

**Amaravati Sustainable Capital City Development Project
(ASCCDP)**

Environmental and Social Assessment

EXECUTIVE SUMMARY



Andhra Pradesh Capital Region Development Authority (APCRDA)

Government of Andhra Pradesh, Amaravati

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Proposed Amaravati Sustainable Capital City Development Project (ASCCDP)

Environmental and Social Assessment

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Section 1: Project Context

1. The Andhra Pradesh Reorganization Act 2014, which came into effect on June 2, 2014 provided for the reorganization of the existing state of Andhra Pradesh. The development of a new Capital City – critical for administration, economic development, and cultural integration – is a priority for the successor state of Andhra Pradesh. The State Cabinet meeting of September 1, 2014 passed a resolution ‘to locate the Capital City in a central place of the state, around Vijayawada, and to go for decentralized development of the state with 3 Mega Cities and 14 Smart Cities’. The State Government identified the Capital City area between Vijayawada and Guntur cities on the Southern bank of River Krishna, upstream of the Prakasam Barrage.

2. The Amaravati Capital City has an area of 217.23 sq.km and is spread across 25 villages in 3 mandals (Thulluru, Mangalagiri and Tadepalli) of Guntur district. The 25 villages in the Capital City area have about a population of about 100,000 people. The nearest cities are Vijayawada at a distance of 30 km and Guntur at a distance of 18 km. The nearest railway station is KC Canal railway station near Tadepalli and the nearest airport is Gannavaram which is at a distance of 22 km. Amaravati is envisioned to be a ‘People’s Capital’ built around sustainability and livability principles. It aims to be at par with global standards and has developed a masterplan with the assistance of the Government of Singapore. The new capital will be a center of economic activity, will create a range of jobs and will provide affordable and quality housing. Sustainability, efficient management and optimum utilization of resources will form an important pillar of this new capital.

3. The Project Development Objective of the proposed Amaravati Sustainable Capital City Development Project (ASCCDP) is to provide select urban infrastructure in designated locations of Amaravati Capital City, and to support the initial development of its institutional and governance structure. The ASCCDP has five main components, as follows: (i) Basic Urban and Pro-poor Infrastructure Component, which will support the implementation of priority transport corridors and integration of 25 villages into the Amaravati Capital City development, by financing the construction of a priority road network and the upgrading of infrastructure in selected villages (e.g. water supply, sewage, village roads, and drainage); (ii) Green Climate Resilient Infrastructure, which will help build sustainability and climate resilience in Amaravati Capital City by supporting its integration with the natural surroundings, riverfront, and greenery; (iii) Citizen Benefit Sharing component, which will support government’s efforts to implement benefit sharing measures for the residents of the capital city area, including but not limited to, training programs for farmers, landless families and other stakeholders, skill building programs, which will allow capital city residents to access jobs and new economic opportunities emerging in an urban context; (iv) Institutional and Fiscal Development, which will support government efforts to develop local government institutions and governance systems; and, (v) Project Management and Implementation Support.

4. An Environmental Assessment (EA) of the ASCCDP was undertaken with the objective of assessing: (a) sustainable management of various activities envisaged under ASCCDP, (b) compliance

with environmental and social regulations of Government of India (GoI) and Government of Andhra Pradesh (GoAP), and (c) compliance with the World Bank's safeguard policy OP 4.01, Environmental Assessment. Considering the fact that some of the ASCCDP investments are not known in detail at the time of project approval, and that they will be identified and designed during the course of project implementation, an Environmental and Social Management Framework (ESMF) has been chosen as the instrument for the EA. The ESMF outlines the systems and procedures that will ensure that all sub-components minimize and adequately manage associated environmental and social risks, in accordance with World Bank policies. The ESMF also aims to sensitize field staff and contractors to the assessment and management of environmental and social risks arising in World Bank financed investments, and to the mitigation measures required to address those risks.

5. The ESMF has already been applied during project preparation for undertaking the environmental and social assessment process of two of the initial, known investments that will be appraised before project approval, i.e. 10 roads priority network, and flood management works. These investments have been prepared to meet the Government of India's 'readiness' requirement of 30% of project cost that must be ready for procurement award by the time of project negotiations. Section 2 summarizes the ESMF as well as the Environmental Assessments and Management Plans of the investments that will be appraised prior to project approval.

6. The Resettlement Policy Framework (RPF) is applicable to all World Bank financed investments and to those specific land parcels that will be used during implementation. The RPF will help mitigate any potential impact arising due to loss of land, restriction on use of land, physical or economic displacement, impact on livelihood and/or restricted access to natural resources. The RPF as well as the Assessments and Resettlement Action Plans (RAPs) of the investments that will be appraised prior to project approval are summarized in Section 3.

Section 2: Environment and Social Management Framework (ESMF)

This section summarizes the following: (2.1) environmental and social assessment covering the regulatory framework, institutional capacity, key environmental issues, impacts and risks; (2.2) systems and procedures for the management of the identified environmental & social impacts; (2.3) environmental assessments and management plans of two sub-components that will be appraised prior to project approval.

Sub-section 2.1: Environmental and Social Assessment

7. **Purpose:** The purpose of the environmental and social assessment was to: (i) assess the policy, legal and regulatory framework for environmental and social management relevant to the Amaravati Capital City development and the ASCCDP, (ii) assess the institutional framework and capacity for environmental and social management, (iii) identify the positive and negative social and environmental impacts and the risks associated with the proposed investments to be financed under the ASCCDP.

8. **Legal and regulatory framework:** The National and State level environmental laws and regulations, and, the Operational Policies of the World Bank are applicable to the ASCCDP. The key laws and regulations applicable to the project are Water (Prevention and Control of Pollution) Act 1974, Forest (Conservation) Act 1980, Air (Prevention and Control of Pollution) Act 1981, EIA Notification 2006, Andhra Pradesh Water Land and Trees Act 2002, Ancient Monuments and Archaeological Sites

and Remains Act 1958, Waste Management Rules 2016, the World Bank OP 4.01 Environmental Assessment, and, OP 4.11 Physical Cultural Resources. In addition, the conditions prescribed in the Environmental Clearance given by the State Level Environmental Impact Assessment Authority, and those specified in the judgment given by the National Green Tribunal are applicable.

9. **Institutional capacity:** The key institutions involved in the implementation of the ASCCDP are the Andhra Pradesh Capital Region Development Authority (APCRDA) and the Amaravati Development Corporation (ADC), both governed by the Department of Municipal Administration and Urban Development (MA&UD) of the Government of Andhra Pradesh. APCRDA is the regulatory and planning authority for the entire capital region established for the purpose of planning, co-ordination, execution, supervision, financing, funding and for promoting and securing planned development within the capital city. The ADC is the development agency for the Capital City area and will take up infrastructure works within the Capital City area. There is flexibility in allocation of work and responsibility between the APCRDA and ADC. APCRDA will have overall responsibility for project coordination and urban sector reforms under ASCCDP, while ADC will be involved in implementation of specific infrastructure sub-components.

10. **Capacity of APCRDA for Environmental Management:** APCRDA has an existing capacity for environmental management. Environmental management aspects are coordinated by the Landscape and Environment group. This group is headed by a senior Indian Forest Service Officer. The team consists of the Engineers and Planners, who have experience in formulating and reviewing Terms of Reference (ToRs) for EIA studies, identification of environmental impacts, designing mitigation measures, environmental monitoring and capacity building on environmental aspects. The team is also experienced in ensuring and monitoring compliance to legal and regulatory frameworks, as applicable. The team members possess minimum of post graduate qualifications with some members also having doctoral qualifications in civil engineering, urban planning, etc. The experience of senior team members is in the range of 25-30 years and that of other team members is in the range of 8-10 years. The team also has good experience in use of GIS and modeling tools. Both APCRDA and ADC have engineers and planners with experience in environmental management.

11. With regards to management of social aspects (e.g. implementation of policies and initiatives, impacts, monitoring), APCRDA has sufficient capacity. APCRDA has two officers responsible for management of social impacts: (i) a Land Acquisition Officer, whose responsibility is to coordinate all land acquisition/Negotiated Settlement, LPS and related issues related World Bank financed sub-components; and (ii) a Social Development Officer in place to coordinate census, socio-economic surveys, consultation, delivery of annuity and pensions, implementation of RAP, support to vulnerable people, etc. The above two officers will be reporting to Project Director of PMU for the World Bank financed project, and will receive support from all senior staff of APCRDA. Moreover, more broadly than the World Bank intervention and in terms of management of the LPS overall, Deputy Collectors are heading LPS units established in all 25 villages. These units have supporting staff to manage LPS and public information centers, to coordinate with district administration and other stakeholders, manage project-related impact, conducting surveys, studies, monitor implementation, and interact with World Bank. Overall, APCRDA has deployed an extensive group of qualified staff that is managing social development and safeguards aspects related to the development of the new Capital City.

12. **Capacity of ADC for environmental management:** ADC is staffed with engineers, planners, architects as well as foresters (over 50 individuals). The team members possess minimum of post graduate qualifications in urban planning, environmental and civil engineering, architecture, etc. The

experience of senior team members is in the range of 15-30 years. The responsibilities assigned to key staff members (such as the Head-Urban Planning & Architecture, Senior Urban Planner, Senior Infrastructure Planner) include integration of environment components into city planning, coordination with APCRDA for integration of environment protection measures, ensuring compliance with environmental regulations, etc. One senior officer with environmental management experience of 12 years has been designated specifically to coordinate safeguards management, especially focusing on implementation aspects. There is no Social Development staff at ADC, and APCRDA staff supports ADC on social management issues that arise in the implementation of works. By appraisal, a Social Development Officer with appropriate qualifications and experience to manage construction-related social impacts will be in place (selection is underway).

13. Both APCRDA and ADC are new institutions and hence do not have prior experience of working on World Bank supported projects. Also, the implementation of the sub-components is expected to take off in a rapid manner. In view of this, augmentation of the capacity of APCRDA and ADC is planned in order to meet the requirements of the environmental and social safeguards management in the ASCCDP (capacity building measures are detailed later).

Key Environmental Issues, Impacts and Risks:

14. ***Environmental Issues:*** The key environmental issues concerning the ASCCDP include:
- Large scale conversion of agricultural land to non-agricultural use: The Capital City is being developed in an area that was largely agricultural. However, with the implementation of land assembly instruments, including Land Pooling Scheme, Negotiated Settlements and Land Acquisition, the predominant current land use is fallow land. In the future, as infrastructure investments in the capital city advance, the entire area is expected to urbanize, and will be developed in accordance to the Amaravati Master Plan.
 - Flooding: Parts of the Capital City area are prone to flooding due to flash floods of a rivulet called Kondaveeti Vagu. The flood mitigation sub-component under ASCCDP will address this issue.
 - Protection of water bodies: Several small water bodies, used earlier as irrigation ponds, are present in the Capital City area. Conservation of these water bodies is a condition of the Environmental Clearance received for the Amaravati Capital City development and is planned as part of the Capital City Master Plan. World Bank financed investments under ASCCDP may involve some of these water bodies.
 - Diversion of forest land: The proposal for diversion of forest land in the Capital City has been made to the Ministry of Environment Forests and Climate Change, Government of India and its decision/direction will be adhered to by APCRDA. The Capital City Master Plan categorizes forest areas as 'Protected Areas'. The currently identified investments under ASCCDP have been screened, and it was confirmed that they do not involve any forest areas. Future investments under the ASCCDP will be similarly screened to ensure there is no diversion of forest land.
15. ***Environmental Impacts:*** Potential environmental impacts of the ASCCDP activities include:
- Impacts associated with construction activities such as borrow pits, impacts associated with disposal of construction debris, as well as public and worker safety issues.
 - Poor infrastructure facilities at contractor labor camps (ventilation, water, sanitation, waste management, fuel safety, etc.).

- Loss of trees, water bodies and culturally significant structures falling within the alignment of linear infrastructure such as roads, pipelines, and canals.
- Generation of air, water and noise pollution during construction and operation of infrastructure such as roads, sewage treatment plants, landfill sites, flood water pumping stations, etc.
- Poor design, improper execution and mismanagement of infrastructure such as roads, upgraded village infrastructure, reservoirs and canals leading to pollution and public health impacts.

16. **Environmental Risks:** The key environmental safeguards risks associated with the ASCCDP include: (i) inadequate capacity in the implementing agencies to undertake environmental assessments and to prepare environmental management plans for investments to be financed under ASCCDP; (ii) inadequate implementation of environmental management plans; and (iii) inadequate environmental safeguard management capacity in the implementing agencies.

Sub-section 2.2: Environmental & Social Management Systems and Procedures

17. **Purpose:** The ESMF describes systems and procedures for the management of the identified environmental & social issues, impacts and risks under the ASCCDP, including: (i) detailed procedures for environmental and social assessment of all investments under the project, (ii) details on the institutional roles and responsibilities for environmental and social management, (iii) strategy and plan for capacity building of key stakeholders, (iv) plan for monitoring the implementation of environmental and social safeguards, (v) strategy for public consultation.

18. This section focuses largely on the systems and procedures for environmental management. The social management aspects summarized in this section are limited to labor influx and gender based violence. Institutional arrangement, capacity building and budget which are common to both environmental and social management are also presented in this section. The land related social management aspects are presented in Section 3 under Social impact.

19. **Environmental Assessment of Sub-components:** All sub-components being supported under the ASCCDP will be subject to screening, which will be followed by the required level of environmental assessment (EA). Following EA, each sub-component under the ASCCDP will have an Environmental Management Plan (EMP) that will provide an implementation plan for any required environmental risk mitigation measure, a capacity building plan, as well as a monitoring plan, and the corresponding budget. The EMP will also describe the roles and responsibilities of the key institutions involved in the implementation of the EMP. Public consultation and disclosure will be part of the EA-EMP development process.

20. **Environmental Categorization of Investments to be financed under ASCCDP:** As the sub-components under the project will have varying environmental impacts, depending on their location and nature, they have been categorized into different categories – E1, E2 and E3 – linked to the severity of potential impacts and regulatory requirements. E1 category sub-components require project specific EA by an independent agency, other than the engineering consultant responsible for design and implementation. E2 category sub-components require project specific EA. E3 category sub-components may have a generic EMP.

21. **Environmental Management Plan and Mitigation Measures:** The ESMF provides a generic EMP as guidance for preparation of sub-component specific EMPs. The generic EMP includes mitigation

measures, timeframe for implementation, implementing agency and appropriate references to the contract documents. Mitigation measures to address environmental impacts outlined earlier include the following: (a) measures to ensure compliance with all regulatory requirements - including standards for air emissions, noise levels and waste water quality standards, including: water spraying and covering haulage for dust suppression, safe distance of construction plants from habitations, restriction on noise generating work during night, norms for equipment selection and maintenance, etc.; (b) soil erosion and sediment control measures including slope protection, top soil conservation, reuse of spoil for land leveling at identified locations, borrow area rehabilitation, silt fencing; (c) safe disposal of all wastes including construction and demolition wastes; (d) use of personal protection equipment by workers, and, facilities to ensure hygiene and safety at labor camps; (e) compensatory plantation of local tree species; (f) enhancement of water bodies; (g) compliance with regulatory requirements concerning sites of archeological and historical importance and chance find procedures. Residual impacts after implementation of identified mitigation measures include loss of productive agricultural land, loss of large mature trees and partial loss of small water bodies.

22. **Monitoring of Environmental Management:** Monitoring involves cross-checking the implementation of sub-component EMPs, as well as monitoring environmental quality through suitable indicators during construction and operation stages. The monitoring plan includes indicators and parameters to be monitored (air quality, surface and ground water quality, noise levels, and soil quality), methodology, frequency, etc. The primary monitoring responsibility has been assigned to APCRDA/ADC, as well as to the Project Management Consultants and the Contractors. An independent evaluation of the sub-component EMP implementation will be undertaken at the end of implementation of every investment financed under the ASCCDP.

23. **Institutional Arrangements for Environmental and Social Management:** Responsibilities on environmental and social management have been mapped to the key staff in the APCRDA and ADC engaged in project management, as well as those involved in design, planning, implementation, supervision and monitoring of each specific investment under the project. In addition, the following institutional arrangements have been made to augment the capacity of APCRDA and ADC in environmental and social safeguards management: (a) a dedicated Environmental Specialist will be designated in both APCRDA and ADC to ensure that the environmental management requirements in the ASCCDP are met, (b) a Social and Gender Officer, and, a Community Mobilizer at APCRDA will be responsible for the social management aspects of the project (c) the Program/Sub-component Management Consultant firms will be required to have an Environment Expert and a Social Development Expert in their teams to support the APCRDA/ADC.

24. **Capacity Building on Environmental and Social Aspects:** For capacity building of APCRDA and ADC staff on environmental and social management, two types of programs are planned: (a) Training on Environmental and Social Assessment for Sub-components: Bi-annual training workshops will be organized by APCRDA for its staff as well as for staff of ADC and of contractors involved in implementation of the sub-components. (b) Experience Sharing Sessions: Annual experience sharing sessions will be organized by APCRDA to enable exchange of good practices in implementation of environmental and social safeguards management. The participants will include staff of APCRDA and ADC involved in implementation of sub-components, program and sub-component management consultants, officials of statutory boards and other relevant monitoring agencies.

25. **Labor Influx:** The project is expected to induce construction related labor impacts under ASCCDP financed contracts. Hence, the ESMF includes provisions for labor welfare and safe working conditions

as well as measures to monitor the contractor for compliance with relevant labor laws and implementation of labor welfare and safe working conditions. Contractors will have the responsibility to implement worker health and safety measures including provision of adequate labor camp facilities, use of personal protection equipment, worksite safety measures, health checkups, emergency response, awareness building on HIV/AIDS, etc. The contractor will also be responsible for formulating and ensuring implementation of a Code of Conduct for Workers. The construction camp site will be rehabilitated at the end of implementation of the project financed investment. The project will pay attention to ensuring participation of local communities in project activities through stakeholder consultations.

26. **Gender Based Violence (GBV)** - There can be some potential risks regarding women's safety and security arising out of Bank project interventions due to enhanced exposure to harassment and sexual violence for economically displaced female landless agricultural workers while traveling to work and sexual harassment at the construction sites of Bank funded contracts. Based on GBV Risk Assessment carried out by the Bank, the project will prepare a Gender Based Violence (GBV) Action Plan for effectively addressing GBV issues for such instances arising out of Bank funded interventions / components and the Action Plan will be part of the ESMF. The Project will identify GVB counselors, who will be able to provide support to any potential GBV survivors in the project area. Among other measures, GBV Action Plan will include sensitizing the communities, SHGs, workers and training of APRCDA staff, Citizens Committee on GBV, inclusion of female member in the GRCs and provide safe modes of transport to women working in the project area. The contractors will be responsible that every worker signs the Code of Conduct and they will implement measures for GBV prevention and mitigation as per their ESMPs.

27. **Cost estimate for ESMF implementation:** The cost of preparation and implementation of sub-component EMPs will be part of the sub-component costs. The residual costs of ESMF implementation including project level monitoring, institutional arrangements and capacity building are about INR 500 million (USD 7.3 million).

Sub-section 2.3: Environmental Assessment and Management Plans for 2 Sub-components

28. Detailed preparation of two of the investments to be financed under the ASCCDP that have been identified prior to project appraisal has been undertaken as part of the Government of India's 'readiness' requirement of 30% of project cost being ready for procurement award by negotiations. The two identified investments are: (a) 10 priority road grid, providing connectivity across Capital City area; and (2) flood mitigation works. EAs were prepared for the two sets of investments and EMPs were subsequently developed.

29. **EIA and EMP for the 10 Priority Roads:** The EA identified the following impacts: (i) removal of 849 trees; disposal of soil from excavation (4.8 million cubic meters [MCM]); (ii) generation of construction and demolition waste (2686.84 cubic meters); (iii) loss of 17.65 acres of water spread area across 39 water bodies; and (iv) other construction related impacts (e.g. land degradation at borrow sites, dust generation and vehicular air emissions, impacts associated with labor camp sites, etc.). A draft EMP was developed to address the impacts.

30. The key mitigation measures in the EMP include: (i) avenue plantation of 88,973 trees; (ii) disposal of excess spoil and construction/demolition wastes at identified disposal sites; (iii) provision for cross-drainage measures; (iv) energy efficient street lighting; (v) procurement of construction material

only from permitted sites and licensed/authorized quarries; (vi) all construction vehicles and equipment to meet regulatory pollution control standards; (vii) proper siting of plant and provision of oil and grease removal tank to prevent pollution from oil and fuel spills; and (viii) other measures for mitigating construction related impacts (listed earlier).

31. The EMP was disclosed through the APCRDA website on March 4, 2017. Consultation workshops with affected communities were held on April 4, 2017, and on July 19 & 22, 2017. Given that the construction of the 10 priority roads started before the EMP was finalized, an in-process audit of the implementation of the draft EMP was conducted in March 2018. The audit provided a list of recommendations that are being implemented. The final EMP was disclosed on April 17, 2018. Suitable provisions based on the final EA and EMP are part of contract documents.

32. **EIA and EMP for the Flood Mitigation Works:** The flood mitigation works will finance improvements in the carrying capacity of *Kondaveeti Vagu*¹ and *Pala Vagu*. The EA undertaken as part of sub-component preparation identified the following impacts: (i) 529 trees affected,; (ii) loss of top soil (0.475 MCM); (iii) disposal of soil from excavation (38.20 MCM) and associated impacts such as air and noise pollution, traffic impacts during carting of spoil, erosion of disposal sites, etc.; (iv) land degradation due to quarrying (0.111 MCM) of stone will be used for lining of reservoirs; (v) impact on 3 physical cultural sites including a private temple and two burial grounds; (vi) water intake from the Krishna River to the tune of 0.35 Thousand Million Cubic feet [TMC] out of the available 3 TMC (lean period), to maintain minimum water levels in the canals on bi-weekly basis; and (vii) other minor construction-related impacts.

33. A draft EMP was developed to address the above impacts, including impacts on physical cultural sites. The mitigation measures identified in the EMP include: (i) removal of trees only if unavoidable in view of safety risks and only after required permission is secured, transplantation of 106 trees, and development of green buffer plantation alongside canals and water bodies (with about 45,000 trees); (ii) utilization of 0.445 MCM of spoil for embankments at reservoirs; (iii) safe disposal of 38.20 MCM of spoil at identified sites for achieving ground levels as per the City Master Plan; (iv) measures to control soil erosion (excavation during dry season, vegetation cover, proper drainage, slope maintenance, etc.); (v) procurement of construction material only from permitted sites and licensed/authorized quarries; (vi) sourcing water for construction from surface water sources, and ground water extraction upon securing required permission; (vii) construction vehicles and equipment to meet regulatory pollution control standards; (viii) proper siting of plant, oil interceptor and septic tank to prevent pollution from oil and fuel spills; (ix) storage, reuse and proper residual disposal of construction debris; dust control measures (water sprinkling, covering construction material, etc.) and regular monitoring; (x) construction of baffles to control turbidity before discharge; (xi) limiting construction operations to day time; (xii) maintenance of canals and reservoirs (de-weeding, desilting, etc.); (xiii) provision of barricades for canals; (xiv) exclusion of construction facilities, blasting, etc., within 1 km of Undavalli Caves monument; and (xv) chance find procedures. In addition, monitoring of air, water, noise, soil quality will be undertaken on a regular basis.

34. The contractor will prepare and implement the following plans after approval from the ADC: occupational health and safety plan, dust control plan, labour camp management plan, traffic management plan, site restoration and demobilization plan, etc. The contractor will appoint a qualified and experienced Environment & Safety Officer (ESO). The EMP was disclosed through the APCRDA

¹ Vagu refers to stream in Telugu.

website on January 2, 2018. Consultation workshops with affected communities took place on July 25, 2017, January 6, 2018, March 19-22, 2018, and April 25, 2018. The final EA and EMP, which address feedback received during consultations, will be disclosed prior to project appraisal. Suitable provisions will be inserted contract documents.

Section 3: Social Impacts

35. The key social impacts resulting from the ASCCDP include: (i) land-related impacts, i.e. physical and economic displacement of land owners in the Capital City area, as the land required for the development of the city was assembled; and (ii) livelihood impacts, especially on landless agriculture laborers and tenants who were dependent on land that is no longer available for cultivation.

36. **Land requirements and resettlement Impacts.** To develop Amaravati according to its Master Plan, the Government of Andhra Pradesh needs to assemble 217 km² of land. The land is being assembled using a combination of land management mechanisms, including: (i) Land Pooling Scheme, whereby land owners surrender their land 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, along with a range of livelihood support measures including *inter alia* an annuity, skill upgrading and support for setting up self-employed enterprises; (ii) Negotiated settlements, applicable only for land and assets within existing villages, whereby the Government and land owners agree on the terms of a compensation package that is consistent with the provisions of the 2013 Land Acquisition, Rehabilitation and Resettlement Act (LARR Act, 2013), but in which the compensation involves, among other things, a land-for-land exchange rather than a cash exchange, as well as relocation assistance; and, if neither of these first two mechanisms is successful, (iii) Land Acquisition via the 2013 LARR Act, by which compensation for land acquired (replacement value and livelihood support) is provided as per the requirements of the Land Acquisition Act. All such land management mechanisms, to the extent they are applied to land within the project, will be subject to the application of the World Bank Policy for Involuntary Resettlement (OP 4.12).

37. A Resettlement Policy Framework (RPF) been prepared to guide the preparation of investment-specific Resettlement Action Plans (RAPs) for the 10 priority roads grid and the flood management works, as well as those for future village upgrading investments, once those are identified. The RPF includes principles, processes, institutional arrangements for the preparation and implementation of Bank-financed investment-specific RAPs. RAPs will analyze and mitigate potential resettlement impacts of project interventions, and will be prepared consistent with the guidance included in the RPF. The RPF and subsequent RAPs are consistent with OP 4.12.

38. Land assembly will impact various categories of people including: (i) land owners (with titles) who will give up their land under LPS, LARR or Negotiated Settlements; (ii) landless tenants and agricultural wage laborers; (iii) farmers on government-assigned lands; and (iv) informal occupants of agricultural lands and land in villages. Among these, special attention is given to several vulnerable groups, including but not limited to: (i) women; (ii) aging populations; and (iii) scheduled castes/scheduled tribes. All those affected by the ASCCDP will be taken into consideration in the design of the project, in accordance with the Bank's policy objective that displaced people should be assisted to improve or at least restore their livelihoods. The cost for the project-related land acquisition is drawn from the overall budget allocation for the land acquisition of the entire capital city development, and the cost for annuity and pension will be drawn from budgetary support. The remaining cost for the

proposed activities under RAPs is supported by an additional budget of INR 570 Million (USD 9 Million) _

39. Prior to project appraisal, land acquisition impacts for: (i) the 10 priority roads, and (ii) flood management works, are summarized in Table A. The impacts of future works associated with village infrastructure upgrade are not yet known but will be determined as per the RPF.

Table A – Land acquisition impacts of World Bank financed priority roads and flood management works

	Number of families impacted by 10 priority roads	Area required for 10 priority roads (Acres)	Number of families impacted by flood management works	Area required for flood management works (Acres)	Total number of land owning families impacted by roads and flood works	Total area impacted by roads and flood works (Acres)
LPS	1,757	1,002.6	1,754	1,131.3	3,511	2,133.9
2013 LARR Act	71	27.7	110	75.5	181	103.2
Negotiated Settlements	176	17.4	27	10.4	203	27.8
Government land	38	53.8	-	811.1*	38	864.9
Total	2,042	1,101.5	1,891	2,028.3	3,933	3,129.8
Number of landless families impacted by land assembly processes: 21,374 families						

(*) This includes 680 acres of land in reservoirs (Krishnayapalem, Neerukonda and Sakhamauru) and stream flow area and land adjoining the stream per irrigation records (*Vagu* land).

(**) Occupants of Government land will be assisted as per (i) the Negotiated Settlement policy if occupying land in villages; and (ii) as per the LPS is occupying agricultural land.

Note: Land owners currently undergoing Land Acquisition procedures may still opt to join LPS. While this will not affect the total number of families affected, it may affect the breakdown of affected people by land assembly mechanisms.

Consistency of land assembly instruments used in Amaravati with OP 4.12 (refer to RPF for full details)

40. **Land Pooling Scheme (LPS)** – Land owners who opted to participate in the LPS have benefitted in terms of the market value of their returnable plots. Even though the area of returnable plots is smaller, i.e. up to 30 percent that of the original plot, through the change of classification from rural to urban (residential and commercial), and given the access to infrastructure, LPS farmers have already recovered the value of their original plot. On average, in 2017, the value of land has appreciated by 2.7 times the local average rates for rural land through a combination of value of returnable urban land / plots (based on current government guideline rates of urban land). Based on market rates of land as of early 2018, the value received by LPS farmers would be substantially higher – as confirmed by data from 2018, with sales ranging from 7 to 28 times the estimated market value of rural lands that were

contributed / surrendered for LPS.

41. International experience suggests that once the city is developed, these values will increase further. In addition to the market value of their returnable plots, land owners have received annuities and other benefits from APCRDA since May 2015. Unless they sell their plots, they will continue to receive these additional payments and benefits for six more years, which will add up to substantial revenues. Therefore, land owners have received adequate compensation for their plots, i.e. replacement cost and/or higher, which has benefited them financially from the transaction. They will have the option to remain in Amaravati and continue to benefit from the transformation of the region from a rural to an urban driven economy, and thus from improved living standards and economic opportunities.

42. **Negotiated Settlement Policy (NS)** - A review of the Negotiated Settlement Policy (NS) indicated that: (i) the policy provides for land-for-land compensation and payment of two times the cost of the structures at current scheduled rates, hence it adequately meets the requirement of 'replacement cost' under Bank policy; and (ii) for structure-related impacts associated with the Bank project, depreciation costs towards structure value are to be paid separately, as provided in RPF to meet gaps vis-à-vis Bank policy. Equivalent developed land is being given in the same vicinity and within Amaravati city, in addition to construction grant and transitional support (moving allowance and subsistence allowance are provide for one year). All these benefits will enable people to improve or at least restore their living conditions to pre-Capital City standards over time.

43. **Land Acquisition per 2013 LARR Act** - A review of the 2013 LARR Act found the following gaps when compared to the Bank policies: (i) structure valuations are estimated as per the prevailing State Scheduled Rates (SSR rates), and depreciated values for structures are paid to affected people; (ii) cut-off date requirements for eligibility of affected people - the cut-off-date for non-titleholders to be eligible for assistance under the 2013 LARR Act is three years preceding the acquisition, and for the titleholders it is the date of preliminary notification; and (iii) no assistance to those using/occupying public lands (for example, squatters).

44. To address these gaps, APCRDA and the Bank have agreed on the following: (i) compensation of structures will be paid as per the provisions of the LARR Act but without depreciation; (ii) the cut-off date for non-title holders is the date of the census survey for impacts in village areas under the Bank project (i.e. socio-economic survey). In the case of title holders, the cut-off date is the date of preliminary notification; and (iii) all those occupying public lands will receive assistance, as per applicable provisions of LPS and NS policies, as follows: (a) those who are dependent on agriculture lands will receive smaller size *returnable plots* and pensions, as per LPS; and (b) those residing in public lands in village areas will be provided housing and transitional support, as per NS policy.

45. **RAP Implementation.** The implementation of the RAP prepared for the 10 priority roads is underway, as construction of the roads has started and works have advanced substantially. As of July 2018, 1,644 out of 1,757 (94%) land owners impacted by the road construction who chose to join the LPS have surrendered their land and received Land Pooling certificates. Additionally, 4 out of 71 land owners (5%) who opted for the Land Acquisition option have been offered compensation under 2013 LAAR Act. Land Acquisition is progressing slowly, as most of the cases are being challenged in legal courts, as per the provisions of the 2013 LARR Act. The courts have ordered the Government to dispose of all objections on land acquisition before announcing land compensation awards. Furthermore, to date, 124 out of 214 affected families living in villages who opted for Negotiated Settlements (58%),

have been offered compensation and alternative housing sites.

46. **Landless agricultural laborers** – Landless laborers working in the capital city area lost their primary source of income as land was assembled for the development of Amaravati. As such, landless agricultural laborers have been directly impacted by the capital city development project, as land was transferred to APCRDA. A key consideration concerning landless laborers is therefore the extent to which alternative sources of income are available locally to replace the loss of income from agricultural jobs.

47. Although OP 4.12 applies only to the footprint of the World Bank financed project, it is challenging to differentiate between landless laborers affected by land assembly within and outside the World Bank project boundaries. Therefore, APCRDA has agreed that for purposes of this RPF, all landless families registered with APCRDA for pension by July 15, 2018 will be considered project affected people for the purposes of provision of livelihood restoration measures. The payment of pension and other livelihood-related benefits will be monitored for the list of registered landless families as per this RPF. As of July 15, 2018, the total of number of landless households is 21,374.

48. Landless agricultural laborers working in the Capital City area are eligible to receive a combination of livelihood restoration benefits that includes: (i) payment of pensions @ INR 2,500 per month per family for a period of 10 years, with annual increases linked to inflation index; (ii) employment under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) for up to 365 days per year; (iii) facilitate access to interest-free loans for setting up enterprises; (iv) access to skill upgrading and training opportunities; (v) provision of subsidized food; and (vi) free access to medical and educational benefits in designated facilities. When livelihood restoration benefits are fully accessed by landless laborers, landless households are in a financial situation comparable or in some cases better to their status pre-Capital City. However, some landless families may have challenges accessing all the livelihood restoration benefits, in which case there are people in situation that may be worse than their pre-Capital City status.

49. The World Bank's policy on involuntary resettlement states as an objective that "displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher." In line with this objective, measures in addition to those already in place by APCRDA and covering all landless laborers are included in this RPF, to identify and to address, specifically, the needs of the most vulnerable subset of landless households, who need extra support to return to their levels prior to the announcement of the Capital City. The following typologies of landless households are recognized as those at the highest risk: (i) families with women head of household; (ii) households where family members have physical disabilities; (iii) families with chronic diseases; (iv) households with aging family member who cannot 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.

50. APCRDA has established a methodology to identify the vulnerable landless families, within a total of 21,374 landless households as of cut-off date. Using this methodology an assessment was carried out by APCRDA in June - July 2018. A total of 857 vulnerable landless families were identified, living in the 25 villages of the Capital City area. While they are similar in nature to some of the general initiatives that APCRDA is implementing across the Capital City for all landless laborers, additional measures specifically tailored and targeted to the needs of the identified 857 families have been

designed and include: (i) expanding safety nets for targeted; (ii) skill training for those eligible, tailored to supply of jobs; (iii) job dashboard with information on employment opportunities in villages across the Capital City; (iv) safe, public transportation options for women to travel for work to other locations; and (v) creation of more employment opportunities under MGNREGA within and nearby area of Capital City.

51. Existing Self Help Groups (SHG) will, in coordination with APCRDA, engage in reaching out to the targeted households and supporting them as these proposed measures are rolled out. Specifically, they will, first, monitor the implementation of measures targeted to the vulnerable landless households to ensure that measures: (i) provide additional opportunities for target vulnerable landless families to improve their livelihood; and (ii) address some of the bottlenecks in accessing existing programs. Second, activate monitoring mechanisms to verify and calibrate the success of proposed measures, aiming at reducing the number of vulnerable landless families with time; and third, engage with communities and identify new potential families that may need additional assistance. It is expected that the original number of vulnerable landless families will reduce gradually, as target support measures bridge existing gaps and allow families to access opportunities to improve their livelihoods. The monitoring mechanism is in place, building on the present and the penetration of SHGs and of NGO/consultants, will provide a channel to identify on a continuous basis, families that may fall into a vulnerable state.

52. **Grievance Redress Mechanism (GRM)** - A robust GRM Mechanism for the overall Capital City has been set up by APCRDA. The GRM provides multiple avenues, covering physical, web-based and telephonic channels for registering and seeking redress of grievances, all of which are operational. These include: (i) 'Meekosam'- state-wide single-window, online framework for receiving grievances, complaints, covering all government departments. Complaints are routed to the concerned department, including APCRDA for Amaravati related grievances; (ii) physical system in which designated officials, i.e. Competent Authority (CA) at various zonal offices throughout the city, who can be approached by citizens to address grievances. There are approximately 26 units of CAs headed by Deputy Collector. Every Monday, a grievance redressal meeting to attend public grievances is held at APCRDA offices with CAs; (iii) separate online system being operated by APCRDA through their portal; (iv) Call Center - a toll free complaint number '1100' is provided to the public by the Government of Andhra Pradesh to serve as a GRM and complaints registered through this facility go directly to APCRDA; and (v) Mobile app – called 'Mana Amaravati' provides information on the progress of Amaravati city development. It includes an in-built application for grievance redressal. Additionally, Project Information Centers (PICs) have been set up, one in every village. PICs are open to the public, staffed by educated youth from the respective villages who are trained as information assistants, to provide information to villagers about the public. The PICs are equipped with brochures, documents, pamphlets (all in English and Telugu) presenting information about the project and the GRM. A log book is kept in every PIC to register grievances of villagers on a walk-in basis.

53. The multiple channels for grievance redress that have been set up by APCRDA provide adequate avenues for the population of the Capital City area to express their grievances. They will be used as the Project-level GRM to address issues of Project Affected People (PAP), and as such will be monitored by the World Bank. Having a combined GRM will mitigate potential confusion among PAPs and it will promote efficiency in the response of complaints.

Section 4: Public Consultations and Disclosure

54. Thousands of consultation events have taken place since 2014 following each phase of development of the Capital City, starting with the preparation of the Master Plan, and continuing today. Consultations have taken many forms – in the early days they were informal, door to door conversations in the villages, community meetings, which evolved after the start of the LPS into well planned, documented consultations with hundreds of stakeholders. Project Information Centers (PICs) were set up in every village to allow for continuous consultations to take place, on demand, when sought out by the residents of the Capital City. Consultations have been done in person, in writing, and on the phone, in English and in Telugu. They have been coupled with a communications campaign that has made extensive use of printed materials, newspapers, radio, videos, internet and social media. Throughout the evolution of the Capital City, consultations have taken place focused on different milestones, specifically:

55. *Master Plan preparation and notification* - extensive consultations took place during the timeline of preparation of the draft Concept Plan and until the notification of the final Master Plan in February 2016;

56. *Announcement of Capital City Development Program and of LPS* - The official start of the LPS was January 1, 2015. Pre-LPS consultations started in September 2014, and hundreds of distinct events were carried out by APCRDA to inform residents of the capital city area of the development of the new city. Efforts were made to organize consultations at different times (day and evening), and to have meetings in neighboring cities (e.g. Bangalore). Consultations continued in 2015. During consultations, the various steps of the process were explained to landowners. Based on the feedback from consultations, APCRDA made revisions to the program's entitlement matrix, including, returnable plot sizes, and inclusions of various categories of impacted people. As a result of the consultations, some farmers who had initially opted out of LPS have joined, and conversely, some farmers who had initially expressed interest in joining the LPS did not. Consultations also resulted in changes in the design of the program, including, for example: (a) livelihood restoration benefit packages; (b) the need for different package (compensation values) for dry lands and lands irrigated with ground water (Jareebu), which was petitioned farmers; and (c) during consultations and in the early days of the LPS, APCRDA traveled to other places in India and abroad (e.g. Mumbai, Gujarat, Singapore) with some farmers to learn from other previous experiences and have an informed understanding of all the challenges, opportunities and risks of the LPS

57. *Roll out of LPS* – Thousands of consultations with farmers and landless workers took place during the process of joining LPS, while layouts for returnable plots were agreed upon and until the returnable plots were allotted and accepted by the farmers. 30,000 farmers have joined the LPS as of mid-2018, and were consulted at different periods in time, in person if they reside in the area, or via absentee communications if they lived away.

58. *Consultations on Social Impact Assessment (SIA)* under the LARR Act 2013. As part of the land acquisition process for capital city development under the LARR Act 2013, the district administration has been conducting consultations and public hearings on village-specific SIAs in every affected village. Consultations are held by independent consultants and these are still ongoing for a few remaining villages. The minutes of these consultations are disclosed on the APCRDA website. All those going through Land Acquisition procedures, as per the LARR Act, are informed and notified multiple times during the process.

59. *Regular grievance redress meetings* - APCRDA conducts regular weekly grievance redress

meetings to resolve landowners' concerns regarding the LPS and other aspects of the development of Amaravati City.

60. *Project Information Centers (PICs)* are well staffed and open to the public. Grievance logs and documentation are maintained, including descriptions of the project. Information on safeguards documents will be available for consultation at the PICs as well as online, once the safeguards instruments have been finalized and disclosed (in English and Telugu).

61. Consultations continue today, on a permanent basis, as the LPS continue and Land Acquisition is underway. Meetings and focus groups are regularly held at PICs and APCRDA offices.

62. *Safeguards instruments* - Additional rounds of consultations have been carried out as the World Bank project is prepared, and more specifically as the safeguards instruments are finalized. Separate consultations have been held with multiple stakeholders, in preparation of the Environmental and Social Management Framework (ESMF), the Environmental Impact Assessment (EIA) and associated Environmental Management Plans (EMPs) for the roads and the flood management works. Separate rounds of consultations have been held for this RPF and for the associated Resettlement Action Plans (RAPs) for roads and flood management works. World Bank consultations have been held primarily throughout 2017, as project preparation advances, in 2018.

63. Five stakeholder public consultations workshops for the ESMF and RPF were held in 2017-18 as part of project preparation. The first workshop was held in January 2017 and attended by roughly 150 people, including World Bank's Environment and Social specialists, as well as a representative from AIIB. Subsequent consultations were held in August 2017, where four workshops were conducted over two days in four different locations within the footprint of the new capital city and more than 350 people attended these meetings, including World Bank's Environment and Social specialists, a Communication's Specialist and the India's Operations Manager. In addition, third round of consultation was held for people affected by flood mitigation works in January 2018 in four villages-Mandadam, Thullur, Neerukonda and Krishnarayapalem, where 289 people including about 20% women and Bank retained NGOs were participated. In addition, roughly 42 additional focus group consultations on the draft RAPs for roads and flood mitigation works have been carried in 14 different villages during 2017-18. These meetings were targeted towards specific vulnerable groups including: women, landless laborers, SC/ST people, physically displaced families, etc. More than 400 people participated in these additional focus group consultations. In addition, household socio-economic survey was carried out among 433 households, out of 2050 affected households residing within capital city area (21%). The baseline socio-economic characteristics developed from the survey will become basis for measuring changes in socio-economic conditions during post resettlement period.

64. **Communications campaign** - APCRDA has hired a communications firm and they have significantly strengthened their communications campaign, as follows: (i) production of videos, printed materials (pamphlets, books, posters, banners), radio and TV campaigns (in English and in Telugu) that describe the overall Amaravati City Development Program and the proposed World Bank Project, in all languages; (ii) website frequently updated and including current information; and (iii) increased social media presence and grass root communications efforts in various languages.

65. The final draft of the ESMF was disclosed on the website of the APCRDA on 16 August 2017 and on the World Bank website on 30 August 2017. The final RPF and RAPs were disclosed on xxxx. The full draft reports of ESMF, RPF and RAPs can be accessed on the APCRDA website through the link

<https://crda.ap.gov.in/APCRDA/Userinterface/admin/asccd.p.htm>.