasad - Joint Chief Environmental Engineer, APPCB
- Sri Muniswamy Naidu - Joint Chief Environmental Engineer, APPCB
- Sri Sridevi - Senior Environmental Engineer, SEIAA
- Dr. Keerthi Bollineni, President, Vasavya Mahila Madali
- Other members from Vasavya Mahila Madali

Annex 8: List of Documents Reviewed

1. APCRDA Acts and Rules
2. APCRDA Organizational Structure
3. ADCL Organizational Structure
4. Various Government Orders (shared by APCRDA)
5. EIA and EMP of Amaravati Capital City, September 2015
6. ESMF, RPF, EIAs and EMPs, and RAPs disclosed on the World Bank website in 2017 and 2018 for Amaravati Sustainable Capital City Development Project
7. Environmental Clearance for Amaravati Capital City, dated October 9, 2015, with an amendment on June 11, 2018
8. Concept Note from APCRDA to World Bank by APCRDA, August 2024
9. NGT Judgement on Capital City Development in Andhra Pradesh on 17th November 2017
10. Ex-post Audit of EMP and RAP Implementation in Under Construction 10 Sub-Arterial Road Works, March 2018
11. Terms of Reference for Program Management Consultants by APCRDA, August 2024
12. White Paper on Amaravati, APCRDA, July 2024
13. Monthly HSE Report by Contractor for February 2022
14. Flood Mitigation Plan of Amaravati
15. Water Supply Master Plan of Amaravati
16. Wastewater Master Plan of Amaravati
17. Solid Waste Management Master Plan
18. EMRS Meeting Minutes 2019
19. First Yearly Compliance Report
20. Bid Documents - one for each of Turnkey Infra, LPS Infra, Flood Mitigation Works, AGC Works

Annex 9: List of Participants in the Multi-stakeholder Consultation Workshop

A multi-stakeholder workshop was organized, involving participants from key stakeholder groups, including representatives from implementing agencies, officials from relevant departments, civil society organizations, and academia, to seek their feedback and suggestions on the draft ESSA. Below is the list of workshop participants.

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Annex 10: Comparison of Borrower's System Against Core Principles

Core Principle 1: Program E&S Management System

This principle ensures that programs promote E&S sustainability by systematically identifying and managing E&S risks. The underlying planning elements, an assessment of the relevant Program's system, and identified gaps are given in Table A10.1.

Table A10.1. Planning Elements, Assessment, and Gaps/Action

Key Planning Elements	Assessment	Gaps/Actions
1. Operate within an adequate legal and regulatory framework to guide E&S impact assessments, mitigation, management, and monitoring at the PforR Program level.	ACC development is governed by a well-established legal and regulatory framework, including compliance with the Environmental Protection Act (1986), EIA Notification (2006), and various state-level laws such as the Andhra Pradesh WALTA and Water (Prevention and Control of Pollution) Act (1974). ECs were obtained from the SEIAA for the Capacity City Project and various other infrastructure projects covered in the Program. The approvals to be obtained during the various stages of construction are listed in Annex 2 and will be part of the bidding documents.	The EC for the ACC development is valid until October 2026, with the option to extend it for another year until October 2027. Under standard procedures, before its expiration in 2026, APCRDA must apply to SEIAA for an extension, and SEIAA will outline the specific documentation required for the extension process. A review of four previous bidding documents revealed that EMPs were not included in the bidding packages nor were any web references provided, although links to the EC and NGT conditions were included. EMPs should be directly incorporated into the bidding documents. To strengthen APCRDA's institutional capacity for effective E&S management, a dedicated Environmental and Social Management Unit should be established to ensure proper implementation of mitigation measures and adherence to regulatory requirements.
2. Incorporate recognized elements of good practice in E&S assessment and management, including early screening of potential impacts.	The Master Plan for the city helped identify E&S impacts at the early stages of the project planning, allowing APCRDA to integrate mitigation measures early in the project design process and the city's EIA document. Subsequent EIAs on road works and flood mitigation works followed the World Bank's ESMF on the previous Amaravati Project, which were also disclosed on the World Bank's website. The proposed activities in the Program have all EIAs/EMPs in place. Any future activities that are not covered in the Program will follow the EIA (2006) requirements and will obtain ECs from SEIAA.	Any future assessments need to consider further amendments in EIA Notification 2016.
3. Incorporate recognized elements of good practice in E&S assessment and	The Capital City location was identified based on the various alternative assessments appointed by	

management, including consideration of strategic, technical, and site alternatives (including the 'no action' alternative).	the national and state governments. The Master Plan considers strategic and technical alternatives that do not affect the forests and natural water bodies from the proposed developments. The proposed flood mitigation works also went through a detailed alternative analysis and review by external committees to arrive at the final designs. The trunk and LPS infrastructure works proposed in the Program are designed per the Master Plan.	
4. Explicit assessment of potential induced, cumulative, and transboundary impacts	The assessments have considered cumulative environmental impacts, especially in relation to water management and flood control. The potential long-term impacts of urbanization, such as strain on water resources and increased flood risks, were factored into the flood management plan. The overall cumulative impacts of the city's development were considered in the city's EIA. However, there is no transboundary impact given the localized scope of the project, as it is confined within state boundaries.	
5. Identification of measures to mitigate adverse E&S risks and impacts that cannot be otherwise avoided or minimized	The city's planning and design documents include investments in safe drinking water supply, STPs, and integrated waste management plans. EMPs have been developed to mitigate adverse E&S risks associated with the construction activities on natural resources; waste and wastewater generation; and water, soil, air and noise pollution.	The mitigation measures in the EMP, particularly for waste management (organic and other solid waste, construction waste and excess excavations) and wastewater management, are generic and need strengthening. As the current EMPs cannot be updated as per the EC requirements, additional SOPs should be developed to address these impacts and should be attached to the bidding documents. Based on the review of four bidding documents of previous construction works, it was revealed that the BOQ for EMP implementation was not uniformly mentioned, and two bid documents do not include BOQ items related to environmental management. A C-ESMP) was reviewed, and many gaps were found in providing site-specific plans to address E&S impacts. The contractor's reporting system needs to be strengthened.
6. Responsiveness and accountability through stakeholder consultation, timely dissemination of	APCRDA conducted extensive stakeholder consultations, beginning from the Master Plan preparation stage and continuing through various	

the PforR information, and responsive GRMs.	development phases. PICs were established in all villages for ongoing consultations. All the EIA/EMP documents, ECs, and compliance reports were disclosed on the APCRDA website. A GRM was implemented, including weekly grievance meetings to address concerns related to LA and project impacts. Information dissemination occurred via multiple channels, including radio, printed materials, and social media.	
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Core Principle 2: Natural Habitat and Physical and Cultural Resources

Core Principle 2 focuses on protecting natural habitats and cultural resources, ensuring that programs avoid or mitigate damage to ecologically sensitive areas and valuable cultural sites. The underlying planning principles, an assessment of the relevant Program's system, and identified gaps are given in Table A10.2.

Table A10.2. Planning Elements, Assessment, Gaps/Actions

Key Planning Elements	Assessment	Gaps/Actions
1. Identify and screen for adverse effects on potentially important biodiversity and cultural resource areas and provide adequate measures to avoid, minimize, or mitigate adverse effects.	The city's EIA included detailed screening for potential biodiversity impacts, particularly in areas near the Krishna River and the forests of Undavalli Hill. No notified eco-sensitive areas or threatened species are present in the Capital City area. Necessary buffer zones were established around water bodies and forests to minimize adverse impacts. Cultural heritage sites, such as the Undavalli Rock Caves, were identified early, and mitigation measures, such as a no-construction zone, were enforced to protect these areas.	While there are no impacts on the biodiversity and cultural heritage, active monitoring of these sites and adaptive management are needed.
2. Support and promote the protection, conservation, maintenance, and rehabilitation of natural habitats.	The Amaravati Master Plan designates 30% of the city's land for green and blue spaces, which include parks, water bodies, and forested buffer zones. These areas are aimed at promoting biodiversity and maintaining ecological balance. Measures to conserve natural habitats include tree planting programs, the creation of new water bodies, and the enhancement of existing forested zones. APCRDA's Landscape Wing and ADCL's Urban Greenery and Forestry Department are critical in maintaining these buffer zones. APCRDA plans to install a continuous water quality monitoring station in the Krishna River.	
3. Avoid significant conversion or degradation of critical natural habitats. If avoiding significant conversion of natural habitats is not technically feasible, include measures to mitigate or offset	As the city's area was extensively used for agriculture for several decades, no natural and critical habitats were present in the proposed city development area. However, areas near the Krishna River have been carefully managed to avoid degradation, and	

Key Planning Elements	Assessment	Gaps/Actions
the adverse impacts of the PforR Program activities.	reforestation efforts are planned to offset any unavoidable impacts on the river. Green infrastructure and landscaping are central to the project's strategy to mitigate the environmental footprint.	
4. Take into account potential adverse effects on physical cultural property and provide adequate measures to avoid, minimize, or mitigate such effects.	Cultural heritage sites such as the Undavalli Rock Caves are protected under the development plan. A no-construction buffer zone of 100 m has been established around the caves to prevent damage from nearby construction activities. A 'Chance Find Procedure' is also in place to ensure that any archaeological discoveries during construction are reported and preserved. Consultations with local communities and cultural experts have been carried out to safeguard cultural resources.	There is a need for regular monitoring to ensure that the cultural heritage site remains unaffected by construction vibrations as development progresses. There should be active and ongoing coordination with ASI to ensure that the flood mitigation works in Kondaveeti Vagu near the Undavalli caves do not negatively affect the monument.

Core Principle 3: Public and Worker Safety

This principle addresses the need to protect public health and worker safety, particularly in relation to infrastructure projects and activities involving hazardous materials or processes. The underlying planning principles, an assessment of the relevant Program's system, and identified gaps are given in Table A10.3.

Table A10.3. Planning Elements, Assessment, Gaps/Actions

Key Planning Elements	Assessment	Gaps/Actions
1. Promote adequate community, individual, and worker health, safety, and security through the safe design, construction, operation, and maintenance of program activities. While carrying out activities that may be dependent on existing infrastructure, incorporate safety measures, inspections, or remedial works as appropriate. Promote measures to address child and forced labor.	The Program includes OHS plans focusing on workers' health and safety. Contractors must provide all workers with PPE and implement on-site safety measures, including regular inspections and safety audits. Child and forced labor are strictly prohibited, with compliance monitored by APCRDA.	The EMP documents, prepared in 2015 and 2017, did not sufficiently address OHS risks and community health and safety concerns such as GBV and SEA/SH. To address these gaps, there is a need to develop detailed SOPs that outline specific measures for managing these risks. These SOPs should be included in the bidding documents along with the updated EMPs to ensure comprehensive risk management.
2. Promote the use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated under the PforR.	EMPs include provisions for hazardous materials management. Contractors are required to store hazardous materials in covered and bunded areas and ensure safe transportation. Waste from construction sites, including hazardous materials, is disposed of in compliance with national waste management regulations.	There are existing hazardous waste management facilities and licensed vendors approved by the AP SPCB. The APCRDA should actively engage with these facilities and vendors to ensure that the contractors use these facilities.

Key Planning Elements	Assessment	Gaps/Actions
3. Promote the use of integrated pest management practices to manage or reduce the adverse impacts of pests or disease vectors.	Integrated pest management practices are being promoted in green areas of the Capital City, focusing on minimizing the use of chemical pesticides. Native plants that naturally resist pests have been planted across the city's green spaces, limiting the need for chemical intervention.	PPE must be provided to all workers applying fertilizers and pesticides. The chemical containers should be disposed of as hazardous waste through licensed vendors.
4. Provide training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with the relevant international guidelines and conventions.	The EMPs emphasize training for workers handling hazardous chemicals.	Capacity-building programs for the APCRDA and the ADCL staff involved in landscaping and greenery as well as workers and contractors on this issue need to be implemented to reduce risks associated with hazardous materials.
5. Include adequate measures to avoid, minimize, or mitigate community, individual, and worker risks when the PforR Program activities are located in areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or affected by climate events.	The flood management plan developed for Amaravati includes infrastructure such as pumping stations, deepening of streams, buffer zones, embankments, and stormwater drains to mitigate flood risks. The Capital City area is in zone III per the earthquake zonation map and relatively safer than many other parts of the country. All structures in the Capital City will be mandated to employ earthquake-resistant technology as per prescribed standards.	The APCRDA should also focus on the potential flood risks during the construction stage until flood mitigation works are completed to protect the workers from natural disasters.

Core Principle 4: Land Acquisition and Resettlement

This principle addresses the need for management of Program E&S systems for land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards. The underlying planning principles, an assessment of the relevant Program's system, and identified gaps are given in Table A10.4.

Table A10.4. Planning Elements, Assessment, Gaps/Actions

Key Planning Elements	Assessment	Gaps/Actions
1. Avoid or minimize land acquisition and related adverse impacts.	The land procurement process for the ACC has shifted from conventional LA methods to a more humane approach, emphasizing the preservation of landowners' social ties and psychological attachment to their land. The LPS allows landowners to retain land parcels of increased value while receiving returnable urban plots and livelihood support measures, including annuities and skill development.	The existing policy and procedures for land procurement—whether through the LPS, traditional acquisition, or NSs—are comprehensive. However, updates are necessary to address inflation and apply these adjustments in the preparation of RAPs and updating previous RAPs where applicable.
2. Identify and address economic or social impacts caused by land acquisition or loss of access to natural resources, including those affecting people who may		

Key Planning Elements	Assessment	Gaps/Actions
lack full legal rights to resources they use or occupy.	The GoAP implemented this through the LPS F&I Rules under the APCRDA Act 2014, notified on January 1, 2015.	No specific gaps have been identified in the current land procurement and resettlement policies.
3. Provide compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid before taking land or restricting access.	<p>Under LPS landowners receive a guaranteed returnable plot, between 20 and 30 percent of the original area consisting of developed land for residential use or up to 10 percent for commercial use.</p> <p>As of August 2024, the GoAP has successfully pooled 34,389.79 acres, achieving 90.6 percent of its target, with about 28,000 farmers participating. Approximately 99 percent of the land required for Phase 1 construction has been secured through the LPS, leaving only 1 percent potentially needing acquisition.</p> <p>For landowners not joining the LPS, land is being acquired under the Land Acquisition. The LARR Act 2013 guides the process, complemented by amendments in 2018. The RPF aligns with World Bank principles, outlining the procedures and benefits associated with land acquisition.</p> <p>APCRDA has offered additional incentives to promote further land pooling. Some trunk infrastructure may affect private lands within village boundaries that are not eligible for LPS. The negotiated settlement (NS) policy of the APCRDA will be followed for these areas and provides for adequate benefits in line with World Bank Core Principle.</p>	<p>The institutional mechanisms require further strengthening. Key areas for enhancement include the following:</p> <ul style="list-style-type: none"> • Strengthening the E&S unit within the APCRDA, including the ADCL. • Enhancing village-level institutions and CAOs. • Improving the GRM, which is currently being established
4. Provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment).	<p>For supplemental benefits, the LPS benefits include:</p> <ul style="list-style-type: none"> • Land Pooling Ownership Certificate (LPOC) Certificate with alienable rights exempting registration fee • Annuities for the LPS farmers for a 15-year period • Demarcation of village sites/extended habitations • Monthly pensions for a period of 15 years to all the landless families • One-time agricultural loan waiver up to INR 1,50,000 per family to farmers who are surrendering their lands under the LPS. • Provision of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) wage labor/minimum salary up to 365 days a year per family 	No specific gaps.

Key Planning Elements	Assessment	Gaps/Actions
	<ul style="list-style-type: none"> Provision of housing to the houseless and those losing houses during development Skill development trainings with stipend for cultivating tenants, agricultural laborers, and other needy individuals to support alternative livelihoods Interest-free loans up to INR 25 lakhs to all the poor families for self-employment Free Education Policy and Free Health Policy as stipulated 	
5. Restore or replace public infrastructure and community services that may be adversely affected by the Program.	The Master Plan provides village infrastructure to be upgraded and integrated into the ACC services. In Gram Kantam areas, in case of any public infrastructure to be disturbed because of road construction, the RPF has provisions for replacement.	No specific gaps.
6. Include measures in order for land acquisition and related activities to be planned and implemented with appropriate disclosure of information, consultation, and informed participation of those affected.	APCRDA has followed the disclosure norm for all LPS and LA related documents and includes – APCRDA Act 2014 and rules (which provide for LPS provisions), and RPF and RAPs prepared earlier.	No specific gaps

Core Principle 5: Rights and Interests of Indigenous People

This principle addresses the need to give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples, and the needs or concerns of vulnerable groups. The underlying planning principles, an assessment of the relevant Program's system, and identified gaps are given in Table A10.5.

Table A10.5. Planning Elements, Assessment, Gaps/Actions

Key Planning Elements	Assessment	Gaps/Actions
1. Undertake meaningful consultations if the Indigenous Peoples groups are potentially affected (positively or negatively), to determine whether there is a broad community support for the PforR Program activities.	There are no primitive tribal groups (PTG) in the ACC area. The ACC area includes 31 percent SC and 4.6 percent ST populations, primarily from the Yerukulas, Yenadi, and Nayaks/Lambadis tribes. Most of these ST families were landless and received land patta in the 1970s and 1980s under the then-government program.	Similar to other households in ACC, there is no proper update on the livelihood status of ST and SC households as well, and is recommended to be undertaken under the program.
2. Ensure that Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources and indigenous knowledge, the latter (indigenous	<p>Their occupations align with those of SCs and other poor households, some have progressed to roles as traders and small contractors.</p> <p>They, among others, have been supported by the APCRDA through targeted initiatives</p>	Based on the skills and livelihood status, a suitable livelihood action plan is to be prepared and implemented under the program.

Key Planning Elements	Assessment	Gaps/Actions
knowledge) to include the consent of Indigenous Peoples.	for vulnerable households, including skill training, job opportunities, and social security measures.	
3. Give attention to groups vulnerable to hardship or discrimination, including, as relevant, the poor, the disabled, women and children, the elderly, ethnic minorities, racial groups, or other marginalized groups; and if necessary, take special measures to promote equitable access to PforR Program benefits.	<p>The APCRDA has prioritized the needs of vulnerable groups, including SCs, STs, and women, establishing mechanisms for systematic identification and support. During earlier engagement with World Bank, the APCRDA had identified 857 vulnerable households from a total of 21,374 through criteria such as (i) families with woman as head of household including <i>inter alia</i> single women, widows; (ii) households where family members have physical disabilities; (iii) families with chronic diseases; (iv) households with an aging family member who can no longer work (over 60 years old); (v) families with no alternative sources of income other than APCRDA pension; and (vi) families of Scheduled Castes/Scheduled Tribes whose sole source of income is APCRDA pensions.</p> <p>APCRDA prepared a Vulnerable household action plan and initiated implementation in 2018-19. The plan included additional benefits to vulnerable population such as:</p> <ul style="list-style-type: none"> • Expanding access to government social security schemes • Providing targeted skill training aligned with job opportunities • Developing a job dashboard for employment information • Ensuring safe public transportation options for women • Increasing employment opportunities under MGNREGA <p>APCRDA had also identified 7876 houseless households and got administrative sanction (vide G.O. Ms. No. 213) for taking up 5024 houses in the first phase for the Capital City and 2852 in 2nd phase. All the 5024 houses in Phase 1 have been constructed (at 8 locations) and handed over to beneficiaries. These multistorey houses (G+3) are of three sizes: 430 sq.ft, 360 sq.ft, and 300 sq.ft. The 430 sq.ft and 360 sq.ft units were allocated based on an initial down payment of Rs.1 lakh and Rs.50,000, respectively, with a 20-year EMI of around ₹3,000, while the 300 sq.ft units were provided free of charge and prioritized for</p>	There is no consolidated assessment or report on status of these vulnerable households including women and shall be covered as part of the socio-economic and livelihood status survey for updates and to plan further action.

Key Planning Elements	Assessment	Gaps/Actions
	most vulnerable within these vulnerable population such as single old age women, etc.	

Core Principle 6: Social Conflict

This principle addresses the need to avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes. The underlying planning principles, an assessment of the relevant Program's system, and identified gaps are given in Table A10.6.

Table A10.6. Planning Elements, Assessment, Gaps/Actions

Key Planning Elements	Assessment	Gaps/Actions
1. Consider conflict risks, including distributional equity and cultural sensitivities.	<p>The interventions of the ACC Program aim to enhance institutional capacity and systems for sustainable growth, ensuring that social conflicts are not exacerbated. The program is designed to be inclusive, with no anticipated exclusion of any groups based on caste, religion, or geography.</p> <p>The master Plan interventions are designed to set up city institutions and service infrastructure that is inclusive and enhances social cohesion in the capital city area.</p> <p>While recent consultations indicate broad stakeholder support for the development of the ACC, there have been conflicts of opinion in the past between groups of differing political or social affiliations who were either supportive of or opposed to the program. In 2019, the government's decision to establish three capitals led to protests from farmers who had contributed their land for the development of Amaravati and local residents. These protests started in 2019 and lasted till June 2024 with the change in Government and restoring Amaravati's status as the capital. Despite the earlier tensions, recent stakeholder consultations indicate a strong desire for the development of the Capital City, with many farmers who were once hesitant including in villages who opposed LPS earlier, now expressing willingness to collaborate on land pooling for ACC development.</p> <p>APCRDA is cognizant of the need to ensure social cohesion and inclusion for the speedy and sustainable realization of the vision of Amaravati as a People's Capital. It is committed to maintaining several two-way channels of communication with all</p>	<p>While there are no specific gaps, APCRDA further aims to strengthen the Grievance Redress Mechanism (GRM) system with feedback and audit function and setting up clear accountability for resolution and initiating regular communication with all stakeholder groups including farmers and landless households, and other disadvantaged and/or vulnerable communities.</p> <p>The Program also aims to revive the Citizen Advisory Committee to enhance citizen engagement in the program implementation.</p>

Key Planning Elements	Assessment	Gaps/Actions
	stakeholders, as well as setting up platforms for voice and participation such as the proposed Citizens' Committee. It maintains village-level offices in 11 villages for direct interaction with local stakeholders and addressing questions, concerns and grievances.	

Annex 11: Strengthening E&S Clauses in the Bidding Documents

APCRDA will include the following E&S conditions including cost implications in the bidding documents after review and update.

Table A11.1. Contract Conditions for E&S Compliance

Condition	Rationale for the Inclusion of this Condition in the Contract	Specifications to Be Included in the Bidding Documents
1. Past performance of the contractor on E&S is one of the eligibility criteria for the shortlisting process	The contractor's past performance on compliance with E&S is an indicator of the contractor's commitment and capability for implementation of the ESMP.	The bidder shall "declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the noncompliance of any environmental, or social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV) or health or safety requirements or safeguard in the past five years."
2. World Bank's SEA and/or SH disqualification	Contractor's past performance	At the time of contract award, not subject to disqualification by the World Bank for noncompliance with SEA/SH obligations
3. The contractor shall propose adequate E&S Specialists in his/her team	The contractor's E&S staff should include an Environmental Health and Safety Officer responsible for implementing all mitigation measures on E&S risks and compliance with EMP and SOPs.	<p>The bidder shall provide details of the proposed E&S staff, including academic qualifications and work experience.</p> <p>The E&S Specialists should have a minimum bachelor's degree in engineering or a master's degree in sciences related to environmental management. The specialists should have 5 years of experience working on monitoring and managing E&S risks related to infrastructure projects.</p>
4. Implement mitigation measures to address construction-related impacts given in EMP and SOP	The mitigation measures to address potential E&S risks and impacts should be included in the bidding documents. The contractor shall be made responsible for the implementation of the mitigation measures through the necessary conditions in the contract.	<p>APCRDA will ensure the ESMP in the General Specifications of the Bidding Document and the reference to this document will be provided in the Conditions of the Contract as follows:</p> <ul style="list-style-type: none"> The contractor shall implement the mitigation and monitoring measures given in the EMP to address E&S risks associated with the construction works. The consultant shall refer to the EIAs/EMPs of the program, which are available on the APCRDA website, for further guidance.
5. Code of Conduct for Contractor's Personnel	All workers hired by the contractor should sign a Code of Conduct to ensure compliance with the E&S obligations of the contract.	<p>The bidder shall submit the Code of Conduct that will apply to the contractor's employees and subcontractors. The Code of Conduct will state that the workers will comply with the following E&S requirements:</p> <ul style="list-style-type: none"> Wear PPE in the workplace at all times Ensure nondiscrimination in dealing with the local community by race, ethnicity, gender, religion, disability, sexual orientation, gender identity, social or health status.

Condition	Rationale for the Inclusion of this Condition in the Contract	Specifications to Be Included in the Bidding Documents
		<ul style="list-style-type: none"> • Maintain a respectful attitude while interacting with the local community. • Prohibit SH, particularly toward women and children. • Prohibit violence, including sexual and/or GBV. • Respect reasonable work instructions • Ensure protection and bidder use of the property. <p>The suitability of the Code of Conduct can be assessed and discussed as part of the bid/proposal evaluation and negotiations.</p> <p>The successful bidder is required to implement the agreed Code of Conduct upon contract award.</p>
6. Contractor's MSIP to manage the E&S risks	The contractor's proposal should include his/her understanding of the E&S requirements of the project and the proposed strategies to manage the E&S risks.	<p>The bidder shall submit MSIPs to manage the following key E&S risks:</p> <ul style="list-style-type: none"> • Traffic management plan to ensure smooth traffic flow around the worksites and the safety of local communities from construction traffic. Implement a strategy for the protection of workers and community from construction-related hazards • Pollution prevention (wastewater, air, and noise emissions) and management • A waste management strategy for proper collection and disposal of waste • Strategy to address labor influx impacts on the local communities. • GBV and SEA prevention and response action plan • Emergency response plan and early warning system. <p>The contractor shall be subsequently required to submit (before mobilization) the C-ESMP using the above strategies and Condition 4 of this table.</p>
7. Preparation of C-ESMP (after award of the contract)	The contractor shall submit site-specific management plans to address E&S risks following the ESMP requirements, and the MSIP proposed in the bid documents.	<p>The contractor will submit for approval and implement its C-ESMP.</p> <p>The C-ESMP should be submitted before the commencement of construction works, and no construction activities will be carried out under the project until approval of the C-ESMP.</p> <p>The C-ESMP will include the following site-specific management plans:</p> <ul style="list-style-type: none"> • OHS management plan • Community health and safety management plan • Waste management plan. • Wastewater discharge management plan • Air and noise emissions management plan • Hazardous material management and spill control plan

Condition	Rationale for the Inclusion of this Condition in the Contract	Specifications to Be Included in the Bidding Documents
		<ul style="list-style-type: none"> • Workers accommodation plan • Management of labor influx and facilities for foreign workers • Labor recruitment procedures and labor management • Traffic management plan including transport of materials from quarries • Training plan for E&S risks, including HIV/AIDS, SEA, and GBV. • Emergency response plan • GRM • Demobilization plan after completion of works. <p>The contractor shall review the C-ESMP every six months and update it as required.</p>
8. Labor Management Procedures	Hiring procedure for construction workers, including the signing of the code of conduct	<p>Provisions in labor management procedures will be followed. The procedures will include terms and conditions of employment, specifying hours of work, wages, overtime, compensation and benefits, holidays, leave, and so on. The procedures will set out measures to prevent and address harassment, intimidation, and/or exploitation.</p> <p>All workers shall sign the code of conduct and will be terminated from employment if they do not comply with it.</p>