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SOCIAL ASSESSMENT AND SOCIAL MANAGEMENT FRAMEWORK

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Project on Climate Resilient Agriculture (POCRA)

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Abbreviations

APMC	Agricultural Produce Market Committee
ATC	Additional Tribal Commissionerate
ATMA	Agricultural Technology and Management Agency
CBO	Community Based Organisation
CC	Cluster Committee
CC	Cluster Committee
CHC	Custom Hiring Centre
CRPP	Climate Resilient Perspective Plan
DPAP	Drought Prone Area Programme
DPMU	District Project Management Unit
DSAO	District Superintending Agriculture Officer
ESC	Environment and Social Cell
SMF	Social Management Framework
FAO	Food and Agriculture Organisation
FFS	Farmer's Field School
FLD	Field Level Demonstration
FPC	Farmer Producer Company
FPO	Farmer Producer Organisation
FRA	Forest Rights Act
GCA	Gross Cropped Area
GER	Gross Enrolment Ratio
GHG	Greenhouse Gas
GM	Genetically Modified
GM	Government of Maharashtra
GP	Gram Panchayat
GPI	Gender Parity Index
HDI	Human Development Index
ICT	Information Communication and Technology
IHDI	Inequality Adjusted Human Development Index
IMD	India Meteorological Department
IMR	Infant Mortality Rate
INM	Integrated Nutrition Management
IPM	Integrated Pest Management
IPNM	Integrated Plant Nutrient Management
ITDP	Integrated Tribal Development Project
IWMP	Integrated Watershed Management Program
JSA	Jalayukt Shivar Abhiyan
KVK	Krishi Vigyan Kendra
LGP	Length of Growing Period
LP	Linear Programming
MADA	Modified Area Development Agency
MCIC / CIC	Maharashtra Climate Innovation Centre
MCM	Million Cubic Meter
MF	Marginal Farmer
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MI	Micro Irrigation
MSAMB	Maharashtra State Agriculture Marketing Board
NIDM	National Institute for Disaster Management
NPK	Nitrogen, Phosphorous and Potash
NSA	Net Sown Area

PCN	Project Concept Note
PCR	Physical Cultural Resource
PDO	Project Development Objective
PESA	Panchayat Extension to Scheduled Area
PMU	Project Management Unit
POCRA	Project on Climate Resilient Agriculture
PRI	Panchayati Raj Institution
RD & PR	Rural Development and Panchayati Raj
RF	Rain Fall
RKVY	Rashtriya Krishi Vikas Yojana
SA	Social Assessment
SAU	State Agriculture University
SC	Scheduled Caste
SDAO	Sub-Divisional District Agriculture Office
SF	Small Farmer
SFAC	Small Farmer Agri-Business Consortium
SMF	Social Management Framework
SRR	Seed Replacement Rate
ST	Scheduled Tribe
TAO	Taluka Agriculture Officer
TDET	Technology Development, Extension and Training
TDS	Total Dissolved Solid
TMC	Terminal Market Complex
TMC	Technology Mission on Cotton
TPPF	Tribal People's Planning Framework
TSP	Tribal Sub-Plan
WB	World Bank
WF	Women Farmer
WHS	Water Harvesting Structure
WPR	Workforce Participation Rate
WUA	Water User Association
WUE	Water use Efficiency

SOCIAL AND TRIBAL PEOPLES PLANNING & MANAGEMENT FRAMEWORK
Executive Summary

Project Background:

The Government of Maharashtra has approved a project on Climate Resilient Agriculture (PoCRA) to address the drought related vulnerability in the agriculture sector with the support of World Bank. Essentially, it is proposed to enhance the resilience of the farmers practicing rainfed farming from vagaries of climate change and thus ensure stable and secured livelihood, especially, to the poor and vulnerable farming communities in the state.

The Project Development Objective (PDO) is "to enhance climate-resilience and profitability of smallholder farming systems in selected districts of Maharashtra". The project will be implemented in 4210 drought prone villages and 932 salinity affected villages in Purna river basin spread across 15 districts of the State. The project has main three components

(A) Promoting Climate Resilient Agriculture Systems- Sub components are A.1: Participatory development of mini watershed plans A.2: On-farm climate-resilient technologies and farming systems and A.3: Climate-resilient development of catchment areas.

(B) Climate Smart Post-Harvest Management and Value Chain Promotion- Sub components are B.1: Promoting Farmer Producer Companies B.2: Strengthening emerging value-chains for climate-resilient commodities and B.3: Improving the performance of the supply chain for climate-resilient seeds.

(3) Institutional Development, Knowledge and Policies for a Climate-resilient Agriculture - Sub components are C.1: Sustainability and institutional capacity development C.2: Maharashtra Climate Innovation Center and C.3: Knowledge and policies

Objectives of the SMF and TPPF:

The overall objective of social assessment study is "to better understand and address social development issues, and ensure accomplishing the outcomes – inclusion, cohesion, equity, security, decentralization and accountability

The objectives of the TPPF are to ensure that (1) The tribal people are adequately consulted and take part in the process of preparation, implementation and monitoring of project activities (2) Project benefits are equally accessible and they are provided with special assistance as per prevailing laws and policies because of their culture identities and to minimize further social and economic imbalances within communities (4) Institutional arrangements specially disclosure mechanisms and grievances redressal mechanism and (5) Monitoring and reporting arrangements.

Approach and Methodology:

The social assessment was conducted in a consultative and participatory manner. Consultations were conducted with the representatives of all the stakeholders i.e. small, marginal and women farmers, schedule caste and tribal, divyaangs and subject experts. Their views and concerns have been incorporated in this document. The methodology also consisted of primary and secondary data collection and analysis to illustrate the existing social status, preparing respective management plans including screening mechanism for the proposed interventions and preparing plan for capacity building of stakeholders. Primary data collection consisted of field visit to existing interventions of the Government of Maharashtra that have close resemblance with the climate resilient interventions.

Components of the SMF: Social Management Framework consisted of project overview, development objectives; approach and methodology adopted in the assessment process and key stakeholders consulted; Relevant national and state acts and policies, institutional framework and regulations; state demography, land holding pattern, occupation, income, gender aspects and tribal components; key stakeholders consulted and their concerns and expectations; plan to mitigate the expected adverse impact of the project on social aspects, if any; Gender Action Plan; Tribal peoples planning and management framework; and overall implementing plan for SMF and TPPF along with required institutional arrangement and capacity building.

Legal and Regulatory Framework: The key Policies, Laws and Regulations of Central and State Government, that are applicable to the project are like (1) Panchayati Raj Act (2) Panchayats (Extension to the Scheduled Areas) Act, 1996 (3) Forest Rights Act, 2006 (4) Constitutional Definition of Scheduled Caste and Scheduled Tribes (5) Fifth Schedule [Article 244(1)] (6) Constitutional Safeguard for Scheduled Caste and Scheduled Tribes (7) Tribal Development and Tribal Sub-Plan (TSP) Approach (8) National Policy for Women National Policy for Farmers 2007 (9) Agrarian crisis and policies of the GoM

World Bank Safeguard Policies: The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. Safeguard policies also provide a platform for the participation of stakeholders in project design and have been an important instrument for building a sense of ownership among local populations. The World Bank safeguards policy applicable for SMF is OP/ OB 4.10 of Indigenous Peoples and its objective is "to design and implement projects in a way that fosters full respect for indigenous peoples' dignity, human rights, and cultural uniqueness and so that they (1) receive culturally compatible social and economic benefits, and (2) do not suffer adverse effects during the development process".

Social Issues: The key areas having social implications under the project are – (1) Reduction in growth rate of agriculture and 50% people are dependent on allied activities for livelihood (2) Reduction in average land holding size in different holding categories (3) Declining agricultural performance has been one of the major contributors for increasing agrarian distress (4) Marathwada and Vidarbha region have comparatively low HDI and per capita income (5) Low female literacy rate in comparison to their male counterpart in all the social categories.

Based on the analysis, it becomes important to consider three critical aspects in the context of the project and for the social management framework, i.e., (1) Improvement in low cost input agriculture and promotion of alternate livelihood (2) gender development and (3) Inclusion of marginalized section, more particularly the SC/tribal communities.

Social Management Framework: The Social Management Framework (SMF) is prepared taking into account the key concerns of different stakeholders and their suggestions on different project components. While designing the framework, the project has taken a holistic view to deal with the concerns and ensure the outcomes of the project is realized in order to benefit the small holders and marginalized sections of the project locations.

Project's Design Elements to Approach the Issues: The key issue considered while designing the project is decentralized approach, involvement of local Gram Panchayat and constitution of Village Climate Resilient Agricultural Management Committee (VCRMC) to ensure active participation and ownership by the community at the planning, implementation, and monitoring level; principles of inclusion and equity; transparency and accountability norms in all the stages and levels of operation; preparation of mini

watershed level plans/ cluster planning; sustainability of project inputs; capacity building; Scheduled Area and Tribal Development Gender Concerns; in Scheduled Areas, provisions of PESA Act will also be adhered so that tribals participate actively in the planning, implementation and decision-making process.

Gender Action Plan (GAP): During the social assessment, consultations were organized with different stakeholders to understand the gender issues and possible measures that can help women in ensuring their participation in the overall process. Major gender issues that have significance for the Project are (1) Active participation in community institutions is limited to a few women (2) Occupational health hazards due to prolonged duration of engagement during farm activities / post-harvest activities (3) Drudgery of women in agricultural activities due to less usable agricultural equipment (4) Low awareness on agricultural technologies (5) Poor access to extension services and institutional facilities (6) Inadequate role of women in farm related decision-making process (7) Women perform most of un-mechanized agricultural and multiple tasks, which add more burden to them (8) Women earn less wage for the same duration of work etc.

Project Strategies for GAP: The project will take feasible and implementable actions that will support greater participation of women. The project will focus on women specific issues across different project components that would help women for a better participation and decision making along with benefitting from the project interventions. The project approach, therefore, would be more inclusive in nature. The project will use the operational definition of women farmers in its intervention plan by which they will not be left out. In all the project activities, across the components, such strategies will be taken that help the women to participate and access project benefits.

Tribal Community Assessment:

The objective of social assessment of tribal community is to understand the expected impact of the project on the tribes and to design the execution strategy as per the safeguard policies, ensuring appropriate inclusion of tribes. It is assessed that many of the historical tribal development barriers are gradually diminishing due to various measures taken by the Central and State Governments. The Key tribal concerns are- (1) Land alienation, which was a major contributor to the poor livelihood condition of the tribes is addressed through safeguard policies as per the constitutional norms (2) Allocation of forest land under FRA, 2006 has proved to be beneficial for the tribal families who are engaged in farming (3) The Forest Rights Act has also been helpful to give rights to the tribal community over the forest (4) Restrictions in collection of non-timber forest produces and its trading have been addressed through the implementation of the Act (5) Maharashtra has been one of the progressive States to issue Records of Rights to the forest dwellers, including STs against the demarcated and allocated land (6) The low skill set is a major issue to get employed in different sectors of engagement (7) The decentralized local governance system (as per the prescription of PESA Act) is gradually getting strengthened in terms of adoption of local planning process, direct allocation of funds to PESA GPs and its execution by the GPs as per the approved plan.

The project will have exclusive strategic focus for greater inclusion and representation of tribal in scheduled areas and their active association in project interventions.

Implementation Plan for SMF and TPPF:

The State Project Management Unit of PoCRA will take required measures to ensure proper implementation of the social management and tribal people's planning framework. The project will have a Social Development Expert within the State Project Management Unit (PMU). The expert will supervise all social related aspects and coordinate with different agencies / institutions. The concerned officials / experts at the

PMU and District level will be oriented on different social aspects by which they will be equipped well to manage the social issues effectively and efficiently. The capacity building on social aspects would take into account the current issues that may influence the project activities, measures that are required to be taken to ensure greater involvement of socially and economically backward families and deprived sections of the society

Grievance Redressal Mechanism:

During implementation of the project, certain grievances may arise which require time bound redressal. The project will have grievance redressal mechanism in place to take care of grievances of the people in general and tribal in particular, if any such cases arises. The grievance redressal framework will be placed at appropriate levels i.e. at village, cluster, SDAO, SAO to PMU level and it will be inbuilt in project implementation structure. The project will introduce a toll-free number for suggestions/ grievances for timely redressal of grievances. The project will extensively use IT platform for receiving, processing and addressing the grievances. From VCRMC to Cluster Committees, at every stage the grievances received, number of grievances addressed, time consumed for decision making and decision of the VCRMC and Cluster committee related to the raised grievance would be documented. In case of IT based grievance redressal mechanism or use of toll free number, such aspects will be electronically recorded for future review.

Section I: Project Introduction

1.1 Background of the Project

The Government of Maharashtra has approved a project on Climate Resilient Agriculture (PoCRA) to address the drought related vulnerability in the agriculture sector with the support of World Bank. Essentially, it is proposed to enhance the resilience of the farmers practicing rainfed farming from vagaries of climate change and thus ensure stable and secured livelihood, especially, to the poor and vulnerable farming communities in the state.

1.2 Project Development Objective (PDO)

The Project Development Objective (PDO) is "to enhance climate-resilience and profitability of smallholder farming systems in selected districts of Maharashtra".

The project entails ensuring "climate smart villages" with climate resilient agriculture technologies duly integrated with community led soil and water management practices in the drought prone areas of Vidarbha and Marathwada regions. The two regions put together has about 18768 (Marathwada-10,041; Vidarbha- 8,727 of which 932 villages are salinity affected) villages perpetually affected by drought. PoCRA plans to cover 4210 villages (3,088 in Marathwada and 1,122 in Vidarbha). Apart from these, 932 villages from Vidarbha have been included to deal with saline-sodic track of Purna river basin. Thus, the total number of villages proposed to be covered under the project aggregates to 5,142.

Table 1: Project Particulars

Project Title	Project on Climate Resilient Agriculture (PoCRA)
Proponent	Dept. of Agriculture, Govt. of Maharashtra
Project Development Objective	To enhance climate-resilience and profitability of smallholder farming systems in selected districts of Maharashtra.
Financial Support	Govt. of Maharashtra and The World Bank
Number of Project Districts	15 Districts
No. of Agro-Climatic Zones	Three Agro-Climatic Zones
No. of Clusters	667Clusters
Number of Villages	5142 Villages
Life Span of the Project	6 Years

1.3 Project Area

The project is in the State of Maharashtra in India. Maharashtra is the second largest state in the country in terms of population[1] and has geographical area about 3.08 lakh sq. km. The state is highly urbanized[2] and having a population density of about 365 persons per sq. km. The state occupies the western and central part of the country and has a long coastline along the Arabian sea of about 720 km.

There are about 18768 villages which require climate resilience interventions. Of this, 6377 are being covered by another project "Jalayukt Shivar Abhiyan" (JSA). Of the remaining 12,391 villages, the project will cover about 5142 villages, i.e., 3088 villages from 8 districts in Marathwada (viz. Aurangabad, Nanded, Latur, Parbhani, Jalna, Beed, Hingoli, Osmanabad), 2054 villages in 6 districts of Vidarbha (viz. Akola, Amravati, Buldhana, Yavatmal, Washim, Wardha,)

[1] As per population census, 2011 the population of the State is 11.24 crore which is 9.3 per cent of the total population of India

[2] About 45.2 per cent people residing in urban areas

and Jalgaon district of Nashik Division. It will also cover 932 salinity affected erosion prone villages in 3 districts in Amravati division of Vidarbha (viz. Akola, Amravati and Buldhana) and one district from Nashik division (Jalgaon).

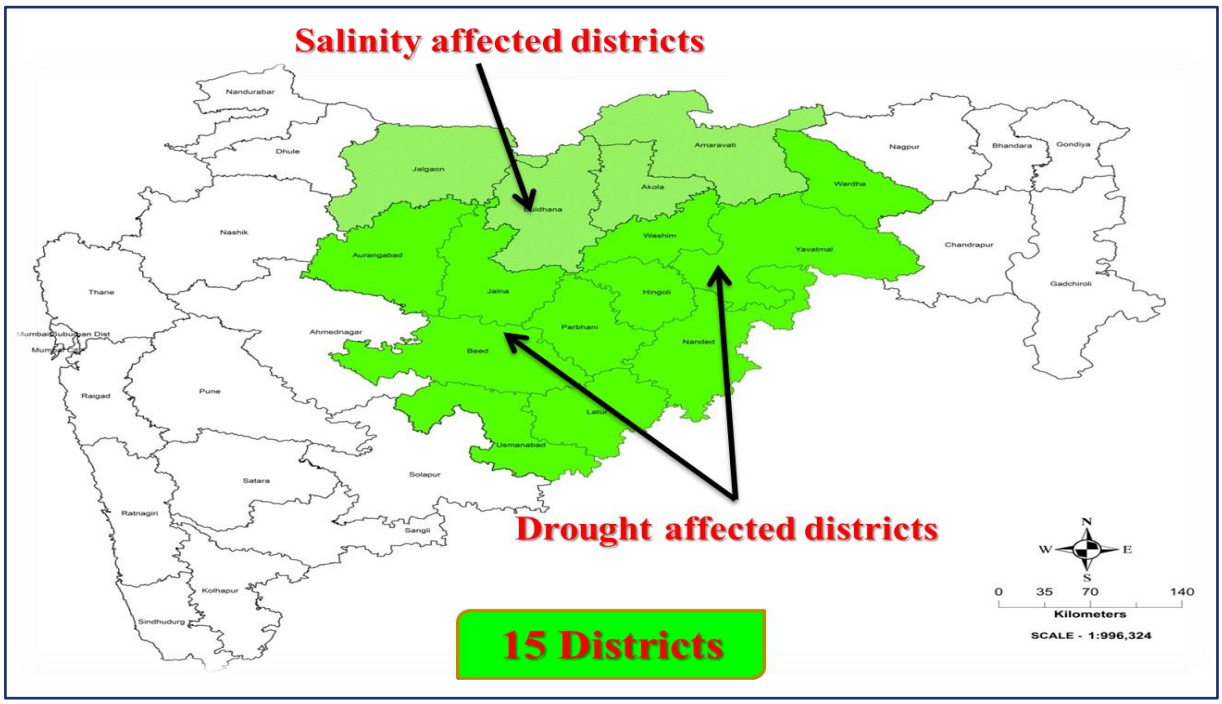

Figure 1: Project Area Map, Maharashtra

1.4 PROJECT COMPONENTS / SUB-COMPONENTS

The project has mainly four components namely (A) Promoting Climate Resilient Agriculture Systems (B) Climate Smart Post-Harvest Management and Value Chain Promotion and (C) Institutional Development, Knowledge and Policies for a Climate-resilient Agriculture (D) Project Management

Under component A, there are three sub component i.e. A.1: Participatory development of mini watershed plans A.2: On-farm climate-resilient technologies and farming systems and A.3: Climate-resilient development of catchment areas. Under Component B, there are three sub components i.e. B.1: Promoting Farmer Producer Companies B.2: Strengthening emerging value-chains for climate-resilient commodities and B.3: Improving the performance of the supply chain for climate-resilient seeds. Component C, consist of three sub component i.e. C.1: Sustainability and institutional capacity development C.2: Maharashtra Climate Innovation Center and C.3: Knowledge and policies

The project envisages increasing access to water, improving farm productivity by adopting climate resilient agricultural practices, soil management and adoption of water conservation technologies, and providing agro-meteorological services to farmers. In order to improve the market share of the agriculture produce at the producer's end, the project intends to promote / strengthen supply chain and value chain of select agricultural / horticultural commodities, using Farmer Producer Organizations (FPOs) / Farmer Producer Companies. Project intends to establish Maharashtra Climate Innovation Centre (MCIC) for knowledge sharing and learning for climate resilient technologies and practices in different segments, including agriculture and allied sectors.

1.4.1 Component A: Promoting Climate Resilient Agriculture Systems

Under component Aproject will promote and support in building climate-resilience in agricultural production systems. As the project envisages to take up area treatment approach as it is in watershed development, various soil and water conservation measures will be initiated under this component. A detail cluster level planning (mini watershed of 5000 Ha.) will be done before taking up structural and other measures. This component will also support farmers in adapting climate resilient agricultural farming systems, based on the agro-climatic condition and technological feasibility. At the design stage, after consultation with different institutions and implementing entities, it is visualized that this component will enhance resilience of small and marginal farmers to drought and other climate variabilities.

The Project Concept Note (PCN) highlights that this component will enhance resilience in smallholder agriculture through technology transfer and watershed treatment by: (i) promoting the adoption of Good Agricultural Practices aimed at improving farm productivity through measures to enhance soil health and water-use efficiency; and (ii) improving water resources management to achieve a relative increase in the use of "green water" for agriculture over "blue water". The component seeks to achieve a knowledge-based behavioral change in small and marginal farmers through the diffusion and adoption of a range of climate-smart agricultural technologies that further enhance crop productivity and contribute to increasing the carbon sink capacity of arable land in the project area.

This component (Component A) is having three Sub-Components and each Sub-Component takes care of one of the planned aspects under the component.

1.4.1.1 Sub-Component A1: Participatory Development of Mini Watershed Plans

This sub-component will be implemented in the preparatory phase of the project. The plans will be prepared at the village level and will be aggregated at the mini watershed level. About 500 mini watershed plans will be prepared covering all the identified project locations. Local area planning will be done after the assessment of the current situation and mapping of the prospects. The participatory way of preparing the plan will help in identifying the actual needs of the community, designing the interventions appropriately to suit the local needs, bringing ownership of the community and assure their active participation during the execution and over and above sustaining the process beyond the life of the project.

1.4.1.2 Sub-Component A2: On-farm climate-resilient technologies and farming systems

This sub-component is basically intended to popularize climate smart agricultural practices among the farming community, focusing on small and marginal farmers, including women farmers. Mobilisation of farmers, organizing Farmer's Field School (FFS) for demonstration of climate smart practices, etc. will be taken up under this sub-component. This component will help to avail various technological options that are available with different national and state level institutions to help farmers in adapting climate resilient agricultural practices.

1.4.1.3 Sub-Component A3: Climate-resilient development of catchment areas

In a rain-fed farming system, productive use of water is vital for agriculture and this component will promote such practices among the farming community. The activities under this sub-component will promote on-farm water security by maximizing the use of surface water for agriculture, managing groundwater resources in a sustainable manner, and enhancing water-use efficiency and water productivity. Under this sub-component, project will promote Micro Irrigation (MI) system to improve water use efficiency, renovation of existing water bodies (as per the plan), in-situ conservation and management of rainwater (water harvesting), run-off management etc.

With the planned measures, it is expected that water productivity will improve in the project area along with bringing additional area into the fold of protective irrigation and minimizing the impact of dry spell on standing crops.

1.4.2 Component B: Climate Smart Post-Harvest Management and Value Chain Promotion

The Component B, i.e., "Climate Smart Post-Harvest Management and Value Chain Promotion" looks at strengthening the forward and backward linkage of farm produces through proven measures. The objective of this component is to build climate resilience beyond farm gate and provide end-to-end solutions focusing on agricultural value chains that are key to the farmers' livelihood (food security), have clear market opportunities (income security), and have the potential to create livelihood opportunities in rural areas. The component will also help build resilience by promoting climate adaptation and mitigation practices and technologies in post-harvest management and value-addition for selected commodity groups. In line with GoM priorities, this component will build on existing and new Farmer Producer Companies (FPCs) as a major driver of change in the selected value chains. Other activities under this component relate to value-chain development for selected commodity groups. Successful implementation of the activities in this component will help achieve the PDO by: (i) contributing to an increase in farmers' participation in selected value chains through the support to FPCs and the strengthening of FPC linkages with other actors in the value chains and (ii) promoting practices and technologies in post-harvest management and value-addition that support climate adaptation and/or mitigation.

This component (Component B) is having three subcomponents to achieve the overall objective of the component and the project.

1.4.2.1 Sub-Component B.1: Promoting Farmer Producer Companies

This sub-component will help in two ways, i.e., promoting new Farmer Producer Companies (FPCs) in the project locations where no FPC is currently functioning. Secondly, Custom Hiring Centers (CHCs) shall be established at cluster level to promote appropriate farm mechanization for coping up with climate variability in the project area. The existing FPCs will be assessed and measures will be taken to improve their capacity by which they can be associated with the project for product specific value chain development. This sub-component will also help in strengthening the capacity of the FPCs to deliver climate-related technical advisory services to their farmers, provide training on climate adaptation and mitigation practices at farm level and in post-harvest management, and raise farmer and consumer awareness on the climate agenda. The sub-component will also support viable mechanisms to further consolidate and set up new business linkages for FPCs with the private sector and financial institutions.

1.4.2.2 Sub-Component B.2: Strengthening Emerging Value Chains for Climate Resilient Commodities

This subcomponent will support scaling up of value-chain initiatives already emerging in the project area and driven by crop diversification towards higher-value commodities, e.g. vegetables and fruits. The component will also consider financing, where there is a proven business case driven by FPCs, investments that support product aggregation, handling, transformation and marketing (e.g. collection centers, grading and packaging units, cold storage facilities, ICT-based market information systems). Priority will be given to investments that promote the use of green technologies (including solar energy). Value-chain financing and specifically access to finance and financial services for value chain actors will be explored under this component.

1.4.2.3 Sub-Component B.3: Improving Performance of the Supply Chain for climate resilient seeds

Adoption of climate resilient seed varieties is an important aspect of climate smart agriculture. Adequate supply of seeds with short duration, drought proofing, salinity resistant or heat-tolerant features, is an essentiality to promote climate resilience in the agriculture sector. This sub-component will focus on enhancing the performance of the supply chain of climate-resilient seeds, promoted by agriculture universities / other technical institutions. This sub-component will help in availing support of key players involved in seed multiplication and supply of seeds through the existing innovative routes. The sub-component will further support the scaling up of emerging initiatives with increased participation of FPCs in the seed supply chain, e.g. for the multiplication of foundation seeds to certified seeds.

1.4.3 Component C: Institutional Development, Knowledge and Policies for Climate-resilient Agriculture

The objective of this component is to strengthen the capacity of key institutions and enhance the skills of stakeholders associated with the project at different levels. The component will help to improve the quality and efficiency in the delivery of technical and advisory services required to enhance climate resilience in the agriculture and food system.

The component will support agricultural extension and weather advisory services in the project area. For weather-advisory services, project activities will include: (i) Updation of Strategic Research and Extension Plan (SREP) aligned to mini-watershed (ii) upgrading existing and set up new community-based agro-met stations, (iii) strengthening the local capacity to operate and maintain those weather stations, (iv) collecting, processing and managing agro-meteorological data and data systems, and (v) enhancing local capacity for community-level pest and disease surveillance. To that effect, the project will work closely with the India Department of Meteorology (IMD) and explore collaboration with private service providers.

The component will also support an agricultural action research agenda geared at developing and field-testing agricultural technologies and practices for climate-adaption of dryland farming systems in the project area. The project will develop strategic partnerships with the State Agricultural Universities (SAU) / other institutions for developing / propagating climate-adaptive drought-tolerant, short-duration crop varieties. The component would support the expansion of such seed programs and its scaling up. It is also envisioned that under this component, a Climate Innovation Center (CIC) will be established. The CIC would support local private sector capacity with focus on entrepreneurs and SMEs to commercialize and deploy emerging technologies and business models in sectors like climate-smart agriculture, water, energy etc. For knowledge and scaling up of good practices, different action research / scientific studies will be commissioned under this component.

1.4.4 Component D: Project Management

The Project Management Unit (PMU) will be constituted at the state level under the Department of Agriculture. The PMU, headed by the Project Director, will ensure smooth implementation of project activities and coordinate with various stakeholders / agencies associated with the project. District level project structures will also be established under this component for the execution of the project activities.

Project Preparation

As a part of the project preparation, Government of Maharashtra conducted several scoping studies and assessments, which include the Social Assessment (SA) study. Broad elements of the study include beneficiary assessment, stakeholder analysis, social impacts, institutional assessments and risks analysis.

1.5 SOCIAL ASSESSMENT

The project preparation recognized that the beneficiary profile is not homogeneous, rather, quite diverse comprising a number of sub-groups identifiable on the basis of their differential endowment, gender, ethnicity, different economic groups and other regional features. The challenge therefore lies in addressing the requirements of all social groups, with special attention towards the poor and socially excluded groups. Maharashtra is an ethnically diverse state with different (indigenous) languages, traditions and cultural practices; its diversity makes it challenging to develop a service delivery system which can respond flexibly to different needs. Also, there are multiple stakeholders to the project, who would have varying degrees of influence and impact on project activities and outcomes. This made it necessary for the project to provide a framework for participation of all key stakeholder groups and solicit their contributions towards project design and delivery mechanisms. The social assessment helped in identifying key social development issues and to assess impacts of the project. This led to drawing necessary measures that the project is expected to take up to ensure inclusion of the deprived segments, more particularly the tribals; addressing equity in accessing project benefits, strengthening decentralized governance system as per the constitutional norm and ensuring gender based integration in project execution process.

The initial scoping and preliminary assessments made during the project preparation established that the profile of project beneficiaries are diverse, comprising of a number of social and ethnic sub-groups and other regional features. There are substantial tribal people (indigenous peoples) in the project area; and they do have a collective attachment to the project interventions and outcomes, especially in the scheduled/ tribal areas. There are 10.51 million tribal people in Maharashtra, which accounts for 9.35% of the total population. Tribals are living throughout the state; but more predominantly in certain districts such as Nandurbar (69.30 percent), Gadchiroli (38.68 percent), Dhule (31.55 percent) Nashik (25.61 percent), Yavatmal (18.54 percent), Chandrapur (17.65 percent), Gondia (16.18 percent), Jalgaon (14.28 percent), Thane (13.95 percent), Amaravati (13.98 percent) and Wardha (11.53 percent)[3]. In fact, Maharashtra has a significant geographical area covered under the Fifth Schedule wherein tribal areas are delineated and provided with a separate set of constitutional guarantees. Further, it has also been ascertained that the tribal people do have a collective attachment to their traditional customs and habitat; and because of this, issues related to them require special measures to ensure that tribal peoples are included in and benefit from project as appropriate. It is in this backdrop, social assessment was conducted to understand and address social development issues, and ensure accomplishing the outcomes in terms of inclusion, cohesion, equity, security and accountability. The study has helped in the following:

- Mapping of project stakeholders and conducting detailed stakeholder consultations;
- Assessing the social impacts of the proposed project interventions;
- Review and suggest, as appropriate, the legal, policy and institutional aspects to enable accomplish the social development objectives; and
- Develop measures to enhance positive impacts and mitigate negative impacts, if any.

Broad elements of the study included beneficiary assessment, stakeholder analysis, social impacts, institutional assessments and risks analysis. The assessment was carried out in consistent with GOI, GOM and the World Bank safeguard requirements, policies, regulations and guidelines.

[3] Tribal population percentage is as per census 2001; Figures in the parenthesis highlights tribal population percentage to total population of the district. Of these districts, Amaravati, Jalgaon, Wardha and Yavatmal are project districts.

1.5.1 Objectives

The overall objective of social assessment study is "to better understand and address social development issues, and ensure accomplishing the outcomes – inclusion, cohesion, equity, security, decentralization and accountability

1.5.2 Aspects of Social Assessment

1.5.2.1 Beneficiary Assessment

Assessment of the potential beneficiaries, based on the available secondary data, comprising socio-economic profile of the project state and district, was undertaken in the assessment process, including tribal communities. The assessment covered current status of development in different aspects, local institutional and governance mechanisms and the local operational arrangements.

1.5.2.2 Stakeholder Analysis

Identifying stakeholders at different intervention levels, mapping their key expectations, expected impacts, issues and concerns as related to each stakeholder and the subgroups thereof.

1.5.2.3 Impact Assessment

Identifying positive and negative social impacts likely to occur for different sub-groups or beneficiaries as a result of project interventions; assessing and prioritize impacts based on their significance; and likelihood of measures (within the scope of the project) to minimize negative impacts and derive the maximum from positive impacts.

1.5.2.4 Institutional Analysis

Documenting the existing institutional and implementation arrangements, covering key actors, such as government departments, sector institutions, political bodies etc.

1.5.2.5 Risk Assessment and Analysis

The assessment and its analysis, from within and external to the project and specific measures required to address them. Identifying key issues to be addressed by the project and preparing a Social Management Framework to address the same which includes; implementation arrangements, capacity building, awareness and application of IEC etc. The assessment also adhered to the Bank's Operational Policy on Indigenous Peoples i.e. OP 4.10.

1.5.2.6 Develop Monitoring and Evaluation Framework

Preparing a Monitoring and Evaluation System from social perspectives, based on the planned activities under the scope of the project. Preparation of the M&E evaluation Suggesting a

1.5.2.7 Capacity Building Framework

Given that the objective is to mainstream environmental and social safeguards in planning and implementation, a robust capacity building plan for various levels of stakeholders should be prepared.

1.5.2.8 Implementation Arrangements

Establish a clear understanding of the institutional requirements, roles and responsibilities for adopting and implementing the SMF. Importantly, this should include a thorough review of the authority and capability of institutions at different levels (e.g. block, district and state) and their capacity to manage and monitor SMF implementation.

1.5.2.9 Budget for SMF

Estimating a realistic budget to be allocated for timely implementation of the SMF in the project; including human resource requirements, building and enhancing the capacity of the institutions responsible for implementing the SMF and cost of ensuring safeguard policies and mitigation measures.

1.6 Associated Preparation Activities

In addition to SA, other efforts undertaken have resulted in different project related documents, like Project Implementation Plan, Environmental Assessment (EA) Environmental Management Framework (EMF), Financial Manual, Procurement Manual, vulnerability assessments and baseline information.

1.7 Approach and Methodology for SA

1.7.1 Approach of the Assessment

The social assessment was conducted in a consultative and participatory manner. Consultations were conducted with all the stakeholders and maximum possible subject experts. Similarly, during the field visits, primary stakeholders i.e. small and marginal farmers (men and women) were consulted. Their views and concerns have been incorporated in this document.

1.7.2 Assessment Methodology

The methodology consisted of participatory consultations, secondary data collection and analysis to illustrate the existing social status, preparing respective management plans including screening mechanism for the proposed interventions, defining monitoring indicators, preparing plan for capacity building of stakeholders and the budget of the entire SMF. Secondary data sources mainly consisted of reports, statistics including census information and online publications of the Government of India and the Government of Maharashtra.

Primary data collection consisted of field visit to existing interventions of the Government of Maharashtra that have close resemblance with the climate resilient interventions. Similarly, interaction with the small and marginal farmers (men and women) in sample villages in the project area was done to understand the situation. Finally, the stakeholder consultations were conducted in the project area in the selected villages to document concerns of the primary stakeholders, with reference to the project.

1.7.3 Field Visit and Stakeholder Consultations

To understand the expected project risks and people's perception on the project, field visits were conducted in three agroclimatic zones of Maharashtra wherein the project area lies. The field visit also covered schedule V area, an area with concentration of tribal population, in one of the project districts to understand the concerns of tribal community. The visit to the Schedule V area substantially helped in developing the tribal safeguard framework for the project.

The field visit and stakeholder consultations were conducted in four districts out of 15 project districts. These districts were, namely Amravati, Akola, Jalna and Latur. A taluka (block) was visited in each of these districts. The selection of the districts for field visit and stakeholder's consultation was based on the vulnerability index as calculated in Maharashtra State Adaptation Action Plan on Climate Change (MSAAPCC), 2014. Similarly, the Human Development Index (2012) of all project districts was considered for the selection of districts. In addition to the community level consultations, different service providing agencies like MAHABEEJ (Maharashtra State Seeds Corporation Ltd.), officials of ATMA, private input suppliers, KVK officials etc. were consulted. Coverage of the districts for field assessment are presented in Table No. 3.

Table 2: Selected Districts and Talukas for Consultation Meetings

S.No.	District	Taluka
1.	Amravati	Dharni
2.	Akola	Telhara
3.	Jalna	Ghansavangi
4.	Latur	Latur

In each district, one Taluka was selected purposefully, like the tribal Taluka (Dharni) in Amravati and the saline-sodic track in Telhera Tehsil of Akola. Field level demonstrations and initiatives by different institutions and organisations were also covered in the process, along with agricultural universities, government departments, input suppliers, market committees of APMCs etc. (Table No. 4).

Table 3: Stakeholders Covered During Consultations

S. No.	District	Amaravati	Akola	Jalna	Latur
	Taluka	Dharni	Telhara	Ghansavangi	Latur
	Stakeholders				
1.	APMC	√	√	√	√
2.	ATMA	√	√	√	√
3.	DSAO	√	√	√	√
4.	Farmer (of all Holdings)	√	√	√	√
5.	FPO / FPC		√	√	√
6.	PRI	√	√	√	
7.	SDAO	√	√	√	√
8.	Seed Grower			√	
9.	TAO	√	√	√	√
10.	Tribal Communities	√			
11.	Women Farmer	√		√	√
12.	Input Supplier	√	√	√	√
13	KVK				√
14	State Ag. University		√		

Consultation with stakeholders was taken up in two phases. In Phase-I, consultations were taken up prior to the preparation of SMF with the objective of assessing the possible adverse impact of the project on corresponding areas and to understand the opinion of different stakeholders on different project components. Phase II consultations were organized after the preparation of SMF to share the project strategies and actions to mitigate the identified adverse impacts and seeking opinion of the stakeholders on its adequacy and any modifications that are required in the designed framework. A stakeholder consultation workshop was organized to share the SMF and receive feedback from different concerns. The workshops were organized in three agro-climatic zones and key suggestions of the stakeholders were recorded and applicable suggestions were incorporated in the overall framework. Apart from government departmental officials, local community groups, local service providing entities, non-government agencies were also participated in the process. The SMF was finalized incorporating suggestions of different stakeholders rendered in the consultation processes.

1.7.4 Data Collection and Analysis

Required data were collected from both primary and secondary sources. The secondary sources covered Government publications / reports, different studies / researches conducted by scholars on different project components in different countries and information from district level offices of the Government on their schematic activities and initiatives. Available secondary data, collected from

different sources were analysed to understand the current situation and overall trend. As discussed earlier, primary information was collected from a range of stakeholders from state, district and community level. A detailed discussion was done on different project components with the community to understand their views on the possible adverse impact of the project suggested measures on the local social and environmental conditions. Analysis of secondary data and findings of consultations with various stakeholders are presented in this document.

A number of consultation workshops were organized in different locations of the state to assess the possible adverse impact of the project. The team also consulted with different agricultural scientists, agricultural universities and officials of agriculture department to assess the expected adverse impact of the project.

1.8 REPORT PRESENTATION FRAMEWORK

The findings of the assessment and the management framework is presented in different sections in this report, in the following manner.

Section I: **Introduction and Project Overview**:
Section one introduces the project and gives an overview on project objectives and activities. This section describes the approach and methodology adopted in the assessment process and key stakeholders consulted during the process.

Section 2: Policy, Acts, Regulations and Safeguards:
Relevant national and state acts and policies, institutional framework and regulations that may apply during the implementation of the project are discussed in this section.

Section 3: **Beneficiary assessment**
The demographic situation of the State, land holding pattern, occupation, income, gender aspects and tribal components are discussed in this section to understand the social status of the project state.

Section 4: **Stakeholder Analysis**
This section presents key stakeholders consulted and their concerns and expectations from the project in different aspects. This section basically presents people's perception and opinion.

Section 5: Opportunities and Challenges

Section 6: Institutional assessment

Section 7: **Social Management Framework**:
Plan to mitigate the expected adverse impact of the project on social aspects, if any, is presented here which are based on the consultation with different stakeholders and analysis of available secondary data. In addition this chapter will cover Institutional and implementation arrangement, M&E including grievance redressal mechanism.

The details of the stakeholder consultation is annexed as 'A'

Section II: Policies, Acts, Regulations and Safeguards

2.1 INTRODUCTION

In this section, some of the policies and legislations of the Government of India and the Government of Maharashtra are briefly discussed, that will have bearing on the Project. This is followed by a brief description of the project relevant development programmes and schemes being implemented by the Government of India and the Government of Maharashtra. Later, at the end of the section, the World Bank Safeguard Policies are presented.

2.2 PANCHAYATI RAJ ACT

As per the 73rd constitutional amendment act, 1992, the panchayats as the local self-government are empowered to plan execute and monitor certain activities as per the activity mapping. As per the status of devolution, 11 subjects have been fully devolved in the State of Maharashtra and 18 subjects / schemes are implemented by the PRIs. The act strengthens the decentralized governance system and promotes bottom-up planning. As per the act, the GP level plans are to be prepared in Gram Sabha which is having an important bearing on the planning process of the proposed project. The act is having both mandatory and discretionary provisions and of the mandatory provisions of the Panchayati Raj Act, the most critical are those that strengthen the structure of representative democracy and political representation at the local level. To ensure inclusion, mandatory reservations have been provided for women, scheduled castes and scheduled tribes.

2.3 PANCHAYATS (EXTENSION TO THE SCHEDULED AREAS) ACT, 1996

To mainstream the tribal in the development process, without disturbing or destroying their cultural identity and socio- economic milieu, the Parliament extended the provisions of 73rd Amendment Act to the Scheduled Areas by passing Provisions of Panchayats (Extension to the Scheduled Areas) Act, 1996.

The Panchayat (Extension to the Scheduled Areas) Act, 1996, commonly known as PESA, legally recognizes Scheduled Tribe's own systems of self-governance. The Gram Sabha of the village becomes the focal institution, endowed with significant powers. Under section 4(d) of PESA: "every Gram Sabha shall be competent to safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolution." PESA legally recognizes the right of tribal communities to govern themselves through their own systems of self-government and also acknowledges their traditional rights over natural resources. The salient feature of the Panchayats (Extension to the Scheduled Areas) Act include the following:

1. Legislation on Panchayats shall be in conformity with the customary law, social and religious practices and traditional management practices of community resources;
2. Habitation or a group of habitations or a hamlet or a group of hamlets comprising a community and managing its affairs in accordance with traditions and customs; and shall have a separate Gram Sabha.
3. Every Gram Sabha to safeguard and preserve the traditions and customs of people, their cultural identity, community resources and the customary mode of dispute resolution.
4. The Gram Sabhas have roles and responsibilities in approving all development works in the village, identify beneficiaries, issue certificates of utilization of funds; powers to control institutions and functionaries in all social sectors and local plans.
5. Gram Sabhas or Gram Panchayats at appropriate level shall also have powers to manage minor water bodies; power of mandatory consultation in matters of land acquisition; resettlement and rehabilitation and prospecting licenses/mining leases for minor minerals; power to prevent alienation of land and restore alienated land; regulate and restrict sale/consumption of liquor; manage village markets, control money lending to STs; and ownership of minor forest produce.

6. The provisions of Panchayats with certain modification and exceptions have been extended to the Schedule V areas.

Figure 2: Scheduled Areas (PESA) in Maharashtra
Source: http://rajbhavan-maharashtra.gov.in/rajbhavan/Pages/frm_departments.aspx?pid=6

In line with the PESA Act, the Government of Maharashtra has formulated rules for the Panchayats (Extension to Scheduled Areas) Act, 1996

2.4 LARR ACT, 2013

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (also Land Acquisition Act, 2013) is an Act of Indian Parliament that regulates land acquisition and lays down the procedure and rules for granting compensation, rehabilitation and resettlement to the affected persons in India. The Act has provisions to provide fair compensation to those whose land is taken away, brings transparency to the process of acquisition of land to set up factories or buildings, infrastructural projects and assures rehabilitation of those affected.

2.5 FOREST RIGHTS ACT, 2006

This Act, "Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act", 2006 grants legal recognition to the rights of traditional forest dwelling communities and makes a beginning towards giving communities and the public a role in forest and wildlife conservation. The Act gives rights to the forest dwellers which secure individual or community tenure or both. The Act gives forest rights of forest dwelling Scheduled Tribes and other traditional forest dwellers on all forest lands, namely:- (a) right to hold and live in the forest land under the individual or common occupation for habitation or for self-cultivation for livelihood by a member or members of a forest dwelling Scheduled Tribe or other traditional forest dwellers; (b) community rights over forest; (c) right of ownership, access to collect, use, and dispose of minor forest produce which has been traditionally collected within or outside village boundaries. The scope of the Act also covers the following rights that are placed on the forest dwelling communities.

1. Community rights of uses or entitlements such as fish and other products of water bodies, grazing (both settled or transhumant) and traditional seasonal resource access of nomadic or pastoralist communities;
2. Community tenures of habitat and habitation for primitive tribal groups and pre- agricultural communities;
3. Rights in or over disputed lands under any nomenclature in any State where claims are disputed;
4. Conversion of leases or grants issued by any local authority or any State Government on forest lands to titles;

5. Settlement and conversion of all forest villages, old habitation unsurveyed villages and other villages in forest, whether recorded, notified, or not, into revenue villages;
6. Protect, regenerate, or conserve or manage any community forest resource, which they have been traditionally protecting and conserving for sustainable use;
7. Rights which are recognised under any State law or laws of any Autonomous District Council or Autonomous Regional Council or which are accepted as rights of tribals under any traditional or customary law of concerned tribes of any State;
8. Access to biodiversity and community right to intellectual property and traditional knowledge related to biodiversity and cultural diversity;
9. Any other traditional right customarily enjoyed by the forest dwelling Scheduled Tribes or other traditional forest dwellers, as the case may be, which are not mentioned in clauses (a) to (k) but excluding the traditional right of hunting or trapping or extracting a part of the body of any species of wild animal;
10. In-situ rehabilitation, including alternative land in cases where the Scheduled Tribes and other traditional forest dwellers have been illegally evicted or displaced from forest land of any description without receiving their legal entitlement or rehabilitation prior to the 13th of December 2005.

The project is not expected to take any such measure that may affect the basic interest of the forest dwellers, contrary to the prescription of the Act. Rather, the implementation of the project will create scope for the forest dwellers, who have been allotted rights over the forest land for agriculture. They may take up climate resilient agricultural practices in their fields to cope with the climate variability for improved livelihoods security. The project suggested measures are supportive to the act and can add value to the current initiatives in terms of improving livelihood and food security of the forest dwellers.

2.6 THE SCS AND THE STS (PREVENTION OF ATROCITIES) ACT, 1989

The act was passed in 1989 to prevent Scheduled Castes and Scheduled Tribes from atrocities. The act suggests Precautionary and Preventive Measures.

As per the provision of the act, the State Government shall set up a Scheduled Castes and the Scheduled Tribes Protection Cell at the State head quarter under the charge of Director General of Police/Inspector General of Police. This Cell shall be responsible for (i) conducting survey of the identified area; (ii) maintaining public order and tranquility in the identified area; (iii) recommending to the State Government for deployment of special police force or establishment of special police post in the identified area; (iv) making investigations about the probable causes leading to an offence under the Act; (v) restoring the feeling of security amongst the members of the Scheduled Castes and the Scheduled Tribes; (vi) informing the nodal officer and special officer about the law and order situation in the identified area; (vii) making enquiries about the investigation and spot inspections conducted by various officers; (viii) making enquiries about the action taken by the Superintendent of Police in the cases where an officer in-charge of the police station has refused to enter an information in a book to be maintained by that police station; (ix) making enquiries about the willful negligence by a public servant;

2.7 TRIBAL DEVELOPMENT AND TRIBAL SUB-PLAN (TSP) APPROACH

The tribal situation varies by states where some areas have high tribal concentration while in other areas, the tribal form only a small portion of the total population. The Constitution of India provides a comprehensive framework for the socio-economic development of Scheduled Tribes and for preventing their exploitation by other groups of society. A detailed and comprehensive review of the tribal problem was taken on the eve of the Fifth Five Year Plan and the Tribal Sub-Plan strategy took note of the fact that an integrated approach to the tribal problems was necessary in terms of

their geographic and demographic concentration. The tribal areas in the country were classified under three broad categories, i.e., (1) category 1: States and Union Territories having a majority Scheduled Tribes population, (2) Category 2: States and Union Territories having substantial tribal population but majority tribal population in particular administrative units, such as block and tehsils, and (3) Category 3: States and Union Territories having dispersed tribal population.

In the light of the above approach, for the second category of States and Union Territories, tribal sub-Plan approach was adopted after delineating areas of tribal concentration. To look after the tribal population coming within the new tribal sub-Plan strategy, in a coordinated manner, Integrated Tribal Development Projects are conceived during Fifth Five Year Plan. During the Sixth Plan, Modified Area Development Approach (MADA) was adopted to cover smaller areas of tribal concentration and during the Seventh Plan, the TSP strategy was extended further to cover even smaller areas of tribal concentration and thus cluster of tribal concentration was identified. At the time of delineation of project areas under the Tribal Sub-Plan strategy, it was observed that the ITDPs/ITDAs are not coterminous. Areas declared under Fifth Schedule of the Constitution. The Scheduled Areas as per the Constitutional orders have been declared in eight States and Maharashtra is one among them. As per the provisions contained in the Fifth Schedule of the Constitution, various enactment in the forms of Acts and Regulations have been promulgated in the states for the welfare of scheduled tribes and their protection from exploitation.

The TSP strategy is having twin objectives, i.e., Socio-economic development of Schedule Tribes and protection of tribal against exploitation, the Govt. of India in Aug., 1976 had decided to make the boundaries of Scheduled Areas coterminous with TSP areas (ITDP/ITDA only) so that the protective measure available to Scheduled Tribes in Sch. Areas could be uniformly applied to TSP areas for effective implementation of the development programmes in these areas. Accordingly, the TSP areas have been made co-terminus with Scheduled Areas in the State.

2.8 NATIONAL POLICY FOR WOMEN

In 2016, Government of India in its Ministry of Women and Child Development formulated a draft women policy. The policy was formulated decade after the formulation of National Policy for the Empowerment of Women (2001). The objectives of the policy look at (1) creating a conducive socio-cultural, economic and political environment for women, (2) mainstreaming gender in all-round development processes / programmes, (3) a holistic and life cycle approach to women's health, (4) improving and incentivizing access of women / girls to universal and quality education, (5) improving participation of women in workforce etc. Different priority areas are identified in the policy that are contextually relevant for women, such as (1) health, food security and nutrition, (2) education, (3) economy (includes agricultural activities; poverty reduction; industry, labour and employment, service sector engagement etc.), (4) governance and decision making, (5) violence against women. In the line of National Policy for Women, the Government of Maharashtra is having a State policy on Women to protect their rights and entitlement.

2.9 NATIONAL POLICY FOR FARMERS 2007

The National Policy for Farmers was formulated in view of the need to focus more on the economic well-being of the farmers, rather than just on production. The policy recognizes the socio-economic well-being of the farmers, besides production and growth. The aim of the Policy is "to stimulate attitudes and actions which should result in assessing agricultural progress in terms of improvement in the income of farm families, not only to meet their consumption requirements but also to enhance their capacity to invest in farm related activities". The major goals of the National Policy for Farmers, among others, are to:

1. Improve economic viability of farming by substantially increasing the net income of farmers and to ensure that agricultural progress is measured by advances made in this income.

2. Protect and improve land, water, biodiversity and genetic resources essential for sustained increase in the productivity, profitability and stability of major farming systems by creating an economic stake in conservation.
3. Develop support services including provision for seeds, irrigation, power, machinery and implements, fertilizers and credit at affordable prices in adequate quantity for farmers.
4. Strengthen the biosecurity of crops, farm animals, fish and forest trees for safeguarding the livelihood and income security of farmer families and the health and trade security of the nation.
5. Provide appropriate price and trade policy mechanisms to enhance farmers' income.
6. Provide for suitable risk management measures for adequate and timely compensation to farmers.
7. Mainstream the human and gender dimension in all farm policies and programmes.
8. Pay explicit attention to sustainable rural livelihoods.
9. Foster community-centered food, water and energy security systems in rural India and to ensure nutrition security at the level of every child, woman and man.
10. Develop and introduce a social security system for farmers.
11. Provide appropriate opportunities in adequate measure for non-farm employment for the farm households.

Overall, the policy looks at improving the socio-economic condition of the farmers through various measures, like, (1) reform in asset, i.e., ensuring that every farmer household in villages possesses and/or has access to productive assets like land, livestock, fishpond, homestead farm and/or income through an enterprise and or market driven skills, so that the household income is increased substantially on a sustainable basis; (2) land reforms, with particular reference to tenancy laws, land leasing, distribution of ceiling surplus land and wasteland, providing adequate access to common property and wasteland resources and the consolidation of holdings; (3) availability of water for irrigation and water use efficiency; (4) livestock development etc.

2.10 AGRICULTURAL PRODUCE MARKET COMMITTEE ACT, 2003

The Agricultural Produce Market Committee Act, 1963 (APMC, 1963) operate on two principles, i.e.,(1) to ensure that farmers are not exploited by intermediaries (or money lenders) who compel farmers to sell their produce at the farm gate for an extremely low price; (2) all food produce should first be brought to a market yard and then sold through auction.

The specific objective of market regulation is to ensure that farmers are offered fair prices in a transparent manner. The APMC Act empowers state governments to notify the commodities, and designate markets and market areas where the regulated trade takes place. The Act also provides for the formation of agricultural produce market committees (APMC) that are responsible for the operation of the markets. The entire State is divided and declared as a market area wherein the markets are managed by the Market Committees constituted by the State Governments. Once an area is declared a market area and falls under the jurisdiction of a Market Committee, no person or agency is allowed freely to carry on wholesale marketing activities.

Maharashtra government has amended the Agricultural Produce Market Committee Act deregulating sale of vegetables and fruits.

Agrarian crisis and policies of the GoM

The rainfed agriculture in Maharashtra is dependent on monsoon. The state has faced drought situation in many parts during the last 4-5 decades. The GoM has taken a series of measures to provide relief to farmers who face the brunt of crop failure. Some of these measures are:

S. No.	Point	Implementing Department
1	Emergency help	Revenue and forest (Relief and Rehabilitation)
2	Loan rescheduling	Co-operation , Marketing and Textile Department
3	Regulation of loan from private money lender	
4	Waive of premium of crop insurance scheme	Agriculture and ADF
5	Financial help to farmers for more production	
6	Community marriage scheme for farmers daughters marriage	Women and Child Development
7	Reimbursement of capital development fund	Co-operation, Marketing and Textile Department
8	Relief to cotton grower farmers	Agriculture and ADF
9	Starting helpline for farmers guidance	Agriculture and ADF
10	Monitoring of declared programme	General Administration Department
11	Food and nutrition security	Food and Civil Supplies Department
12.	Agricultural commodities price stabilization through minimum support price	Marketing Department

2.11 WORLD BANK SAFEGUARD POLICIES

This section is intended to highlight World Bank safeguards in projects. The World Bank's environmental and social safeguard policies are a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for Bank and borrower in the identification, preparation, and implementation of programs and projects. Safeguard policies also provide a platform for the participation of stakeholders in project design and have been an important instrument for building a sense of ownership among local populations. In essence, the safeguards ensure that environmental and social issues are evaluated in decision making, help reduce and manage the risks associated with a project or program, and provide a mechanism for consultation and disclosure of information. The safeguards policies of the World Bank are discussed below (Table No. 5).

Table 5: Social Safeguard Policies of The World Bank

OP/OB	Safeguard	Policy Objectives
4.10	Indigenous Peoples	Design and implement projects in a way that fosters full respect for indigenous peoples' dignity, human rights, and cultural uniqueness and so that they (1) receive culturally compatible social and economic benefits, and (2) do not suffer adverse effects during the development process.

Note: With reference to The World Bank Safeguard Policies

2.12 RELEVANT PROGRAMMES AND SCHEMES OF THE GOVERNMENT

Both Central and State Governments have been implementing a number of schemes / programmes under central, state and district sectors (Central Scheme, Centrally Sponsored Scheme and State Scheme), that are relevant to the project. Some of these schemes and its salient features are discussed below, which are relevant in the context of the project.

Table 5: Relevant Schemes, Schematic Provisions and Linkage Potential

S. No.	Scheme	Schematic Provisions and Linkage Potential
1	Strengthening of Agmark Grading Facilities	1. Analysis of samples / research samples for developing and promoting grading and standardization of agricultural commodities under Agmark
2	Development / Strengthening of Agricultural Marketing Infrastructure, Grading & Standardization	1. The scheme is for those States which have amended the APMC Act (Maharashtra included); 2. Direct marketing, contract farming and permit to set up of markets in private and cooperative sectors; 3. Credit linked back-ended subsidy on capital cost of general or commodity specific infrastructure for marketing of agricultural commodities and for strengthening and modernization of existing agricultural markets, wholesale, rural periodic or in tribal areas; 4. Rate of subsidy: 25% of the capital cost of the project. Subsidy of 33% in case of entrepreneurs belonging to Scheduled Caste (SC)/Scheduled Tribe (ST) and their cooperatives; 5. Maximum amount of subsidy restricted to Rs.50 lakhs for each project and Rs.60 lakhs in case of entrepreneurs belonging to Scheduled Caste/Scheduled Tribe and their cooperatives.
3	Gramin Bhandaran Yojana:	1. Creation of scientific storage capacity with allied facilities in rural areas.
4	Agriculture-Business Development (SFAC):	1. Setting up of agribusiness ventures, 2. Catalyzing private investment in setting up of agribusiness projects 3. Strengthen backward linkages of agri-business projects with producers; 4. Assist farmers, producer groups to enhance their participation in value chain through Project Development Facility; 5. Training and visits of agri-entrepreneurs in setting up identified agribusiness projects.
5	Setting up of Terminal Market Complex (TMC):	1. Backward linkages with farmers through collection centres 2. Forward linkages through wholesalers, distribution centres, retail cash and carry stores, processing units for exporters etc.
6	National Agriculture Market (NAM) through Agri-Tech Infrastructure Fund (ATIF):	1. Setting up of common e-market platform that would be deployable in selected regulated wholesale markets (SFAC implements the national e-platform).
7	Integrated Scheme for Agricultural Marketing:	1. Creation of agricultural marketing infrastructure by providing backend subsidy support to State, cooperative and private sector investments; 2. Creation of scientific storage capacity; 3. Promote Integrated Value Chains (up to primary processing); 4. ICT as a vehicle of extension for agricultural marketing; 5. Establishing a nation-wide information network system for speedy collection and dissemination of market information; 6. Support framing of grade standards and quality certification of agricultural commodities; 7. Catalyze private investment in agribusiness projects; 8. Training, research, education, extension and consultancy in the agri marketing sector.

S. No.	Scheme	Schematic Provisions and Linkage Potential
8	PradhanMantri Fasal Bima Yojana (PMFBY) (Prime Minister Crop Insurance Scheme)	1. Providing financial support to farmers suffering crop loss/damage arising out of unforeseen events 2. Stabilizing the income of farmers to ensure their continuance in farming 3. Encouraging farmers to adopt innovative and modern agricultural practices 4. Ensuring flow of credit to the agriculture sector; which will contribute to food security, crop diversification and enhancing growth and competitiveness of agriculture sector besides protecting farmers from production risks
9	Sub-Mission on Agricultural Mechanization:	1. Increasing reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low; 2. Promoting Custom Hiring Centres; 3. Creating hubs for hi-tech & high value farm equipment; 4. Awareness among stakeholders through demonstration and capacity building activities.
10	National Mission for Sustainable Agriculture (NMSA):	1. Promotion of Integrated / Composite Farming Systems; 2. Conservation of natural resources through appropriate soil and moisture conservation measures; 3. Comprehensive soil health management practices based on soil fertility maps, 4. Soil test based application of macro & micronutrients; 5. Judicious use of fertilizers; 6. Efficient water management to expand coverage for achieving 'more crop per drop'; 7. Developing capacity of farmers & stakeholders on climate change adaptation and mitigation measures; 8. Pilot models in select blocks for improving productivity of rain-fed farming by mainstreaming rainfed technologies refined through NICRA;
11	Rashtriya Krishi Vikas Yojana (RKVY):	1. Preparation of agriculture plan; 2. Focused intervention to reduce yield gap in important crops; 3. Distribution of ag. Inputs, extension, soil health management and IPM promotion; 4. Dairy development; 5. Fishery promotion; 6. Information dissemination; 7. Infrastructure development under Infrastructure and Assets.
12	National Food Security Mission:	1. Extension of improved technologies i.e. seed, Integrated Nutrient Management including micronutrients, soil amendments, IPM and resource conservation technologies; 2. Capacity building of farmers.
13	Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds:	1. Establishing seed bank and its maintenance; 2. Development of seed village; 3. Assistance for Creation / Strengthening of Infrastructure Facilities in Public Sector; 4. Strengthening State Seed Testing Laboratories for quality control; 5. Awareness campaign through SAUs, scientific

S. No.	Scheme	Schematic Provisions and Linkage Potential
		organisations/Institutes; 6. Promotion of tissue culture through SAUs/specialised institutions/seed corporations; 7. Boosting Seed Production in Private Sector.
14	Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	1. Creation of new water sources; repair, restoration and renovation of defunct water sources; construction of water harvesting structures, secondary & micro storage, groundwater development, enhancing potentials of traditional water bodies at village level, etc. 2. Developing/augmenting distribution network where irrigation sources (both assured and protective) are available or created; 3. Promotion of scientific moisture conservation and runoff control measures to improve groundwater recharge so as to create opportunities for farmer to access recharged water through shallow tube/dug wells; 4. Promoting efficient water conveyance and field application devices within the farm viz, underground piping system, Drip & Sprinklers, pivots, rain-guns and other application devices etc.; 5. Encouraging community irrigation through registered user groups/farmer producers' organisations/NGOs; and 6. Farmer oriented activities like capacity building, training and exposure visits, demonstrations, farm schools, skill development in efficient water and crop management practices (crop alignment) including large scale awareness on more crop per drop of water through mass media campaign, exhibitions, field days, and extension activities through short animation films etc.
15	Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA)	1. Supplementary livelihood in rural areas through unskilled manual work, 2. Categories of work permitted to be taken up for providing employment are water conservation, drought proofing, irrigation, land development, rejuvenation of traditional water bodies, flood control and drainage work, rural connectivity and work on the land of Scheduled Castes (SCs), Scheduled Tribes (STs), Families Below Poverty Line (BPL) and Indira Awas Yojana (IAY) beneficiaries, land reform beneficiaries and individual small and marginal farmers.
16	Tribal Development Schemes	
17	Special Central Assistance (SCA) & Grants Under Article 275(1) of the Constitution	1. Family-oriented income generation (SCA to TSP); 2. Administration of Scheduled Area and Residential school.
18	Scheme for Development of Particularly Vulnerable Tribal Groups (PVTGs)	1. Preparation of "Conservation-cum-Development (CCD) Plans" for PVTGs; 2. Support for housing, infrastructure development, education, health, land distribution / development, agricultural development, cattle development, social security, insurance,

S. No.	Scheme	Schematic Provisions and Linkage Potential
		etc.
19	Tribal Cooperative Marketing Development Federation (TRIFED)	1. Marketing assistance for minor forest produce and surplus agricultural produce.
20	Vanbandhu Kalyan Yojana	1. Creating enabling environment for need based and outcome oriented holistic development of the tribal people; 2. Convergence of resources through appropriate institutional mechanism.
21	Thakkar Bappa Scheme	1. Community development and individual/family centric works; 2. Village-specific micro-planning, focusing on community level facilities.

2.12 RELEVANT PROGRAMMES AND SCHEMES OF THE GOVERNMENT

The following table summarizes the Acts and policies and their applicability in PoCRA.

Table 6: Applicability of policies and Acts

S. No	Act/Policy	Applicability	Remark
1	PANCHAYATI RAJ ACT	Yes	Proposed VCRMC is a subcommittee of the Gram sabha
2	PESA Act, 1996	Yes	Sarpanch heads the VCRMC and micro-planning process is participatory
3	LARR ACT, 2013	No	The project is not envisaging any involuntary acquisition of land
4	THE SCS AND THE STS (PREVENTION OF ATROCITIES) ACT, 1989	Yes	It will apply *mutatis mutandi*
5	TRIBAL DEVELOPMENT AND TRIBAL SUB-PLAN (TSP) APPROACH	Yes	PoCRA is a convergent project and would avoid duplication and leverage the schemes
6	APMC ACT, 2003	Yes	As per the latest amendment buying and selling of food grains and vegetables will be governed by this act
7	FOREST RIGHT ACT, 2006	Yes	The project will with Forest Department if at all any area is needed for catchment treatment or watershed activities
8	World Bank Safeguard Policies (4.10)	Yes	Indigenous people policy framework has been followed in PoCRA, no acquisition of land (4.12) is envisaged. Project will adopt inclusive strategy with special focus on tribal inclusion in project areas, falling within the scheduled area.
9	Development Policies (i.e. National Farmer Policy, National Policy for Women) and programmes.	Yes	PoCRA is a convergent project and the frameworks would apply to the extent possible.

Section III: Social Baseline

3.1 DEMOGRAPHIC COMPOSITION

The State is having 2.43 crore normal households (which excludes institutional and other households) which covers 98.9 percent population. Average size of normal household in the State is 4.6 which was 4.9 in 2001. For SC and ST average size of normal household is 4.5 and 4.7 respectively. At all-India level, average size of normal household is 4.8, which is same for SC & ST.

Maharashtra is the second largest state in India in terms of geographical area, spread over 3.08 lakh sq. km. The population of the state is 9.29 percent of the country's population and total population is 11.24 crore. About 45 percent of the state's population lives in urban areas while the national urban population average is 31 percent. The state's sex ratio is at 925 which is lesser than the national average of 940 (Census, 2011).

In the terms of absolute number, the population as per Census 2011 is 11,23,74,333 whereas it was 9,68,78,627 in 2001, i.e., an addition of 1,54,95,706 during the decade 2001-11. So, decadal population growth rate was 15.99 percent in 2001-11. The decadal population growth rate of the state was 22.73 during 1991-01. This shows a reduction in growth rate by 6.74 percentage points. The population density is 365 persons per sq. Km in the state as against 315 in 2001 (Table No. 7).

Table 7: Demography of Maharashtra

Population (census 2011)	Persons	11,23,74,333
	Male	5,82,43,056
	Female	5,41,31,277
Decadal Population Growth Rate	1991-2001	22.7
	2001-2011	15.99
Sex ratio (Number of Females per 1000 Males)	2001	922
	2011	929
Population Density (Population per sq. km.)	2001	315
	2011	365

Source: Census of India, 2011

The decadal population growth rate of the state was 27.45 percent during 1961 to 1971 which has reduced to 15.99 percent during 2011. The average population growth rate of 14 districts is above at State population growth rate. The highest decadal growth in population is recorded in Thane (36.01%), followed by Pune (30.4%) and Aurangabad (27.8%). Other districts that have recorded a growth rate of above 20 percent are Nandurbar, Nashik, Jalna, Parbhani and Dhule. The growth rate of male population has reduced from 27.84 percent during 1961-71 to 15.56 percent during 2001-11. Whereas, female population growth rate has reduced from 27.04 percent to 16.47 percent during the same time period.

Table 8: Population Characteristics in Project Districts of Maharashtra, Census 2011

District	Total Population ('000)			Decennial Growth Rate (2001-11)	Av. HH Size		Literacy Rate			Sex Ratio	Child Sex Ratio (0-6 Years)	Population Density
	Male	Female	Total		NH	HLH	Male	Female	Total			
Akola	932	882	1,814	11.3	4.6	3.4	92.3	83.5	88	946	912	320
Amaravati	1,481	1,408	2,888	10.8	4.4	3.6	91.5	83.1	87.4	951	935	237
Aurangabad	1,924	1,777	3,701	27.8	4.9	3.4	87.4	70.1	79	923	858	366
Beed	1,349	1,236	2,585	19.6	4.8	4.1	85.6	67.8	77	916	807	242
Buldhana	1,338	1,249	2,586	15.8	4.6	3.7	90.5	75.8	83.4	934	855	268
Hingoli	606	571	1,177	19.3	5.1	4.4	86.9	69	78.2	942	882	244

District	Total Population ('000)			Decennial Growth Rate (2001-11)	Av. HH Size		Literacy Rate			Sex Ratio	Child Sex Ratio (0-6 Years)	Population Density
	Male	Female	Total		NH	HLH	Male	Female	Total			
Jalgaon	2,197	2,033	4,230	14.9	4.7	4.2	85.4	70.6	78.2	925	842	360
Jalna	1,011	948	1,959	21.5	5	4	81.5	61	71.5	937	870	254
Latur	1,273	1,181	2,454	18	5.1	4.3	84.4	69.6	77.3	928	889	343
Nanded	1,730	1,631	3,361	16.9	5	4	84.3	66.2	75.5	943	910	319
Osmanabad	862	796	1,658	11.5	4.7	4.3	85.8	70.5	78.4	924	867	219
Parbhani	943	893	1,836	20.2	5.1	3.6	82.6	63.6	73.3	947	884	295
Wardha	668	632	1,301	5.2	4.2	3.4	91.9	81.8	87	946	919	206
Washim	620	577	1,197	17.3	4.6	4.1	90.5	75.5	83.2	930	863	244
Yavatmal	1,420	1,352	2,772	12.8	4.3	3.4	89.4	75.9	82.8	952	922	204
State Total	**58,243**	**54,131**	**1,12,374**	**16**	**4.6**	**3.7**	**88.4**	**75.9**	**82.3**	**929**	**894**	

Source: Census of India, 2011; NH: Normal Household, HLH: Houseless Household.

The population growth trend in project districts reflect that highest population growth rate (1991 to 2001) is in Aurangabad (27.76 %), followed by Jalna (21.46%) and Parbhani (20.19%). Among the project districts, lowest population growth observed in Wardha (5.18%) followed by Amravati (10.79%).

Rural population, is higher in the state as compared to the urban population. However, the trend has been changing with increment in the urban population. In 1961, rural population share to the total state population was 71.78 percent which has reduced to 54.78 percent by 2011. On the other hand, urban population was 28.22 percent which has increased to 45.22 percent by 2011. The share of urban population which was 42.4 percent in 2001 has increased to 45.2 percent during 2011. The growth rate of urban population is more than the rural growth rate by which the rural-urban difference is shrinking slowly. The rate of growth in rural, which was 15.25 percent in 1991-01 became 10.36 percent in 2001-11, whereas the same in urban decreased from 34.57 to 23.64 percent. Census year wise rural and urban population is presented in the table (*Table No. 8*).

Table 9: Population of the State in Different Census Years

Particulars	Population of the State in Different Census Years					
	1961	1971	1981	1991	2001	2011
Total	39,554	50,412	62,784	78,937	96,879	1,12,374
Males	20,429	26,116	32,415	40,826	50,401	58,243
Females	19,125	24,296	30,369	38,111	46,478	54,131
Rural	28,391	34,701	40,791	48,395	55,778	61,556
Urban	11,163	15,711	21,993	30,542	41,101	50,818
Scheduled Castes	2,227	3,177	4,480	8,758	9,882	13,276
Scheduled Tribes	2,397	3,841	5,772	7,318	8,577	10,510
Density of Population (per sq. km.)	129	164	204	257	315	365
Literacy Rate (percentage)	35.1	45.8	57.1	64.9	76.9	82.3
Sex Ratio (Females per thousand males)	936	930	937	934	922	929
Percentage of Urban Population	28.22	31.17	35.03	38.69	42.43	45.2

Source: Census of India, 2011

With increasing population, population density in the state has increased from 129 in 1961 to 365 in 2011. Mumbai (sub-urban) and Mumbai tops in density of population with about 20,980 and 19,652 population per sq. Km. respectively. In the district of Thane, the density is 1,157 whereas population density in Pune is 603 and 504 in Kolhapur. The tribal dominated district of Gadchiroli

stands with the lowest density of population at 74 followed by Sindhudurg (163), Chandrapur (193) and Ratnagiri (197).

3.1.1 Sex Composition

There has been an increase of 15.50 million persons in absolute number of population in Maharashtra during 2001-11. During the period, there is growth of 7.84 million male population and 7.65 million female population. The growth rate of females is higher than males, i.e., 16.47% and 15.56% respectively.

Table 10: Sex Ratio in Maharashtra and change in Sex Ratio, 2001 and 2011

Residence	2001	2011	Change
Total	922	929	+ 7
Rural	960	952	- 8
Urban	873	903	+ 30

Source: Census of India, 2011

However, comparison of sex ratio by rural-urban reveals that there is a decline in sex ratio in rural from 960 to 952 (by 8 points) whereas in urban, Sex ratio has increased from 873 to 903 (by 30 points). The sex ratio has decreased in the state from 936 (1961) (Sex Ratio in India during 1961: 941) to 929 (2011) (Sex Ratio in India in 2011: 943).

Table 11: Child Sex Ratio in Maharashtra and Change in Sex Ratio, 2001 and 2011

Residence	2001	2011	Change
Total	913	894	-19
Rural	916	890	-26
Urban	908	899	-9

Source: Census of India, 2011

The sex ratio among the children of 0-6 age group has been declining in the State. In the year 1991, the child sex ratio in the State was 946 (India: 945) which reduced to 894 during 2011 (India: 919). Comparing child sex ratio (0-6 years) of 2001 and 2011, it is observed that there is a reduction from 913 (India: 927) to 894 (India:919) (by 19 points) in the State. In rural, child sex ratio has decreased from 916 to 890 (by 26 points) and in urban it has reduced from 908 to 899 (by 9 points) (*Table No. 11*). The Sex ratio (number of female per thousand male) among all the project districts is highest in Yavatmal (952) followed by Parbhani (947) and Wardha (946) and lowest in Bid (916).

1. About 45 percent of the state's population lives in urban areas while the national urban population average is 31 percent;
2. There is reduction in decadal growth rate of population by 6.74 percentage points. The population density has increased to 365 persons per sq. km as against 315 in 2001;
3. Though, rural population is higher, urban population is increasing rapidly. The share of urban population increased from 42.4 percent in 2001 to 45.2 percent during 2011;
4. Overall, there is increment in sex ratio, i.e., from 922 (census 2001) to 929 (census 2011). Sex ratio in rural has decreased from 960 to 952 during 2001-2011 whereas it has increased in urban from 873 to 903 during the same period;

3.2 LITERACY

The State is having 8,15,54,290 literates and 3,08,20,043 illiterates. The literacy rate of the state is 82.3 percent in 2011. The literacy rate among males is 88.4 percent and 75.9 percent among females. Mumbai (suburban) district has the highest literacy rate (89.9) in Maharashtra. The gap between male and female literacy in 2011 has come down to 12.5 percent from 19.0 percent in

2001. Literacy status of male and female for 2001 and 2011 is presented in the Table (*Table No. 12*).

Table 12: Literacy Rate in Maharashtra, 2001 and 2011

Sex		2001	2011	Difference
Persons	In Million	64.0	81.6	+ 17.6
	Literacy Rate (%)	76.9	82.3	+ 5.4
Male	In Million	37.2	45.3	+ 8.1
	Literacy Rate (%)	86.0	88.4	+ 2.4
Female	In Million	26.8	36.3	+ 9.5
	Literacy Rate (%)	67.0	75.9	+ 8.9

Source: Census of India, 2011; (in Millions)

In 1951, the literacy rate of the state was 27.91 percent with male literacy rate of 40.49 percent and female literacy rate of 14.56 percent. By 2001, it increased to 76.88 percent, with male literacy rate of 85.97 percent and female literacy rate of 67.03 percent. Year wise literacy rate of the State and by sex is presented in the Table (*Table No. 13).*

Table 13: Literacy Rate in Maharashtra, 1951 to 2011

Year	Persons	Male	Female
1951	27.91	40.49	14.56
1961	35.08	49.26	19.80
1971	45.77	59.40	31.00
1981	57.24	70.06	43.50
1991	64.87	76.56	52.32
2001	76.88	85.97	67.03
2011	82.30	88.40	75.90

Source: Census of India, 2011; (in Millions)

Literacy rate of the State has increased from 76.9 per cent in 2001 to 82.3 per cent in 2011. Growth in literacy rate for female (8.9 percentage points) is higher than that of males (2.4 percentage points) during this period. Gender gap in literacy has reduced from 18.9 percentage points in 2001 to 12.5 percentage points in 2011. Literacy rates for rural and urban population are 77 per cent and 88.7 per cent respectively. Rural-urban gap in literacy has also reduced from 15.1 percentage points in 2001 to 11.7 percentage points in 2011.

Table 14: Literacy Rate of Project Districts

S. No.	District	Literacy Rate
1	Akola	88.05%
2	Amravati	87.38%
3	Aurangabad	79.02%
4	Bid	76.99%
5	Buldana	83.40%
6	Hingoli	78.17%
7	Jalgaon	78.20%
8	Jalna	71.52%
9	Latur	77.26%
10	Nanded	75.45%

S. No.	District	Literacy Rate
11	Osmanabad	78.44%
12	Parbhani	73.34%
13	Wardha	86.99%
14	Washim	83.25%
15	Yavatmal	82.82%

Source: Census of India, 2011

Among all the project districts, highest literacy rate observed to be in Wardha district (86.99%) and lowest in Jalna (71.52%)

3.2.1 Female Literacy

Literacy data from the Census 2011 shows that in rural areas the gender gap in literacy was approximately 19 percentage points against 8.4 percentage points in urban areas. This shows that persistence of gap more in rural in comparison to urban. The literacy status for males and females across all social groups was higher in urban areas of the state compared to the rural areas. This also remains true for all the regions in the state. The female literacy rate in rural areas continues to be low at 67.4 per cent. Although the state has witnessed an overall improvement in district level literacy rates, interdistrict variations in literacy exist. These changes are reflected in improvements in the gender parity index (GPI) for literacy, which has seen a rise from 0.4 in 1951 to 0.8 in 2011[4].

The female literacy rate across all social groups was found to be well below the male literacy rate. Overall, the gender gap in literacy was found to be 24, 19, 15 and 11 percentage points respectively for the ST, SC, OBC and Others. In rural areas, the gender gap is quite high at approximately 25 percentage points for the ST, 22 percentage points for the SC and 17 percentage points for the OBC. Similarly, in urban areas the gender gap for these social groups were found to be 17, 13 and 11 percentage points respectively. Literacy rates for ST women were found to be low in rural areas across all regions (except in the Eastern region), with the lowest being in rural parts of the Northern region at 38.4 percent. The Eastern region had the lowest urban literacy rate for ST women (44.6 percent).

The inter-regional variations in ST female literacy rates were also quite high. On the one hand, the Northern region reported it to be as low as 39.7 percent and on the other, literacy in the Eastern region stood at 69.7 percent. Similar variations within rural and urban areas were also found for female literacy rates for the ST/SC. Thus, literacy achievements in the state are yet to bridge the gap, especially for women residing in rural areas and belonging to backward social groups, especially the tribes. Data from the 64th round of the NSS analysed for adult literacy rates shows a gender gap of 18 percentage points at the aggregate level, which is higher at approximately 22 percentage points in rural areas. Female literacy rate in the project districts for 2001 and 2011 is presented in the following table (*Table No. 15*).

Table 15: Female Literacy Rate in Inhabited Villages of Project District, 2001 and 2011.

S. No.	District	Census 2001					Census 2011				
		Inhabited Village	No. of Inhabited Village Having Female Literacy Rate				Inhabited Village	No. of Inhabited Village Having Female Literacy Rate			
			< 50 %	51-70%	71-90%	> 90 %		< 50 %	51-70%	71-90%	> 90 %
1	Akola	857	78	420	344	15	862	15	118	683	46
2	Amravati	1,671	343	428	865	35	1,628	77	308	1,128	115
3	Aurangabad	1,300	698	575	24	3	1,314	121	1096	95	2

[4] Maharashtra Human Development Report, 2011

4	Beed	1,354	781	534	38	1	1,357	49	1095	209	4
5	Buldhana	1,294	266	867	156	5	1,295	59	414	802	20
6	Hingoli	671	457	201	13	0	675	16	497	160	2
7	Jalgaon	1,491	459	872	157	3	1,487	195	901	387	4
8	Jalna	963	823	134	6	0	958	129	806	22	1
9	Latur	921	173	714	34	0	928	16	699	212	1
10	Nanded	1,544	910	577	55	2	1,538	113	1212	210	3
11	Osmanabad	729	200	520	9	0	728	9	490	228	1
12	Parbhani	830	676	151	3	0	829	72	712	43	2
13	Wardha	988	110	608	258	12	962	40	130	752	40
14	Washim	700	208	409	80	3	698	7	221	451	19
15	Yavatmal	1,852	591	1,077	179	5	1,845	37	673	1,115	20
	Maharashtra	**41,038**	**14,207**	**21,203**	**5,464**	**164**	**40,902**	**3518**	**20,785**	**16,070**	**529**

Source: Census of India, 2011

3.2.2 Literacy among Scheduled Castes and Tribes

The literacy rate among Scheduled Castes in the State is 79.7 percent and that of Scheduled Tribe is 65.7 percent (census 2011). Further, the male literacy rate observed to be 87.2 percent in Scheduled Castes and 74.3 percent in Scheduled Tribes whereas female literacy rate is 71.9 percent and 57.0 percent among SCs and STs respectively.

Table 16: Literacy Rate among SC & ST, 2011

S. No.	District	Literacy Rate					
		Scheduled Caste			Scheduled Tribe		
		Male	Female	Total	Male	Female	Total
1	Akola	90.2	75.8	83.2	86.5	71.5	79.2
2	Amaravati	90.6	78.3	84.6	83.1	66.7	75.0
3	Aurangabad	85.5	66.1	76.1	73.4	51.7	62.8
4	Beed	82.0	63.7	73.0	77.7	59.7	68.9
5	Buldhana	87.8	68.9	78.6	77.6	59.1	68.6
6	Hingoli	84.6	66.0	75.5	81.9	62.0	72.2
7	Jalgaon	83.5	63.5	73.7	68.4	48.8	58.9
8	Jalna	76.7	55.3	66.2	75.4	53.3	64.8
9	Latur	80.2	64.4	72.5	79.9	64.1	72.3
10	Nanded	82.2	63.7	73.2	80.5	60.2	70.6
11	Osmanabad	81.6	65.0	73.5	77.4	58.5	68.2
12	Parbhani	79.1	59.3	69.4	77.0	56.1	66.7
13	Wardha	92.6	80.4	86.6	85.7	71.8	78.9
14	Washim	88.9	71.7	80.5	83.9	65.1	74.7
15	Yavatmal	90.1	75.3	82.8	84.1	68.0	76.1
	Maharashtra	**87.2**	**71.9**	**79.7**	**74.3**	**57.0**	**65.7**

Source: Census of India, 2011.

Among the project districts, highest literacy rate among Scheduled Castes in in Wardha (86.6 percent) and lowest in Jalna (66.2 percent). In Case of Scheduled Tribes, highest literacy rate is in Akola district (79.2 percent) followed by Wardha (78.9 percent) and Yavatmal (76.1 percent). Lowest literacy rate among the STs of project districts observed in Jalgaon (58.9 percent) and Aurangabad (62.8 percent). Among Scheduled Castes, male literacy rate is higher in Wardha (92.6 percent) and lowest in Jalna (76.7 percent) whereas among the Scheduled Tribes, the district of Akola is having the highest male literacy rate and Jalgaon the lowest (68.4 percent). Female literacy

rate among the SCs and STs is highest in Wardha (SC: 80.4 percent; ST: 71.8 percent) and lowest in Jalna (55.3 percent) for SCs and Jalgaon for STs (48.8 percent) (*Table No. 16*).

1. The literacy rate of the state is 82.3 percent (census 2011) which increased by 17.6 percentage point between 2001 and 2011;
2. The literacy rate among males is higher (88.4 percent) than that of their female (75.9 percent);
3. The male literacy rate increased by 2.4 percentage point whereas in case of female, it increased by 8.9 percentage point between 2001 and 2011;
4. The literacy rate of tribal is lowest among all other social categories. The literacy rate of scheduled castes is 79.7 percent and that of tribal is 65.7 percent (census 2011);
5. The male literacy rate in scheduled castes is 87.2 percent and 74.3 percent in tribes, whereas female literacy rate is 71.9 percent and 57.0 percent among scheduled castes and tribes respectively;
6. Gender-gap in literacy was found to be 24, 19, 15 and 11 percentage points for the ST, SC, OBC and Others respectively;

3.3 WORKER PARTICIPATION RATE

The state is having 4,94,27,878 worker population of which 4,37,62,890 are main workers and 56,64,988 are marginal workers. Number of workers in rural is significantly higher than that of urban whereas number of non-worker in urban is higher than rural. The work participation rate in rural, with 49.8 percent is higher than the work participation rate of urban (36.9 percent). About 44.0 percent of population are workers and among males there are 56.0 percent and among female 31.1 percent reported as workers. The share of main workers in total workers is 88.5 percent, i.e., 91.9 percent among males and 81.9 percent among female.

Table 17: Worker Population in Maharashtra, 2011

Residence	Number of Workers (Million)	Non-Workers (Million)	Work Participation Rate
Total	49.4	62.9	44.0
Rural	30.6	30.9	49.8
Urban	18.8	32.0	36.9

Source: Census of India, 2011; (in Millions)

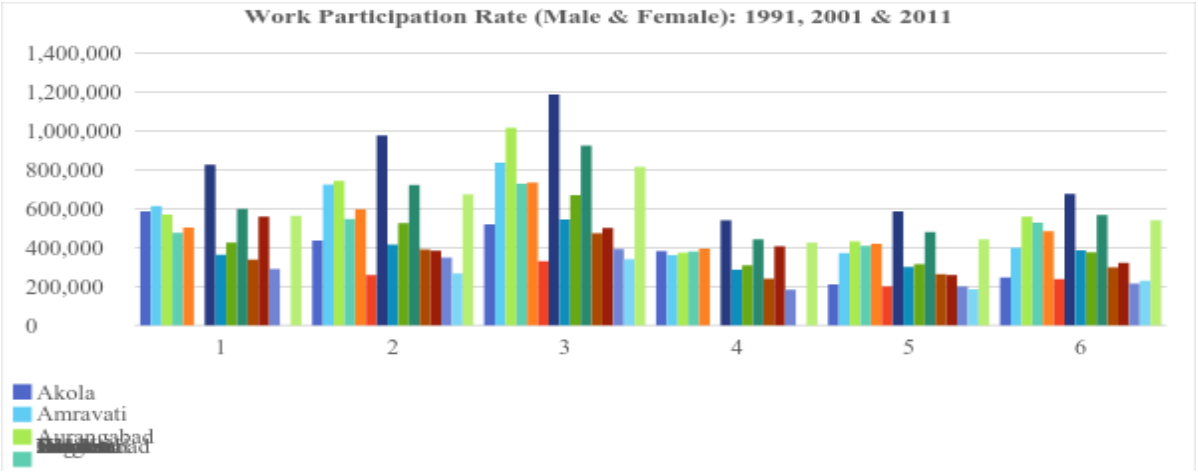

Figure 3: Work Participation Rate by Sex
Source: Registrar General and Census Commissioner (As on April 4, 2013)

Table 18: Total Worker Population in Project Districts, Maharashtra

District	1991			2001			2011		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1	2	3	4	5	6	7	8	9	10
Akola	9,69,159	5,87,188	3,81,971	6,48,243	4,35,791	2,12,452	7,68,154	5,20,362	2,47,792
Amravati	9,76,709	6,14,264	3,62,445	10,95,622	7,24,019	3,71,603	12,36,322	8,37,577	3,98,745
Aurangabad	9,45,345	5,70,607	3,74,738	11,76,857	7,43,791	4,33,066	15,75,079	10,15,864	5,59,215
Bid	8,56,406	4,75,327	3,81,079	9,57,584	5,47,915	4,09,669	12,55,548	7,27,819	5,27,729
Buldana	8,98,569	5,03,608	3,94,961	10,16,015	5,96,607	4,19,408	12,19,641	7,34,024	4,85,617
Hingoli	N.A.	N.A.	N.A.	4,59,978	2,59,474	2,00,504	5,69,182	3,30,903	2,38,279
Jalgaon	13,67,289	8,26,318	5,40,971	15,63,983	9,76,955	5,87,028	18,63,571	11,86,472	6,77,099
Jalna	6,50,685	3,64,701	2,85,984	7,16,900	4,15,137	3,01,763	9,30,886	5,45,030	3,85,856
Latur	7,35,323	4,25,411	3,09,912	8,40,518	5,25,457	3,15,061	10,46,857	6,70,018	3,76,839
Nanded	10,42,461	5,99,995	4,42,466	12,02,037	7,21,922	4,80,115	14,93,953	9,25,232	5,68,721
Osmanabad	5,78,526	3,37,863	2,40,663	6,53,522	3,90,202	2,63,320	7,73,916	4,73,795	3,00,121
Parbhani	9,66,842	5,59,245	4,07,597	6,44,752	3,84,405	2,60,347	8,22,797	5,01,422	3,21,375
Wardha	4,75,614	2,91,324	1,84,290	5,50,351	3,48,611	2,01,740	6,08,235	3,92,316	2,15,919
Washim	N.A.	N.A.	N.A.	4,55,332	2,67,742	1,87,590	5,69,792	3,40,353	2,29,439
Yavatmal	9,90,907	5,64,723	4,26,184	11,18,937	6,74,923	4,44,014	13,55,999	8,15,475	5,40,524

Source: Registrar General and Census Commissioner (As on April 4, 2013)

In work participation rate, two project districts are in the top five districts, i.e., Yavatmal (WPR-48.9 percent) and Bid (48.6 percent). No project district is in bottom five as far as work participation rate is concerned which indicates that work participation rate of other project districts is higher than the bottom five districts (*Table No. 19*).

Table 19: Top & Bottom Five Districts of the State in WPR, 2011

Top Five Districts		Bottom Five Districts	
District	**WPR**	**District**	**WPR**
Gadchiroli	54.5	Mumbai Sub-Urban	39.9
Gondiya	50.3	Nagpur	40.2
Bhandara	49.8	Thane	40.6
Yavatmal	48.9	Raigarh	40.7
Bid	48.6	Sindhudurg	40.9

Source: Census of India, 2011

Table 20: Main and Marginal Workers, 2001 and 2011

Particular	2001	2011	Change
Main Workers	84.4	88.5	4.1
Marginal Workers	15.6	11.5	-4.1

Source: Census of India, 2011

Of the total worker population, main worker population was 84.4 percent during 2001 which increased to 88.5 percent during 2011, i.e. a growth of 4.1 percentage point. The marginal worker population percent reduced by same percentage point (-4.1 percent) during the decade, i.e. from 15.6 percent to 11.5 percent.

Table 21: Proportion of Worker by Category, 2001 and 2011

Worker Category	2001	2011	Variation
Cultivators	28.7	25.4	-3.3
Ag. Labourers	26.3	27.3	1.0
Household Industry Workers	2.6	2.5	-0.2
Other Workers	42.4	44.8	2.4

Source: Census of India, 2011

Distribution of workers by category, in comparison to 2001, reflects that the persons engaged as cultivators have reduced by 3.3 percentage point in the state whereas agricultural labourers have increased by 1.0 percentage point. While other worker population has increased by 2.4 percentage point, household industry workers has reduced by 0.2 percentage point.

3.3.1 Work Participation by Sex

The state has made some progress in bridging the gender gap in different social and economic aspects in the last decade. The work participation rate of female has increased during the period. As compared to 2001 Census, the percentage of workers to total population has increased from 42.4 in 2001 to 44.0 percent in 2011 (by 1.6 percentage point). In case of males that has increased from 53.3 percent to 56.0 percent (by 2.7 percentage point) and in case of females it has increased from 30.8 percent to 31.1 percent (by 0.3 percentage point) (*Table No. 35*).

Table 22: Work Participation Rate by Sex in Maharashtra, 2001 and 2011

Sex	2001	2011	Change
Persons	42.4	44.0	+ 1.5
Male	53.3	56.0	+ 2.7
Female	30.8	31.1	+ 0.3

Source: Census of India, 2011; (in Millions)

In the main worker segment, while male participation growth rate increased by 1.0 percentage point, i.e. from 90.9 percent to 91.9 percent, female participation increased by 9.8 percentage point, i.e., from 72.1 percent to 81.9 percent. In the marginal worker segment, reduction in male worker participation is marginal, i.e. (-) 1.0 percentage point whereas in case of female, it reduced by (-) 9.8 percentage point. As the trend shows, female marginal workers (9.8 percent) have shifted to main worker's category during the period (*Table No. 36*).

Table 23: Main and Marginal Workers, 2001 and 2011

Particular	Sex	2001	2011	Change
Main Workers	Persons	84.4	88.5	4.1
	Male	90.9	91.9	1.0
	Female	72.1	81.9	9.8
Marginal Workers	Persons	15.6	11.5	-4.1
	Male	9.1	8.1	-1.0
	Female	27.9	18.1	-9.8

Source: Census of India, 2011

In the female work participation rate, only the project district of Bid is in top five districts and no other project district is in either top or among the bottom five districts (*Table No. 24*).

Table 24: Female Work Participation Rate, Top & Bottom Five Districts of the State, 2011

Top Five Districts		Bottom Five Districts	
District	WPR	District	WPR
Gadchiroli	49.1	Mumbai Sub-Urban	18.3
Nandurbar	42.8	Mumbai	18.8

Top Five Districts		Bottom Five Districts	
District	**WPR**	**District**	**WPR**
Gondiya	42.7	Thane	21.7
Bid	42.7	Nagpur	23.6
Bhandara	42.4	Raigarh	24.7

Source: Census of India, 2011

Of the total workers in the State of Maharashtra, 25.43 percent are cultivators. Female cultivators to total female worker is 29.61 percent whereas male cultivators to male worker is 23.28 percent. It indicates that a large section of female workers in Maharashtra are engaged in agricultural activities. More or less similar trend is observed in case of agricultural labourers. Of the total workers, 27.28 percent are agricultural labourer in the state. Sex disaggregated data reflects that 39.92 percent of the total women workers are agricultural labourer and in case of male, it is 20.77 percent of the total male workers. So, engagement of women in agriculture (cultivator and agricultural labourer) remain to be 69.53 percent in comparison to 44.05 percent in case of their male counterpart. So, it is required for the project to adopt inclusive approach to ensure that women farmers and women agricultural labourers participate actively and avail the benefit of the project.

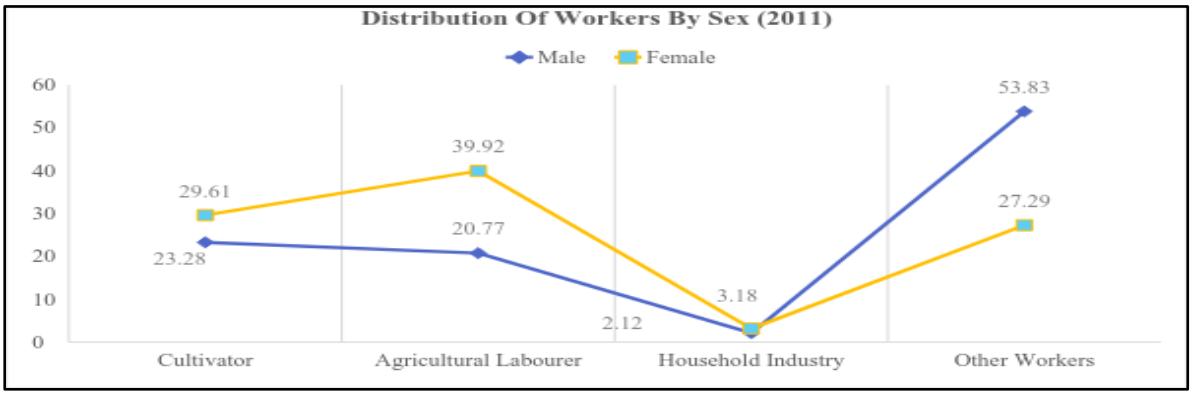

Figure 10: Distribution of Worker by Sex

1. The state is having work participation rate of 44.0 percent (census 2011);
2. The work participation rate in rural (49.8 percent) is higher than urban (36.9 percent);
3. Among males, 56.0 percent are workers and 31.1 percent are workers among female;
4. The share of main workers in total workers is 88.5 percent, i.e., 91.9 percent among males and 81.9 percent among female;
5. Number of workers in rural is significantly higher than that of urban whereas number of non-worker in urban is higher than rural;
6. Of the total workers, 25.43 percent are cultivators;
7. A large section of female workers is engaged in agricultural activities;
8. Female cultivators to total female worker is 29.61 percent whereas male cultivators to male worker is 23.28 percent;
9. About 27.28 percent of the total workers are agricultural labourer;
10. Around 39.92 percent of the total women workers are agricultural labourer whereas 20.77 percent of the total male workers fall into this category;
11. Engagement of women in agriculture (cultivator and agricultural labourer) remain to be 69.53 percent in comparison to 44.05 percent in case of male.

3.4 LAND HOLDING

The state has total operational holding of 1.37 crore, of which 78.6 percent belongs to the marginal and small farmers with land holding less than or equal to two ha (Agricultural Census 2010-11).

The proportion of operational holdings of SC & ST is 7.5 percent and 6.3 percent with area of operational holdings 6.6 percent & 7.9 percent respectively. The average size of landholding of SC & ST is 1.27 ha & 1.80 ha respectively as against 1.44 ha for all operational holdings. The operational holdings and area in the State as per Agricultural Census 2010-11 is given in the Table No. 25.

Table 25: Land Holding Pattern

Farmers	Operational Holding 2010-11 (%)	Operational Holding 2000-01 (%)	Holding Area 2010-11 (%)	Holding Area 2000-01 (%)
Marginal	49.62	43.71	16.87	13.18
Small	29.36	29.71	28.98	25.50
Semi-Medium	15.45	18.73	28.85	30.39
Medium	5.05	7.13	19.86	24.28
Large	0.53	0.72	5.44	6.66
Total	**100.0**	**100.0**	100.0	100.00

Comparing agriculture census of 2000-01, it is evident that there is an increment in percentage of marginal farmers by 5.91 percentage point and their total holding has also increased by 3.69 percentage point. However, there is decrease in percentage farmers in other holding categories, i.e., (-) 0.35 percentage point in Small farmers, (-) 3.28 percentage point in Medium farmers (-) 2.08 percentage point in Semi-Medium farmers and (-) 0.19 percentage point in case of Large Farmers. With reduction in operational holding categories among small, semi-medium, medium and large farmers, there is reduction in average size of holding in all categories, except small farmers. Operational holding and area of holding is presented in the Table No. 26.

Table 26: Land Holding Pattern

Farmers	No. of Operational Holding (Lakh Ha.)	Operational Holding (%)	Holding Area (Lakh Ha.)	Holding Area (%)
1	**2**	**3**	**4**	**5**
Marginal	53.06	43.71	26.49	13.18
Small	36.06	29.71	51.27	25.50
Semi-Medium	22.74	18.73	61.09	30.39
Medium	8.65	7.13	48.80	24.27
Large	0.87	0.72	13.38	6.66
Total	**121.38**	**100.0**	**201.03**	**100.0**
Scheduled Caste (SC)	9.44	7.80	12.41	6.23
Scheduled Tribe (ST)	7.78	6.46	15.34	7.70

Source: Agriculture Census 2010-11, Dept. of Agriculture, Government of Maharashtra

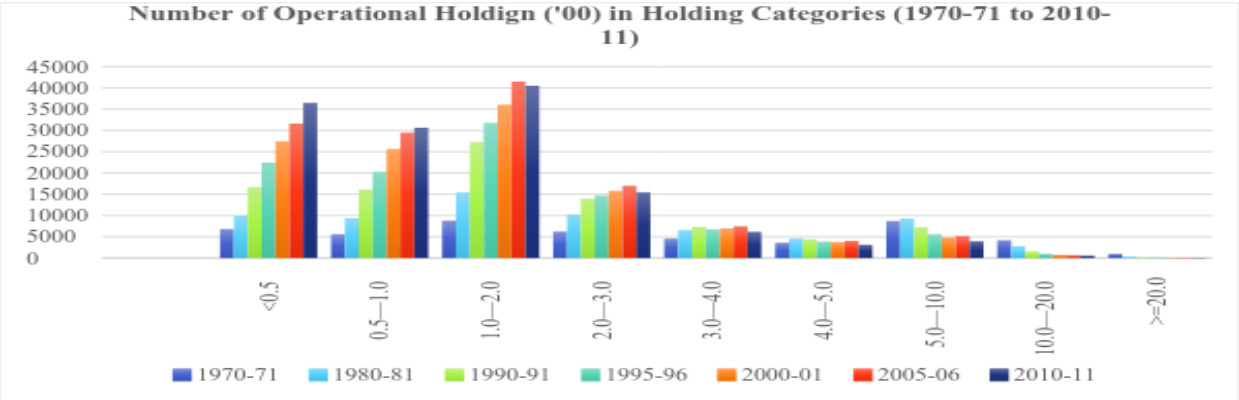

Figure 5: Number of Operational Holding by Holding Categories

Table 23: Operational Holdings and area as per Agricultural Census 2010-11				
Size class (Ha.)	No. of Operational Holdings ('000)	Area of Operational Holdings ('000)	Average size of Holdings (Ha)	
			2005-06	2010-11
Up to 1.0 (marginal)	6,709	3,186	0.46	0.47
1.0-2.0 (small)	4,052	5,739	1.26	1.42
2.0-5.0 (semi-medium)	2,473	7,155	2.73	2.89
5.0-10.0 (medium)	396	2,603	6.16	6.57
10.0-20.0 (large)	59	752	10.89	12.75
20 & above (large)	9	332	32.52	36.89
Total	13,698	19,767	1.46	1.44
Source : Commissionerate of Agriculture, GoM (Economic Survey of Maharashtra 2016-17)				

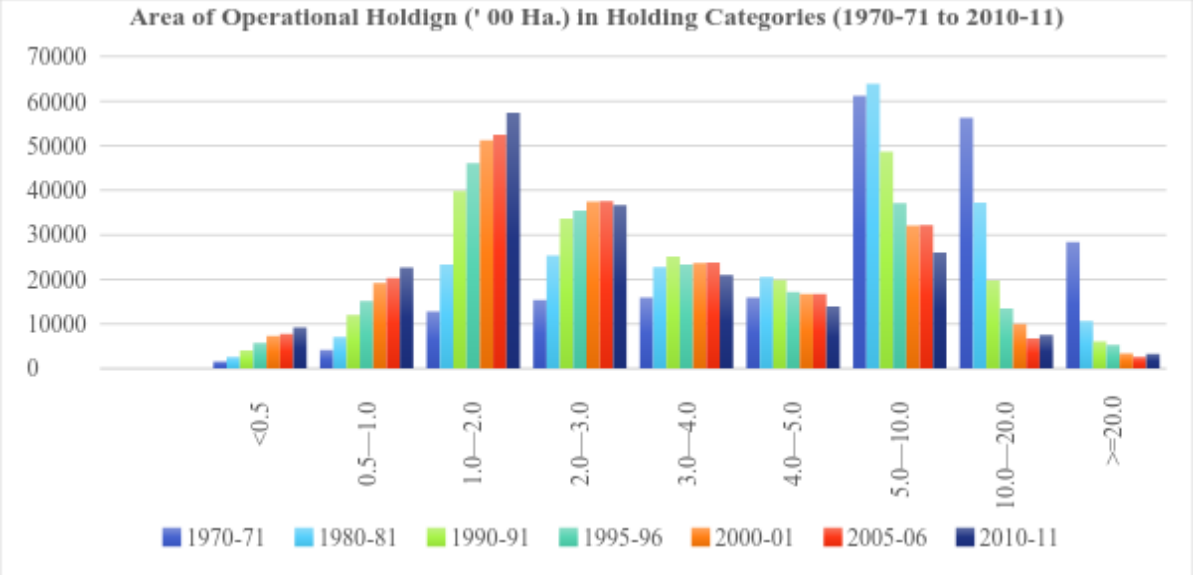

Figure 6: Area of Operational Holding in Holding Categories

Table 28: Area of Operational Holding ('00 Ha.) in the State, 1970-71 to 2010-11

SN	Size Class (Ha.)	1970-71	1980-81	1990-91	1995-96	2000-01	2005-06	2010-11
1	Below 0.5	1,634	2,630	4,119	5,746	7,328	7,740	9,180
2	0.5—1.0	4,142	7,103	12,057	15,120	19,159	20,274	22,680
3	1.0—2.0	12,842	23,337	39,833	46,059	51,271	52,476	57,390
4	2.0—3.0	15,386	25,363	33,689	35,420	37,414	37,542	36,681
5	3.0—4.0	15,920	22,815	25,108	23,303	23,676	23,756	20,974
6	4.0—5.0	15,961	20,556	19,864	17,210	16,717	16,717	13,901
7	5.0—10.0	61,213	63,937	48,700	37,150	32,084	32,135	26,027
8	10.0—20.0	56,302	37,213	19,749	13,514	9,961	6,776	7,524
9	20.0 and above Total	28,394	10,662	6,129	5,274	3,418	2,634	3,314
	Total	**2,11,794**	**2,13,616**	**2,09,248**	**1,98,796**	**2,01,028**	**2,00,050**	**1,97,671**

Source: Economic Survey, 2015-16 as Reported by Commissionerate of Agriculture, GoM

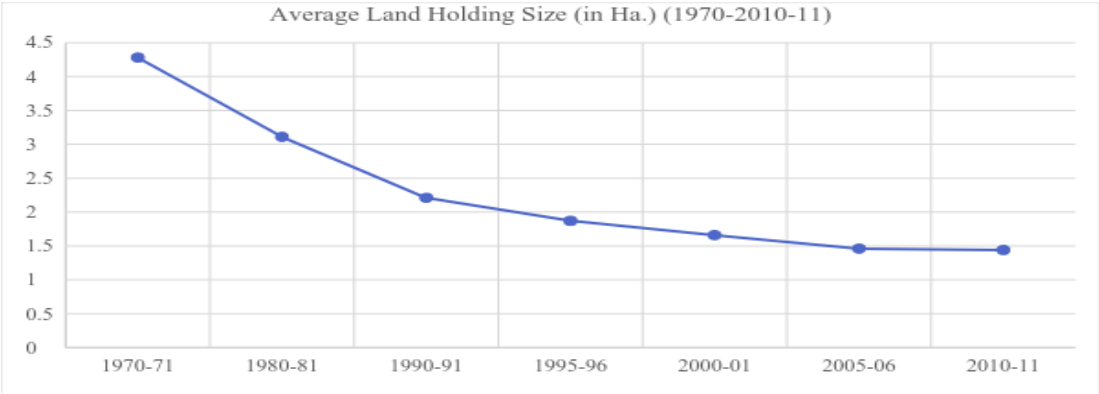

Figure 7: Trend of Average Land Holding Size

The average land holding size in the state has been declining between the period 1970-71 to 2010-11. In 1970-71, the average holding size, irrespective of land holding categories, was 4.28 Ha. which has reduced to 1.44 Ha. by 2010-11. Average landholding size observed declining in the holding categories of 1.0 to 2.0 ha. (1.46 ha. in 1970-71 to 1.42 ha. in 2010-11), 2.0 to 3.0 ha. (2.46 ha. in 1970-71 to 2.37 ha. in 2010-11) and other holding categories, except holding category of 20 ha. or more. In comparison to 1970-71, the average holding size has increased from 29.55 ha. in 2070-71 to 37.24 ha. in 2010-11. So, average land holding is more less remaining constant in the low land holding category of up to 1.0 ha. whereas it has increased in the highest category and reduced in all other holding categories. It reflects that big farmers, with holding size more than or equal to 20.0 ha. added land to their farming whereas holding in other categories has reduced either because of division of land and/or selling it out.

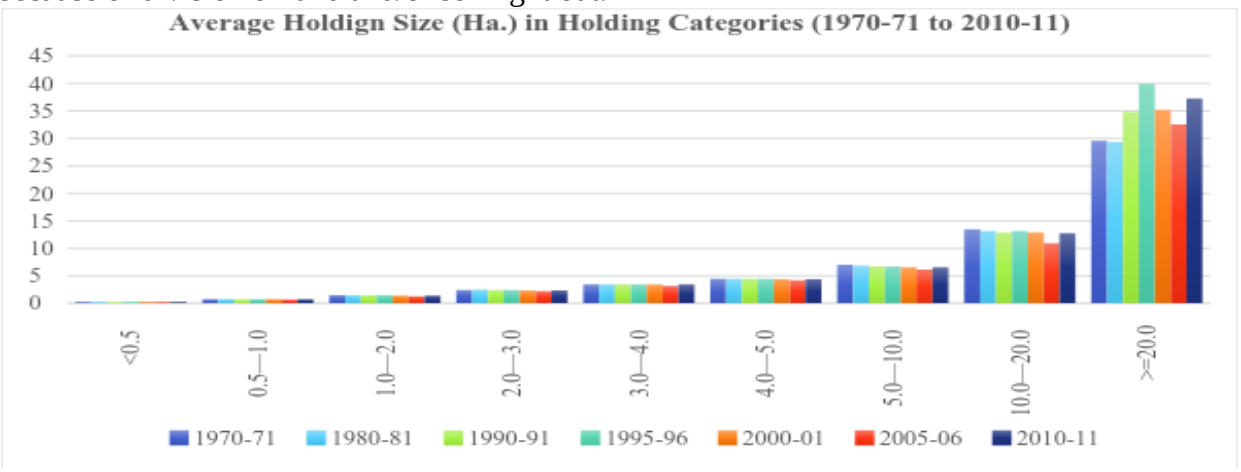

Figure 8: Average Holding Size in Different Holding Categories

Table 29: Average Holding Size; 1970-71 to 2010-11

S. No.	Size Class (Ha.)	1970-71	1980-81	1990-91	1995-96	2000-01	2005-06	2010-11
1	Below 0.5	0.24	0.27	0.25	0.26	0.27	0.24	0.25
2	0.5—1.0	0.74	0.76	0.75	0.75	0.75	0.69	0.74
3	1.0—2.0	1.46	1.51	1.46	1.45	1.42	1.26	1.42
4	2.0—3.0	2.46	2.47	2.41	2.4	2.37	2.21	2.37
5	3.0—4.0	3.46	3.47	3.44	3.44	3.41	3.17	3.42
6	4.0—5.0	4.46	4.47	4.44	4.44	4.42	4.14	4.42
7	5.0—10.0	7.02	6.86	6.73	6.68	6.58	6.16	6.57
8	10.0—20.0	13.47	13.2	12.91	13.13	12.89	10.89	12.75
9	20.0 and above	29.55	29.37	34.82	39.95	35.24	32.52	37.24
	Total	**4.28**	**3.11**	**2.21**	**1.87**	**1.66**	**1.46**	**1.44**

Source: Economic Survey, 2015-16 as Reported by Commissionerate of Agriculture, GoM

1. About 78.6 percent of the total operational holding (1.37 crore) belongs to the marginal and small farmers (Agricultural Census 2010-11);
2. The proportion of operational holdings of SC & tribal is 7.5 percent & 6.3 percent with area of operational holdings 6.6 percent and 7.9 percent respectively;
3. The average size of landholding of SC & tribal is 1.27 ha & 1.80 ha respectively as against 1.44 ha for all operational holdings;
4. There is an increment in percentage of marginal farmers (5.91 percentage point) with total holding (3.69 percentage point). However, there is decrease in percentage farmers in other holding categories;
5. There is reduction in average size of holding in all categories, except small farmers;
6. The average land holding size in the state has been declining between the period 1970-71 to 2010-11, i.e., from 4.28 ha. to 1.44 ha.

3.5 OCCUPATION AND INCOME

Maharashtra's Gross State Domestic Product (GSDP) accounted for 12.98 per cent of India's gross domestic product (GDP) in 2014-15, the highest among all states. The Gross State Domestic Product (GSDP) at current prices for 2012-13 is estimated at Rs.13, 23,768 crores and contributes 14.8% of the GDP. Industry and Services sector both together contribute 89.1% to the State's income while the contribution of agriculture and allied activities sector is 10.9%. The GSDP grew at a Compound Annual Growth Rate (CAGR) of around 11.1 per cent between 2004-05 and 2014-15 to reach US$ 264.8 billion. Maharashtra is the most industrialized state in India and has maintained the leading position in the industrial sector in the country. The state is equally a frontrunner in small scale industries and boasts of the largest number of special export promotion zones. The state has a well-developed social, physical and industrial infrastructure.

The State has always been a major contributor to the national economy. The Real GSDP is estimated at Rs.15,24,846 crore resulting in expected growth of 5.8 per cent during 2014-15 over the previous year (2013-14). Deficit of monsoon and unseasonal rains had an adverse impact on the agricultural production during 2014-15. Production of food grains declined by nearly 24.9 per cent over the previous year. Production of cereals and pulses decreased by 18.7 per cent and 47.0 per cent respectively. Production of cotton and oilseeds dropped by nearly 59.5 per cent and 52.8 per cent respectively. Production of fruits and vegetables also decreased by nearly 15 per cent. However, there was increase of 19.0 per cent in the production of sugarcane. The Real GSVA of Crop sector, thereby, is expected to decline by 23.4 per cent. With negative growth of 3.0 per cent in 'Forestry & Logging' sector as well, growth in the Real GSVA of 'Agriculture & Allied Activities' sector is expected to be (-)16.0 per cent.

Table 30: Sectoral Annual Growth Rate of Real GSVA and Real GSDP

Sector	Growth Rate (%)			
	2012-13	2013-14	2014-15	2015-16
Agriculture and Allied Activities	**(-)1.9**	**12.6**	**(-)16.0**	**(-)2.7**
i) Crops	(-)3.6	19.6	(-)23.4	(-)5.3
ii) Livestock	3.8	1.1	4.1	4
iii) Forestry and Logging	(-)1.8	(-)6.5	(-)3.0	(-)3.1
iv) Fishing and aquaculture	0.9	2	7	3.8
Industry	**5.4**	**1.2**	**6.8**	**5.9**
i) Mining & Quarrying	4	(-)20.2	22.6	2.4
ii) Manufacturing	8.4	5.7	4.6	6.2
ii) Electricity, Gas, Water supply & Other Utility Services	5.3	0.5	18.7	10.6
iv) Construction	(-)2.8	2.4	1.2	5.3
Services	**8.2**	**7**	**10**	**10.8**
i) Trade, Repairs, Hotels & Restaurants, Transport, Storage,	9.6	2.2	9	10.6

Communication & Services related to Broadcasting				
ii) Financial, Real Estate & Professional Services	8	9.4	10.2	11.2
iii) Community & Personal Services	6.4	8	10.8	9.9
GSVA (at basic prices)	**5.9**	**5.6**	**5.6**	**7.7**
GSDP	**6.6**	**6.2**	**5.8**	**8**

Source: Economic Survey Report, Maharashtra, 2015-16.
Note: Preliminary Estimate for 2012-13 and 2013-14, First Revised Estimate for 2014-15, Advance Estimate for 2015-16; GSDP=GSVA at Basic Prices

In the Industry sector, Real GSVA of 'Mining & Quarrying' is expected to increase by 22.6 per cent and that of Manufacturing is expected to increase by 4.6 per cent. Real GSVA of 'Electricity, Gas, Water Supply & Other Utility Services' is expected to grow at 18.7 per cent whereas, that of Construction sector is expected to grow at 1.2 per cent. During 2014-15, Real GSVA of Industry sector is expected to grow at 6.8 per cent over 2013-14.
In the Services sector, Real GSVA of 'Trade, Repairs, Hotels & Restaurants, Transport, Storage, Communication & Services related to Broadcasting' sector is expected to grow at 9.0 per cent whereas, that of 'Financial, Real Estate & Professional Services' sector is expected to grow at 10.2 per cent. Thus, during 2014-15, Real GSVA of Services sector is expected to grow by 10.0 per cent over the previous year. Table 3.1 depicts sectoral annual growth rates of Real GSVA (at basic prices) and Real GSDP.

3.5.1 State Income

First revised estimates of Net State Domestic Product (NSDP) at current market prices is estimated at Rs.15,72,037 crore in 2014-15, as compared to Rs.14,50,003 crore in 2013-14 showing an increase of 8.4 per cent. The NSDP at constant (2011-12) market prices in 2014-15 is estimated at Rs.13,29,308 crore, showing an increase of 5.3 per cent over previous year. The Per Capita Net State Income (Per Capita NSDP) at current prices is estimated at Rs.1,34,081 during 2014-15 as compared to Rs.1,25,146 during 2013-14, depicting growth of 7.1 percent over the previous year.

Table 31: Region wise Per Capita income, Excluding Mumbai (2008-09 to 2011-12)

S. No.	Region	Per Capita Income (Rs.)	Distance from Average of Top 3 Districts	Proportions/Regional Share Percent to Total
1	Vidarbha	57,079	49,859	0.38
2	Marathwada	49,653	57,285	0.43
3	Rest of Maharashtra	81,719	25,218	0.19

Source: Report of the High-Level Committee on Balanced Regional Development Issues in Maharashtra, Planning Department, Govt. of Maharashtra, 2013.

Per capita income by regions of the state reveals that highest per capita income is in Rest of Maharashtra region (Rs., 81, 719; Rank 1) followed by Vidarbha (Rs.57, 079; Rank 2) and Marathwada (Rs.49, 653; Rank 3) is having the lowest per capita income.

Among the project districts, Aurangabad is having the highest per capita income (Rs.74,769, Rank 1) followed by Jalgaon (Rs.62,575, Rank 2) and Wardha (Rs.56,511; Rank 3). The districts that are having lowest in per capita income are Hingoli (Rs.36,746; Rank 15) followed by Nanded (Rs.41,581, Rank 14) and Buldhana (Rs.41,974; Rank 13). Average Net District Domestic Product (NDDP) and per capita income of the project districts are presented in Table No. 32.

Table 32: District wise Per Capita Income (2008-09 to 2011-12) (at Current Price)

S. No.	District	Average NDDP (Rs. Lakh)	Average Population	Per Capita Income (Rs.)	District Rank by Per Capita Income
1	Akola	9,58,828	18,40,427	52,098	5

S. No.	District	Average NDDP (Rs. Lakh)	Average Population	Per Capita Income (Rs.)	District Rank by Per Capita Income
2	Amravati	15,48,800	29,28,252	52,892	4
3	Aurangabad	25,32,252	33,86,788	74,769	1
4	Beed	10,72,338	24,33,882	44,059	10
5	Buldhana	10,50,013	25,01,550	41,974	13
6	Hingoli	4,07,231	11,08,224	36,746	15
7	Jalgaon	25,96,055	41,48,689	62,575	2
8	Jalna	8,33,500	18,26,076	45,644	9
9	Latur	10,79,263	23,47,720	45,971	7
10	Nanded	13,46,934	32,39,324	41,581	14
11	Osmanabad	7,19,821	16,40,195	43,886	11
12	Parbhani	8,11,705	17,46,934	46,465	6
13	Wardha	7,68,565	13,60,021	56,511	3
14	Washim	4,98,055	11,42,644	43,588	12
15	Yavatmal	12,48,342	27,28,327	45,755	8
	Maharashtra	**6,77,17,636**	**9,68,04,561**	**69,953**	
	Marathwada	**8803044**	**17729143**	**49653**	
	Rest of Maharashtra	**45698398**	**55921177**	**81719**	
	Vidarbha	**13216194**	**23154242**	**57079**	
	Maharashtra	**67717636**	**96804561**	**69953**	

Source: Report of the High-Level Committee on Balanced Regional Development Issues in Maharashtra, Planning Department, Govt. of Maharashtra, 2013.

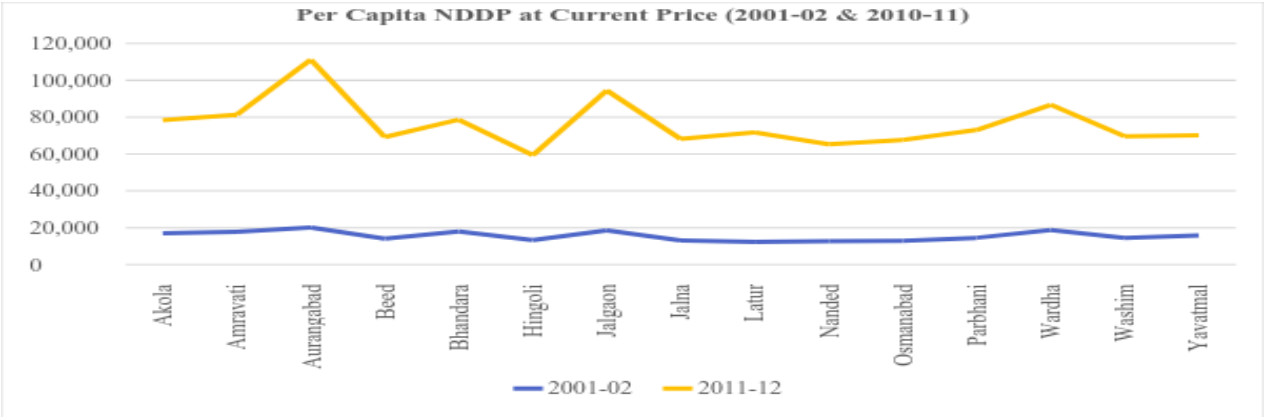

Figure 9: Per Capita NDDP at Current Price
Source: Maharashtra Human Development Report, 2012

In all the project districts, per capita NDDP (at current price) has increased during 2011-12, in comparison to 2001-02. In terms of per capita NDDP, Aurangabad was having the Rank 1 among all the project districts in 2001-02 and the district continue to have Rank 1 during 2011-12. All other project districts reflect either ascending or descending rank during these two periods of assessment. The ranking of the districts for 2001-02 and 2011-12 is presented in the Table No. 33.

Table 33: Per Capita NDDP of Project Districts and Their Rank, 2001-02 & 2011-12

District	Per Capita NDDP			Rank	
	2001-02	2011-12	Difference	2001-02	2011-12
Akola	17,051	61,423	44,372.00	6	5
Amravati	17,795	63,467	45,672.00	5	4
Aurangabad	20,174	91,100	70,926.00	1	1

Beed	14,094	55,139	41,045.00	10	10
Bhandara	17,900	60,764	42,864.00	4	6
Hingoli	13,184	46,190	33,006.00	11	15
Jalgaon	18,601	75,956	57,355.00	3	2
Jalna	13,075	55,067	41,992.00	12	11
Latur	12,364	59,396	47,032.00	15	7
Nanded	12,742	52,583	39,841.00	14	14
Osmanabad	12,847	54,833	41,986.00	13	12
Parbhani	14,523	58,512	43,989.00	8	8
Wardha	18,672	68,085	49,413.00	2	3
Washim	14,373	55,200	40,827.00	9	9
Yavatmal	15,749	54,497	38,748.00	7	13

Source: Maharashtra Human Development Report, 2012

1. The Vidarbha and Marathwada region, where project districts are located, are having lower per capita income in comparison to the rest of Maharashtra;
2. Deficit of monsoon and unseasonal rains had an adverse impact on the agricultural sector;
3. In 2014-15 production of food grains declined by nearly 24.9 per cent over the previous year. Production of cereals and pulses also decreased by 18.7 per cent and 47.0 per cent respectively along with production of cotton (59.5 percent) and oilseeds (52.8 percent). Production of fruits and vegetables also decreased by nearly 15 percent;
4. The Real GSVA of Crop sector, expected to decline by 23.4 percent;
5. Growth in the Real GSVA of 'Agriculture & Allied Activities' is expected to be (-)16.0 percent.

3.6 GENDER AND DEVELOPMENT

"Gender" is a socio-cultural term referring socially defined roles and behaviors assigned to 'males' and 'females' in a given society. The root cause of gender inequality in Indian society lies in its patriarchy system "a system of social structure and practices in which men dominate. So, it is a desirable condition in development interventions that both male and female participate equally and project support remain equitably distributed with equal accessibility. However, the societal conditions may not be conducive equally for both male and female due to socio-cultural and historical phenomenon. In comparison to many other states of the country, status of women is marginally better in Maharashtra. The Maharashtra Economic and Human Development Indicators, reflects that the Gender Development Index (GDI) of the State is 0.677 which is higher than the GDI value of the country (0.590)[5] and the GDI rank of the State among all the States is 10. The estimated value of Gender Empowerment Measure (GEM) was 0.516 (India: 0.497) and having the rank 10 at national level.

The state is having 12.24 percent female headed households of the total households[6]. About 26.84 percent women headed households earn their livelihood from agriculture whereas 52.62 percent from manual casual labour. Domestic service as a means of livelihoods is for 4.04 percent women headed households. Remaining percentage of women headed households are engaged in other livelihood activities. Further, monthly income of highest earning member of the family in women headed household remains to be less than Rs.5,000/- in 82.20 percent women headed households.

So, it becomes imperative for the project to develop a strategy by which there will be greater association of women in activities that helps to develop their socio-economic condition. The

[5] Estimated in 2006, UNDP

[6] Socio-Economic and Caste Census, Maharashtra

inclusive strategy of the project looks for a greater involvement of women segment through appropriate measures. This section, presents two important aspects from gender perspective that are contextually relevant, i.e., work participation of male and women and their level of education.

3.7 TRIBAL COMMUNITIES

Maharashtra is having sizeable number of tribal population, which comprises 9.4 percent of the total population of the state. Of the total population of the state, there are 1, 05, 10,213 reported as Scheduled Tribe, of which 53, 15,025 are males and 51, 95,188 are females. In between two census periods, i.e., 2001 and 2011, the state has added 19, 32,937 tribal population (census 2011).

Table 34: Tribal Population in Maharashtra

Population	2001	2011	Variance	Growth Rate
Persons	8577276	10510213	1932937	22.5
Males	4347754	5315025	967271	22.2
Females	4229522	5195188	965666	22.8

Source: Census of India, 2011

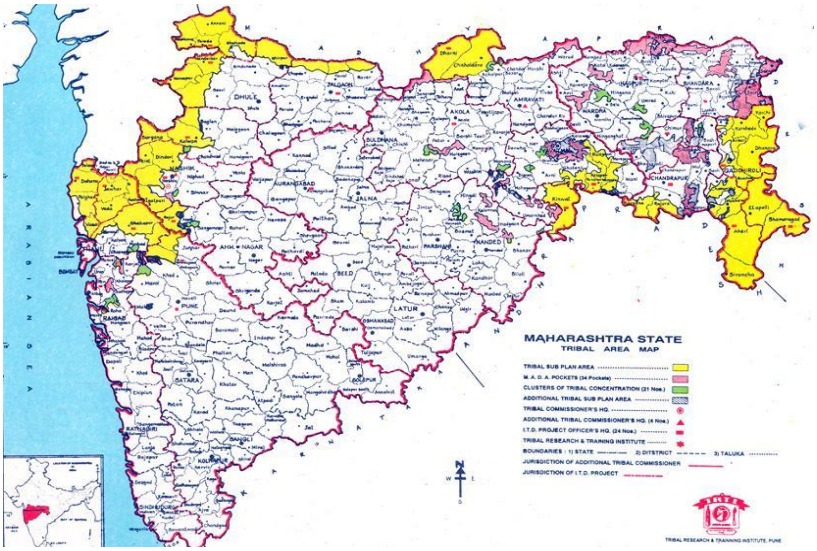

Figure 10: Tribal Area Map of Maharashtra

The State is having total Scheduled Tribe population of 1,05,10,213, of which 53,15,025 are males (50.57 percent) and 51,95,188 are females (49.43 percent) (census 2011). The tribal population during the decade has increased by 19,32,937 during 2001-11. The growth rate for ST population during 2001-11 stands to be 22.5 percent and their proportion in total population of the state stands at 9.4 percent (census 2011) against 8.9 percent in 2001. The district Nandurbar has the highest proportion of ST population with 69.3 percent followed by Gadchiroli (38.7 percent), Dhule (31.6 percent) and Nashik (25.6 percent).

Table 35: Population of Scheduled Tribes in Maharashtra, 2001 and 2011

Population	2001	2011	Variation	Growth Rate
Persons	8577276	10510213	1932937	22.5
Male	4347754	5315025	967271	22.2
Female	4229522	5195188	965666	22.8

Source: Census of India, 2011; (in Millions)

Among the project districts, Yavatmal has the highest proportion of tribal population (18.5 percent), followed by Jalgaon (14.3 percent), Amaravati (14.0) and Wardha (11.5 percent). Lowest proportion of tribal population is in Beed (1.3 percent) followed by Jalna (2.2 percent), Parbhani (2.2 percent) and Osmanabad (2.2 percent). Proportion of tribal population to total population of the project districts is presented in the Table (*Table No. 36*).

Table 36: Population Proportion of SC & ST, 2011

S. No.	District	Proportion to Total Population					
		Scheduled Caste			Scheduled Tribe		
		Rural	Urban	Total	Rural	Urban	Total
1	Akola	23.2	15.4	20.1	7.8	2	5.5
2	Amaravati	18.7	15.5	17.5	19.9	3.4	14
3	Aurangabad	11.9	18.1	14.6	5.7	1.6	3.9
4	Beed	13.5	14.1	13.6	1.3	1.2	1.3
5	Buldhana	19.4	13.8	18.2	5.7	1.6	4.8
6	Hingoli	16.2	11.6	15.5	10.7	2.9	9.5
7	Jalgaon	9.3	9.1	9.2	18.6	5	14.3
8	Jalna	14.3	12.2	13.9	2.3	1.7	2.2
9	Latur	20.2	17.8	19.6	2.6	1.5	2.3
10	Nanded	19.3	18.3	19.1	9.9	4.4	8.4
11	Osmanabad	16.1	15.6	16	2.2	2.1	2.2
12	Parbhani	13.6	13.1	13.5	2.5	1.5	2.2
13	Wardha	13.1	17.5	14.5	14.3	5.8	11.5
14	Washim	20.3	13.8	19.2	7.9	1.5	6.7
15	Yavatmal	11.5	13.2	11.8	21.8	6.7	18.5
	Maharashtra	**12.2**	**11.4**	**11.8**	**14.6**	**3.0**	**9.4**

Source: Census of India, 2011;

The growth rate for ST population during 2001-11 stands to be 22.5 per cent and their proportion in total population is 9.4 percent against 8.9 percent in 2001. The state is having only one scheduled district (more than 50.0% ST population) and 3 districts where tribal population is 25.0 percent to 50.0 percent. At district level Nandurbar has the highest proportion of ST population with 69.3 percent followed by Gadchiroli (38.7 percent), Dhule (31.6 percent) and Nashik (25.6 percent). The project districts do not fall into scheduled district category, i.e., more than 50.0 percent tribal population or to the district category of 25.0 percent to 50.0 percent tribal population.

The state has 59 scheduled tehsils, of which thirteen tehsils are in the project area. Jalgaon district has three tehsils, two in Nanded and seven tehsils are in Yavatmal district.

Table 37: Scheduled Tehsils in Project Districts

S. No.	Scheduled Tehsils	District	S. No.	Scheduled Tehsils	District
1	Palghar	Thane	32	Akole	Ahmednagar
2	Vasai (Bassein)	Thane	33	Ambegaon	Pune
3	Bhiwandi	Thane	34	Junnar	Pune
4	Murbad	Thane	35	Kinwat	Nanded
5	Dahanu	Thane	36	Mahur	Nanded
6	Talashree	Thane	37	Maregaon	Yavatmal
7	Mokhada	Thane	38	Ralegaon	Yavatmal
8	Jawahar	Thane	39	Kelapur	Yavatmal
9	Vada	Thane	40	Ghatanji	Yavatmal
10	Shahapur	Thane	41	Vani	Yavatmal
11	Vikramgarh	Thane	42	Jharijamani	Yavatmal
12	Peth	Nashik	43	Anni	Yavatmal

S. No.	Scheduled Tehsils	District	S. No.	Scheduled Tehsils	District
13	Surgana	Nashik	44	Chikaldhara	Amravati
14	Kalawan	Nashik	45	Dharini	Amravati
15	Dindori	Nashik	46	Edapalli	Gadchiroli
16	Igatpuri	Nashik	47	Sironcha	Gadchiroli
17	Nasik	Nashik	48	Aheri	Gadchiroli
18	Baglan	Nashik	49	Dhanura	Gadchiroli
19	Traimbakeswar	Nashik	50	Urkheda	Gadchiroli
20	Dewla	Nashik	51	Bhamragarh	Gadchiroli
21	Sakri	Dhule	52	Kurchi	Gadchiroli
22	Shirpur	Dhule	53	Gadchiroli	Gadchiroli
23	Nawapur	Nandurbar	54	Armori	Gadchiroli
24	Taloda	Nandurbar	55	Chamorshi	Gadchiroli
25	Akalpuan	Nandurbar	56	Mulchera	Gadchiroli
26	Akrani	Nandurbar	57	Desaiganj	Gadchiroli
27	Nandurbar	Nandurbar	58	Rajura	Chandrapur
28	Shahada	Nandurbar	59	Orpona	Chandrapur
29	Chopda	Jalgaon			
30	Raver	Jalgaon			
31	Yavla	Jalgaon			

3.8 HUMAN DEVELOPMENT

When the Inequality Adjusted Human Development Index (IHDI) is considered, Maharashtra falls in the medium HDI category in terms of the international classification of countries. Amongst the states in India, it emerges as a state with very high human development both before and after adjustments for inequality. The human development indicators across districts shows that the inequalities prevail in the status of all the four human development indicators, i.e., income, literacy ratio, GER and IMR (*Table No. 38).*

Table 38: Human Development Indicators of the State by District, 2011

District	Total Literacy Rate		GER		IMR		PCDDP at Constant Price (1999-2000)	
	2001	2011	2001	2011-12	2001	2007-08	2001	2007-08
Akola	81.4	87.6	67.0	85.6	44	28	15,822	24,055
Amravati	82.5	88.2	69.7	86.0	61	59	16,211	21,804
Aurangabad	72.9	80.4	80.1	82.2	51	44	19,539	30,690
Beed	68	73.5	82.2	90.4	43	33	14,398	21,013
Buldhana	75.8	82.1	65.4	87.6	49	34	10,729	19,487
Hingoli	66.3	76	76.4	78.7	54	50	11,203	18,286
Jalgaon	75.4	79.7	69.7	88.2	50	48	16,580	28,939
Jalna	64.4	73.6	71.9	83.7	56	48	11,458	20,565
Latur	71.5	79	89.4	91.1	50	53	11,811	17,674
Nanded	67.8	76.9	73	80.3	57	30	11,022	18,155
Osmanabad	69	76.3	75.7	81.9	47	50	13,011	17,847
Parbhani	66.1	75.2	74.8	86.3	50	51	12,934	23,146
Wardha	80.1	87.2	67.3	87.9	51	62	16,955	26,130
Washim	73.4	81.7	66.3	88.0	52	46	10,152	14,885
Yavatmal	73.6	80.7	70.3	84.9	61	47	13,562	24,118
Maharashtra	**76.9**	**82.9**	**72.8**	**85.4**	**47**	**44**	**21,892**	**35,033**

Source: Maharashtra Human Development Report, 2012

Note: Highlighted Districts are Project Districts; PCDDP: Per Capita District Domestic Product

Human development in the state has improved over time (2001 and 2011). Between 2001 and 2011, the aggregate HDIs show an improvement across districts. There are few districts with higher HDI values. But, the range between the extreme HDI values has not changed much. Thus, the disparity in HDI among the progressive and backward districts still persists. Progress in general seems to have been greater at the lower end than at the higher end of districts when ranked by the HDI. The districts of Nandurbar, Gadchiroli, Jalna, Hingoli and Washim show greater improvement in the HDI values than progressive districts such as Pune, Mumbai, Thane and Kolhapur (*Table No. 39*).

Table 39: HDI of Districts of the State, 2001 and 2011 and their Category

District	HDI 2001	Relative Category	District	HDI 2011	Relative Category
Nandurbar	0.513	Low	Nandurbar	0.604	Low
Gadchiroli	0.538		Gadchiroli	0.608	
Jalna	0.554		Washim	0.646	
Washim	0.554		Hingoli	0.648	
Nanded	0.558		Osmanabad	0.649	
Hingoli	0.561		Nanded	0.657	
Buldana	0.567		Jalna	0.663	
Parbhani	0.578		Latur	0.663	
Dhule	0.579		Dhule	0.671	
Osmanabad	0.588	Medium	Beed	0.678	Medium
Yavatmal	0.592		Parbhani	0.683	
Latur	0.595		Buldana	0.684	
Beed	0.606		Yavatmal	0.700	
Gondiya	0.617		Gondiya	0.701	
Bhandara	0.623		Amravati	0.701	
Jalgaon	0.624		Bhandara	0.718	
Solapur	0.624		Chandrapur	0.718	
Ahmednagar	0.626	High	Ahmednagar	0.720	High
Ratnagiri	0.629		Akola	0.722	
Akola	0.631		Wardha	0.723	
Amravati	0.633		Jalgaon	0.723	
Wardha	0.634		Aurangabad	0.727	
Chandrapur	0.637		Solapur	0.728	
Aurangabad	0.65		Ratnagiri	0.732	
Nashik	0.652		Satara	0.742	
Satara	0.661	Very High	Sangli	0.742	Very High
Sindhudurg	0.667		Nashik	0.746	
Sangli	0.67		Sindhudurg	0.753	
Kolhapur	0.678		Raigarh	0.759	
Nagpur	0.691		Kolhapur	0.770	
Raigarh	0.717		Nagpur	0.786	
Thane	0.721		Thane	0.800	
Pune	0.722		Pune	0.814	
Mumbai	0.756		Mumbai	0.841	
Maharashtra	**0.666**		**Maharashtra**	**0.752**	

Source: Maharashtra Human Development Report, 2012
Note: Highlighted Districts are Project Districts

Arranged in terms of the HDI, Gadchiroli and Nandurbar maintain the lowest HDI values in both 2001 and 2011. The districts of Nandurbar, Gadchiroli, Jalna, Hingoli, Nanded, Washim and Dhule remain in the low human development quartile in both the years, despite showing improvements in HDI values over 2001–11. At the other extreme, Mumbai, followed by Pune, Thane, Nagpur, Kolhapur, Raigarh, Sindhudurg and Sangali show very high HDI values for both years, staying in the very high human development quartile. The movements across HDI quartiles also reflect that despite all districts showing improvements, there are some districts that have performed relatively better, and others that have not managed to perform as well and may have moved down in relative quartile positioning, although they have shown a positive change. Districts that have improved their relative HDI categorization include Nashik from the high to the very high HDI quartile; Solapur and Jalgaon from the medium to the high human development quartile; Buldhana and Parbhani from the low to the medium human development quartile. In the human development front, all the project districts are below the state average[7]. Though, there is an increment in human development aspects during the year 2012 in comparison to the year 2001, still, average progress of many project districts is less than some of the other districts (non-project districts) of the State like Raigad (HDI value 0.76, year 2012) and Kolhapur (HDI value 0.77, year 2012). Human Development Index (HDI) of the Project Districts is presented in the table (*Table No. 40*).

Table 40: Human Development Index of Project Districts

S. No.	District	HDI 2001	HDI 2012	Difference 2001 and 2012	Difference in Comparison to State
1	Akola	0.65	0.73	0.08	0.03
2	Amaravati	0.65	0.71	0.06	0.05
3	Aurangabad	0.66	0.74	0.08	0.02
4	Beed	0.62	0.70	0.08	0.06
5	Buldhana	0.64	0.72	0.08	0.04
6	Hingoli	0.57	0.66	0.09	0.10
7	Jalgaon	0.64	0.73	0.09	0.03
8	Jalna	0.57	0.68	0.11	0.08
9	Latur	0.61	0.68	0.07	0.08
10	Nanded	0.57	0.67	0.10	0.09
11	Osmanabad	0.60	0.66	0.06	0.10
12	Parbhani	0.59	0.70	0.11	0.06
13	Wardha	0.65	0.72	0.07	0.04
14	Washim	0.58	0.66	0.08	0.10
15	Yavatmal	0.61	0.71	0.10	0.05
	Maharashtra	**0.68**	**0.76**	**0.08**	

[7] As per Human Development Index, 2012

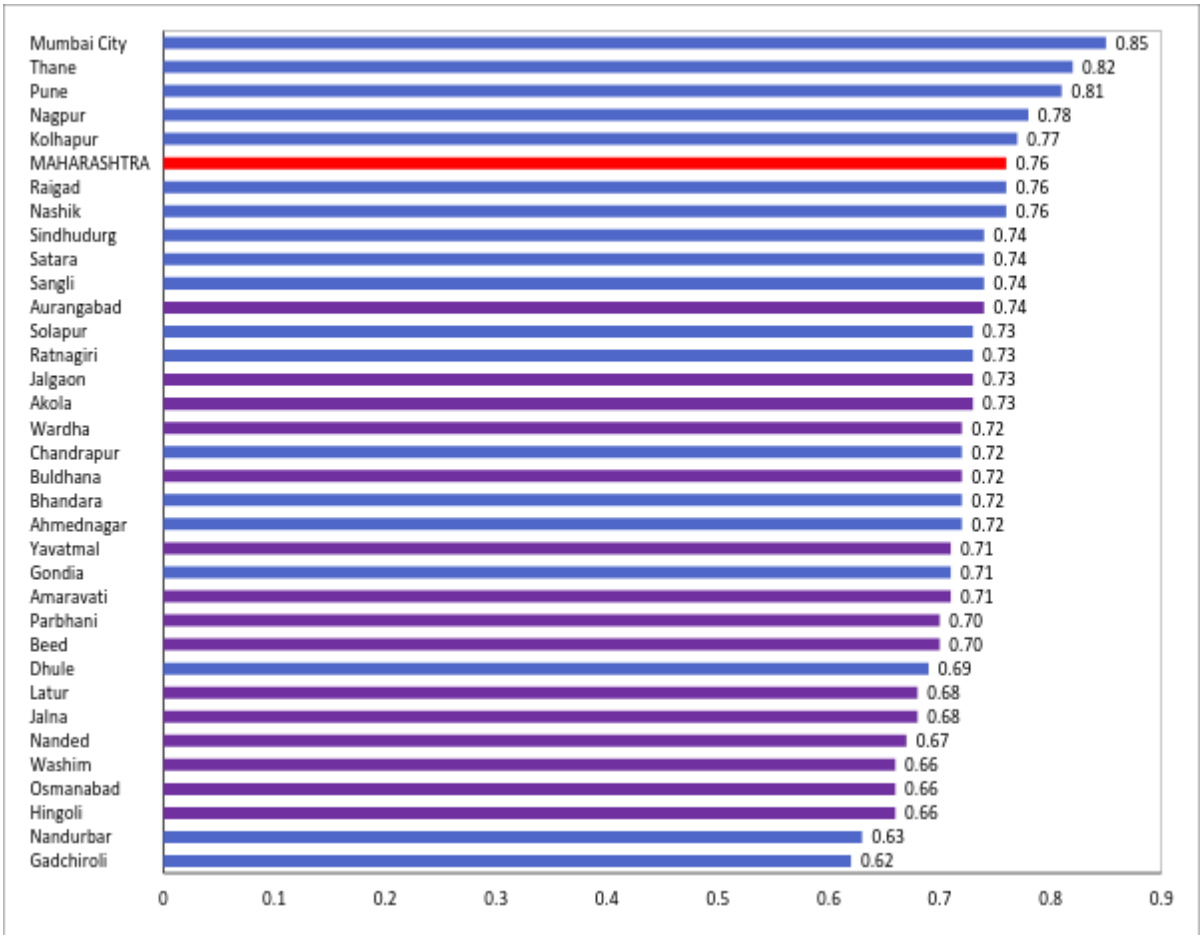

Figure 11: Human Development Index Map of Districts of Maharashtra

3.9 SUMMARY OF KEY SOCIAL ISSUES

The aforementioned discussion reveals that in some fronts of socio-economic development, the State has been performing well. However, in some aspects, the performance of the state has been below that of some other states. The baseline analysis points to the following key areas which are having implications for the project.

1. Fluctuations in growth rate of agriculture and allied activities where more than 50% are dependent for livelihood;
2. Reduction in average land holding size in different holding categories. There is an increment in percentage of marginal farmers by 5.91 percentage point and their total holding has also increased by 3.69 percentage point. However, there is decrease in percentage farmers in other holding categories. With reduction in operational holding categories among small, semi-medium, medium and large farmers, there is reduction in average size of holding in all categories, except small farmers;
3. Declining agricultural performance has been one of the major contributors for increasing agrarian distress;
4. The project districts falling under Marathwada and Vidarbha region have lower per capita income in comparison to the rest of Maharashtra region;

5. Although the State of Maharashtra is progressing in literacy, still, it is low in comparison to literacy rate of some other states of the country[8]. Especially, literacy Rate of tribal population is further low in comparison to other social categories (65.7 percent);
6. Literacy rate of female is low in comparison to their male counterpart in all the social categories, including tribal;
7. Monthly income of highest earning member of the family in women headed household is less than Rs.5,000/- in 82.20 percent cases;
8. Human Development Index covers important social development parameters, i.e., education, health and income. Low HDI value of many project districts in comparison to the State indicates low social and economic status of the people of the districts where the project is planned for implementation;
9. The HDI values of districts where tribal concentration is relatively high has been low in comparison to districts where tribal concentration is low.
10. The GDI value of the State reflects that it is relatively low in comparison to some other states of the country and achievement is average;
11. Gender gap in work participation rate is quite eminent. While decadal growth (2001 to 2011) in work participation rate of male has been 2.7 percentage point, in case of female it has been 0.3 percentage point.

Based on the analysis, it becomes important to consider three critical aspects in the context of the project and for the social management framework, i.e.,(1) Improvement in low cost input agriculture and promotion of alternate livelihood (2) gender development and (3) Inclusion of marginalized section, more particularly the SC/tribal communities.Keeping in view the current scope of the project, engagement and employment will be more related to agriculture and allied sectors, including off-farm engagement.

Gender development components can be taken up mostly in economic front focusing more on women farmers and their association in the agricultural value chain and supply chain management. Scope of development of tribal people can be based on their association in farm and allied sectors. As the project focus is on agriculture and natural resource management, it will benefit directly to the farming community of different social and economic groups and indirectly to all the communities of the project area. Improvement in ecosystem services will be helpful to all in the project areas, including people those are not associated with agricultural activities directly.

Support of project for on-farm and off-farm activities will contribute in improving the engagement of people in agriculture and agro-processing sub-sector. Secondly, the project will support women involvement in different project components in a conscious manner and improve their capacity for efficient association in value chain development and agri-business promotion. Such measures will help them to be economically better-off with improved scope of engagement. While the project intervention in Scheduled Areas will benefit the tribal farmers directly, dispersed tribal families will also be benefitted in non-scheduled areas from project induced development.

[8] Kerala:93.91 percent, Lakshadweep:92.28 percent, Mizoram:91.58 percent, Himachal Pradesh: 83.78 percent

Section IV: Stakeholder Analysis

4.1 INTRODUCTION

Stakeholder consultation is an integral part of the social assessment (SA) and provides inputs for the preparation of Social Management Framework (SMF). The overall objective of such consultations was to document the concerns of the stakeholders with specific reference to the project planned interventions. The consultation meetings were organized basically for two important purposes, i.e., (1) to share project objectives and proposed project interventions with the identified stakeholder groups and (2) to consult with the stakeholders and document their concern, with particular reference to social impacts of the proposed project interventions.

4.2 STAKEHOLDER IDENTIFICATION AND ANALYSIS

The proposed project will influence a large section of the society in the project districts. Stakeholders, identified in the process are either the individuals or group/s of individuals or their institutions in the village / project area that will be influenced by the activities of the proposed project and vice versa. Different stakeholders were identified in the process who have different stake in the project.

Table 41: Identified Stakeholders in Different Execution Levels

Project Level	**Stakeholders**	
Village / Cluster	1. Members of Village Climate Resilient Agriculture Management Committee (VCRMC) 2. Farmers: Marginal and Small Farmers 3. Medium, Semi-Medium and large farmers 4. Agricultural Laborers 5. Daily Wage Laborers 6. Farmers cultivating land alloted under FRA 7. Tribes (ST) 8. Farmers of other Marginalized Section (Scheduled Caste) 9. Farmers differently abled/ divyangjans 10. ST Women Farmers 11. Women Farmers in Other Social Categories 12. Women Involved in Agro-Enterprises 13. Persons having Processing & Value Addition Units 14. Farmers with Orchard / Horticultural Crops 15. Farmers involved in Organic Farming	16. Agriculture Extension Workers 17. Farmer Producers Companies (FPC) / Farmer Producers Organizations (FPO) 18. Members of FPCs/ FPO 19. Small Traders 20. Input Suppliers (Seeds Corporation, Pvt. Input Suppliers 21. Seed Growers (Farmers) 22. Local aggregators 23. Community Organizations (CBOs) 24. NGOs working in the locality 25. Families collecting NTFPs (seasonal) 26. Agricultural Women Workers (Landless families) 27. Traditional Tribal Groups 28. Local Ward Member
Gram Panchayat	1. Sarpanch 2. Deputy Sarpanch 3. Ward Members	4. Village Council / Gram Sabha 5. Farmer Producer Companies 6. Members of the FPCs
Tehsil	Official of Agriculture Department Officials of Irrigation Department PRI members of Tehsil Panchayat Block Technology Manager (BTM) Line Department Officials (Convergence Promotion) Input Suppliers 7. Aggregators (FPC/FIG/FPO/SHG)	8. Traders 9. Credit Institutions (formal/informal) 10. Insurance Agencies 11. APMC 12. NGOs / CBOs 13. Farmer's Associations 14. Officials of Forest Department

Project Level	Stakeholders	
Sub-Division	1.Officials of Agriculture Department 2. Research Institutions/KVKs/ATMA 3.Irrigation Department 4. Partner Agencies 5. Marketing Agency 6. Private Service Providers	7. APMC 8. NGOs 9. Input Suppliers 10. Aggregators 11. Traders 12. Agro-processing units
Project District	District Steering Committee Agriculture Department Water Resources Department Integrated Tribal Development Projects (ITDPs) Seeds Corporation Marketing Agency (Govt.) ZillaParishad / Dist. Admn. Soil Testing Labs under Ag. Dept. / SAUs	9. Credit Institutions 10. Insurance Agencies 11. Weather Information Provider 12. Traders 13. Agro-Industries 14. Farm Machinery Suppliers 15. APMC 16. Pvt. Input Suppliers 17. Forest Department / its Officials
State and National Level	Project Management Unit Department of Agriculture Department of Water Conservation Department of Water resources Department of Tribal Development State Agriculture Universities Technical Service Providing Institutions (Govt. / Pvt.) Central Research Institute for Dryland Agriculture (CRIDA) Seed Corporation Other Departments (Convergence) YASHADA Indian Institute of Science (IISc) 14. Dept. of Economic Affairs, Govt. of India	15. ICRISAT 16. ICAR and its Institutions 17. Ministry of Forest and Environment, Govt. of India 18. Ministry of Tribal Affairs, GoI 19. Pvt. Input suppliers 20. Financial Service Providers 21. Weather Information Provider 22. Insurance Companies (Crop / Weather Insurance) 23. Agro-Processing Agencies 24. Marketing Agencies 25. MSAMB 26. Different associations / organisations of farmers / traders etc.

At the village level, the beneficiary of the project will be basically the small and marginal farmers belonging to different social categories. The local FPCs and members associated with the FPC will also be directly benefitted due to the agricultural value chain development and agri-business promotion. Similarly, at the cluster level they can be associated in agri-business promotion activity. The project is having a number of stakeholders who can influence or can be influenced / benefited by the project such as agriculture universities, input supplies, weather service providers, processing and marketing agencies / agents, credit institutions, insurance service providers etc. (*Table No. 41*).

4.3 STAKEHOLDER'S CONCERNS / OPINION

1. Farmers dismantled/broke the graded bunds created in earlier WS work to reclaim more land for cultivation
2. Non-availability of Gypsum for soil amendment which is affecting agricultural production
3. Farmers engaged in Cotton, Soybean and Pigeon pea face shortage of seed supply, in particular Mahabeej seeds.
4. Shortage of Mahabeej supply compel the farmers to purchase costly seeds of the private seed companies which increased cost of cultivation.
5. In case of poor germination, it is very difficult to follow up with Mahabeej for replacement or compensation. In comparison, commercial seed company's grievance redressal is faster and quicker.

6. Zero budget farming proponents are conducting 4 days' residential orientation camps. In Latur, about 1000 farmers were attending the camp, each paying Rs. 600/- as participation fee.
7. Selection of seeds, fertilizer and pesticides and its application is a usually a result of peer pressure / motivation, desperation, lack of timely availability of advisory service on the application of fertilizer and pesticides.
8. Limited storage capacity at the household / community level. Farmers / producers cannot wait/withhold until favourable market condition is available as they need cash immediately after harvesting for making repayment to different individuals / suppliers etc.
9. Shortage of inputs at the time of need due to transportation limitation – difficult terrain and distance from the railway downloading facility and market places (interior tribal pockets).
10. Pesticides and fertilizers were hardly utilized upto 1990s. Now it has reached to such a stage that tribal farmers almost believe that farming is not possible without these inputs
11. Storage and marketing with proper rate is necessary. Tribal Development Corporation is not delivering effectively.
12. Goat rearing and poultry can be promoted for women farmers to support their current livelihoods.
13. Traditionally small but regular savings by women of the farming households plays important role in purchase of the inputs – seeds, fertilizers. In several cases the same is now facilitated by the women SHGs.
14. Agriculture extension services are poor in less accessible and distant tribal habitations.
15. Poor capital base to invest in agricultural implements.
16. Limited formal institutional credit accessibility of small / marginal holders due to factors like outstanding of earlier credits, poor asset base, and requirement of less amount of credit which bank feel not feasible etc.
17. Prevalence of informal credit system for agricultural activities, including credit based purchase of inputs from input suppliers.
18. Available weather information (information provided through SMS) is less used by the farmers as there is no guidance on type of fertilizer and pesticides to be used for different crops in different conditions and during occurrence of different diseases.
19. Local cropping pattern is more influenced by lead farmers. Other farmers follow them as far as growing different crops during different seasons is concerned. It results with high production of a crop in the locality which reduces the price of the produce.
20. Scarcity of water for irrigation remains a major constraint to meet the crop-water requirement during dry spell and post-monsoon farming. The situation is improving but limited to few farmers having land in plain areas.
21. Farmers having their land near forest area normally suffer from destruction of crops by wild animals. However, no such attack on wild animals and their killing is reported due to awareness of farmers for wild life protection.

Table 42: Key Issues / Concerns and Expectations of the Stakeholders

Stakeholders	Issues / Concerns	Expectations
Farmers (all Categories)	1. Increasing cost of cultivation, primarily due to input cost; 2. Unscientific application of fertiliser and pesticides 3. Limited storage capacity pushes farmers to sell the commodities immediately after harvesting. According to them "we Cannot wait/withhold until favourable market conditions prevail"; 4. Limited access / use of weather	1. Low cost farming is gaining interests among the farmers; 2. Timely supply of quality agri inputs and in a subsidized rate will be helpful to the small farmers; 3. Provision of institutional credit facility for the farmers; 4. Market linkage of agricultural commodities for remunerative return; 5. Provision for protective irrigation,

Stakeholders	Issues / Concerns	Expectations
	information by the farmers due to connectivity / non-relevance of information/ lack of region specific information/ no guidelines on type of fertilizer and pesticides to be used for different crops in different conditions and during occurrence of different diseases etc. 5. Limited formal institutional credit available for farmers due to various factors like outstanding debts, poor asset base, and requirement of small amount of credit etc. 6. Poor capital base to invest in agricultural implements. 7. Scarcity of water for irrigation remains a major constraint to meet the crop-water requirement during dry spell and post-monsoon farming. 8. Local cropping pattern is more influenced by lead farmers resulting in high production of a crop in the locality which reduces the market price of the produce;	particularly during dry spells; 6. Treatment of saline-sodic land through scientific approaches for higher yield; 7. Training to farmers on modern / changing methods of farming; 8. Storage infrastructure for food grains at local level; 9. Availability of farm machinery to meet the labour shortage;
Tribal Farmers	1. Shortage of inputs due to transportation limitation – difficult terrain, distance from the markets; 2. Poor agriculture extension services in less accessible and distant tribal habitations; 3. Ineffective marketing system of local commodities 4. Credit accessibility and essential loan amount for small / marginal holders are difficult; 5. Poor capital base to invest in agricultural implements. 6. Scarcity of water for irrigation remains a major constraint during dry spell and post-monsoon farming.	1. Storage of agricultural commodities and its marketing with remunerative price is necessary; 2. Agriculture supportive livelihood activities like animal husbandry, small primary processing units will be helpful; 3. Requirement of local storage facility, especially for inputs (seeds, fertiliser and pesticides) so that farmers can get the inputs on time with less cost; 4. Promotion of farmer's collectives in tribal areas that are at a distance from the main market places; 5. Land development / levelling work will help the farmers; 6. Improvement in market accessibility is highly desirable as local market does not provide good prices;
Women Farmers	1. Involvement of women is limited in decision making process for community works, village planning, gram sabha meetings. 2. Women farmers are mostly engaged in all farming activities except ploughing, but there is non availability of women friendly agricultural equipment. 3. Need for drudgery reduction programme on farm and allied sector. 4. Less wage rate of women workers / ag. Labourers; 5. Challenges lying in marketing of	1. There is need for special provisions for active involvement of women in gram sabha/ village planning. 2. Need to work on research and designing module or to involve those institution that are manufacturing women's friendly agri- equipment. 3. Introduction of those alternative livelihood activities which can be easily adopted by women farmers/ women. 4. Adoption of integrated farming approach to enhance the household

Stakeholders	Issues / Concerns	Expectations
	agricultural commodities by women farmers; 6. Requirement of improving the land quality, especially lands given under FRA.	income and improve the socio-economic status of the family. 5. Women SHGs can be involved in agricultural activities (processing, credit delivery etc.); 6. Awareness on precautions to be taken to avoid adverse effects of pesticides;
Input Suppliers	1. Reducing demand of fertilizer (last year) due to consecutive drought; 2. Though soil testing for fertilizer use is essential, still it is not being used effectively; 3. Input dealers are the major influencers in terms of application of different fertilizer and pesticides and its doses; 4. In case of seed quality issues response from government is not as expected.	1. Seed village is a possibility which can be done circle wise within a block; 2. Farmers may be motivated to use their own seeds. 3. Motivating farmers for appropriate application of fertiliser through soil testing; 4. Input suppliers may be involved in supply of climate resilient seed varieties. 5. Need to promote seed bank practice.
APMCs	1. Majority of farmers prefer to sell their produce immediately after harvesting to meet cash requirement; 2. Sometimes, storage in the APMC yard becomes problem, especially during peak selling season.	1. APMC is having its own infrastructure for storage which can be enhanced further; 2. Price fluctuation is regulated within the APMC market and price of commodities as per its grade is fixed based on norm.

Section V: Opportunity and Challenges

The agriculture sector in the State of Maharashtra having its own strengths and weaknesses which are more related to climatic factors, soil and its quality, practices adopted by farmers, consumption of synthetic fertilizer and pesticides and overall sector growth strategy taken up by the State. The externalities like Opportunities and Threats are also have bearing to a large extent to the aforementioned aspects, but also linked to implementation strategies, agricultural policy and the gaps in perspective that required to be bridged.

5.4.1 Turning Opportunities to Strength

5.4.1.1 Scope of Increasing Horticulture Crops and its Processing

Selected project districts provide adequate potential to promote vegetables and fruit cops in different villages / clusters. The trend also reflects that farmers are gradually taking up such crops and opportunities for improvement exists encouraged to take up such crops when the critical gaps are filled and promotional inputs are provided.

5.4.1.2 In-situ Soil and Moisture Conservation

The selected project area having greater scope for in-situ soil and moisture conservation, looking at the drought proneness, water scarcity and degrading soil quality. In-situ soil moisture conservation will help to improve soil-moisture regime and hence support for improved production and productivity and related farm income for small and marginal farmers.

5.4.1.3 Groundwater Recharge Potential

Ground water development activities are gradually increasing in the districts and expected to pose threat in coming years with regard to availability of groundwater for irrigation. Apart from environmental concerned, it is also having direct implication on availability water for irrigation. Areas where groundwater is used for irrigation may become scarce and it may affect the agricultural activities. So, recharging ground water will help to small and marginal farmers to take up different crops during water scarcity period or during dry spells.

5.4.1.4 Scope for Seasonal Crops like Cotton, Tur, gram and safflower

Certain areas provide good scope for crops like Cotton. Tur, Gram and Safflowers whereas in other areas it is already cultivated in large scale. Based on the persisting scope for taking up such crops, farmers feel it can add value to their agricultural income.

5.4.1.5 Increasing Protective Irrigation by Creating Water Storage Structures

It is a desirable condition for most of the farmers to have their water storage structure, in shape of farm ponds so that available water can be utilized to provide protective irrigation to standing crops in dry spell conditions. Marginal and small farmers with low investment capacity require support to have such structures.

5.4.1.6 Intercropping

Intercropping has been adopted by selected farmers and has been proved to be beneficial to optimize their agricultural income. Such demonstrative practices provide potential for extension and its adoption by marginal and small farmers.

5.4.1.7 Scope for Agro-Horticulture, Agro-Forestry Farming System

These farming systems / models are already demonstrated and scope exists for its wider replication in suitable conditions, with the involvement of marginal and small farmers.

5.4.1.8 Scope for Renovating / Creating Water Bodies for Irrigation

The existing water bodies can be renovated and new water bodies can be taken up for water conservation / rain water harvesting and its utilization during dry spells.

5.4.1.9 Scope for Agro-Processing Units

Some of the project districts provide tremendous scope for establishing agro-processing units for value addition. Tapping this scope will help to small producers to improve their share of market price.

5.4.1.10 Promotion and Strengthening FPCs

Farmer Producer Companies have been successfully promoted in different districts. They have been involved in different agri-processing activities and have been supporting to farmers. This create a scope to replicate this institutional model in other places and equip them with required management and marketing skills to improve market share of small and marginal farmers.

5.4.1.11 Promotion of Agricultural Technologies and Agronomic Practices

The State has demonstrated positive impacts of different agricultural technologies and benefits of adoption of recommended package of practices. Such practices not only help improve better production bit also minimizes cost of production. It is important that such practices are promoted in large scale and tested practices are to be popularized among the farmers for adoption.

5.4.1.12 Farm Mechanisation

Increasing reduction in availability of agricultural labour force is a reality which demands adoption of mechanical options to perform different agricultural functions. While demand for farm mechanization is improving, low investment capacity of small and marginal farmers keep them away from availing the benefits of mechanization. It requires a system

5.4.1.13 Promotion of Quality Seed Varieties and its Timely Supply

It has been an issue with farmers, mostly in poorly accessible areas. It is important that quality seeds are available with farmers on time for sowing, in view of the weather condition. Apart from this, it is also equally important that drought resistance, saline resistance (for saline sodic tracks) and short duration seeds can be helpful for the farmers to harvest a good return.

5.4.1.14 Area Treatment Approach

Watershed based area treatment approach has been proved to be beneficial to improve soil-moisture, reduce water runoff and reduce topsoil erosion. Area treatment approach taken in different watersheds of the country proved to be beneficial and demonstrated improved return to the farmers. Such learnings can be adopted in the current project to improve climate resilience of agriculture sector.

5.4.1.15 Promotion of Minor Millets

Minor millets have been cultivated in scheduled areas and has been providing food security to tribes. The Scheduled Areas provide potential to improve minor millets production rather it can be said that it needs revival measures. Government has been taking certain initiatives in this regard and provides scope for consolidation.

5.4.1.17 INM / IPM and Organic Farming System

Increasing use of synthetic fertilizer and pesticides is observed in many project districts which are not in accordance to the prescribed norms. Secondly, such applications increase the cost of cultivation and reduce price recovery. This creates scope for promotion of INM / IPM and its

improve adoption by the farmers. Organic farming is another opportunity which can be explored in a large scale. It will minimize the cost of cultivation and improved return to the farmers due to increased demand in the market for organic food products.

5.4.2 Challenges

5.4.2.1 Technical Aspects

Leaving current practices and adopting scientific agronomic practices by marginal and small farmers may require repeated follow-up, extension services, exposure visits and periodic knowledge based inputs. In saline sodic track, the nature of challenge will be different from the other areas.

5.4.2.2 Institutional Aspects

Key institutional challenges that the project may encounter are like (1) fostering convergence by bringing in interdepartmental coordination, (2) bringing equitable and inclusiveness in the local institutional structures such as VCRMC (a community based organisation representing different interest groups with focus on vulnerable sections of the village, including women. The members of the VCRMC would be appointed by the Gram Sabha and it would act as a sub committee of the Gram Panchayat, VCRMC will be the basic building blocks to plan and undertake climate adaptation measures at the village level) and Cluster Committee, (3) building project perspective across different institutions that have significant stake in the project, (4) improving project governance in a decentralized manner and making it accountable

5.4.2.3 Sustainability

Ensuring sustainability of the project inputs beyond the life of the project by making necessary institutional and financial arrangements and making the operation self-sustaining.

5.5 Issues of Significance for the Project

5.5.1 Issues in Specificity

Need Prioritization and Inclusion of need of Marginal and Small farmers: As the project, will benefit directly to the farmers, it may happen that interest of big farmers may impact upon the small and marginal farmers. Their accessibility to the project created resources may be limited.

Accessibility to farm machinery by share croppers / lease holders: The project intends to promote farm mechanization by establishing custom hiring centres (CHC). It is apprehended that sharecroppers / lease holders may not be given due importance to hire / access farm machinery:

Protective Farming System: The backend subsidy provision may not be of interest of small and marginal farmers in incurring upfront investment and any delay in direct benefit transfer may impact them negatively.

Adoption of INM / IPM: Farmers with low level of operational holdings may not be interested to adopt the INM / IPM due to time and cost factors (it is perceived that such scientific practices will enhance farm level engagement period and may cost them high.

Adoption of water use efficiency enhancing instruments: Accessibility of small and marginal farmers to micro irrigation systems may be limited due to initial investment requirement and fragmented land parcel.

Existence of FPCs: Inaccessible / poorly accessible pockets may not have FPOs / FPCs which may limit / delay execution of certain project activities like agro-processing and value addition activities.

Establishment of Post-Harvest Infrastructure / Processing Units: Establishment of such units in interior / inaccessible clusters will remain an issue and may require additional investment.

Management of Seed Supply Chain: Interior tribal areas / villages near forest may be paid less attention due to conveyance / Monitoring issues and cost of transportation.

Seed Multiplication: Certain project locations may not have existing FPCs which will restrict involvement of farmer's association in seed multiplication process.

5.5.2 Tribal and Women Participation

Engagement of FPCs for Seed Multiplication, Processing and Marketing: Tribal habitations may not have FPCs which may restrict their association in seed multiplication process.

Establishment of Custom Hiring Centre (CHC): Availability of suitable land (non-agricultural) for establishment of CHC may remain a challenge.

Protective Farming: The backend subsidy provision may not be of interest for small and marginal tribal farmers in incurring upfront investment and any delay in direct benefit transfer may impact them negatively. In a dispersed tribal community, their inclusion may remain a challenge.

Farm Ponds: Initial Investment for the construction of individual farm ponds may remain an issue.

Promotion of micro irrigation system: Accessibility of small and marginal tribal farmers to micro irrigation systems may be limited due to initial investment requirement.

Establishment of aggregation / Grading and packing units: Establishment of such units in interior / inaccessible tribal villages / scattered tribal hamlets may remain a challenge with regard to operational feasibility.

Coverage of farmers with Land under FRA: As some tribal farmers are yet to be issued ROR for the land alloted under FRA, their coverage under different project provisions may be limited.

Establishment of Godowns /warehouse: Establishment of such units in interior / inaccessible tribal villages / scattered tribal hamlets may remain a challenge from operational point of view.

Formation of Climate resilient committee (Cluster): Participation / membership of tribal members in the committee

Mapping women farmer's preferences / needs: Capturing needs of women farmers and their seed preferences

Women membership in FPC and their active involvement: Active involvement of women farmers in FPCs may be constraints due to current nature of engagement in different economic / non-economic activities.

Engagement of women in value addition activities: Involvement of women farmers in value chain development and management may be limited.

5.6 PERCEIVED IMPACT ON BENEFICIARIES

1. The proposed measures under the project will benefit small and marginal farmers in general and women and tribal farmers in particular. The inclusion strategy adopted by the project will be helpful to the deserving target mass.

2. The VCRMC, as a people's platform at village level, will look into active participation of marginalized section in the project planning and execution process. It will ensure that people participate in the local planning process and suggest solution to the issues that pertain to agriculture and its resilience to climate variability. Implementation of activities, based on the local planning will help to bring ownership of the community and sustenance of the process.

3. In the less accessible tribal areas, creation of agricultural infrastructure will improve people's accessibility to the facility. Agro-processing and storage facility will be helpful to the tribal farmers to have a higher return of their produce with minimized distress sale.

4. Promotion of integrated farming system will be helpful to vulnerable families for improving their livelihood. Further, apiculture and sericulture will be beneficial for the tribal farmers in both scheduled and non-scheduled areas. This project framed activity will be helpful for women members for improving their engagement and income.

5. The landless families in an intervention cluster / village will also be benefitted due to the project, in terms of getting employment and involving themselves in activities in apiculture, sericulture and other agriculture based processing and value addition activities. The project will create a scope for them to participate in the value chain improvement and marketing. may be associated in skill development initiatives, aggregation of farm produces and marketing of produces. They may be given preference in non-land based activities.

6. The capacity building plan of the project will further improve the knowledge and skill base of the farming community and driving them towards climate resilient agricultural practices.

Type of impact by project activities are discussed in the table.

Table 43: Impact of the Project on Beneficiaries

S. No.	Stakeholders	Perceived Impact	Type of Impact (+) / (0) / (-)
1	Small & Marginal Farmers from different social groups (ST, SC & Others); Women Farmers;	1. Improved soil-moisture and carrying capacity of the cultivated land; 2. Access and use of climate resilient seed varieties and hence ensured return from agriculture; 3. Growth in agricultural productivity; 4. Improved income from agricultural engagement; 5. Improvement in soil organic matter and soil organic carbon 6. Ensured production with reduced crop loss; 7. Crop diversification / mixed farming ensure agricultural income; 8. Availability of source of water for protective irrigation; 9. Improvement in water productivity; 10. Improved irrigation coverage through micro irrigation system;	**(+)**

S. No.	Stakeholders	Perceived Impact	Type of Impact (+) / (0) / (-)
		11. Improved farm water management practices; 12. Adoption of zero-budget farming minimize cost of cultivation; 13. Improvement in soil-moisture due to on-surface run-off management 14. Better availability of groundwater for irrigation due to in-situ water conservation, artificial recharging and optimizing surface water; 15. Improved skill and knowledge base on agronomic practices and agricultural technologies; 16. Improved market share of the produces due to value addition and market linkage; 17. Improved shelf life of agricultural commodities (fruits 7 vegetables) due to cold storage facility; 18. Minimised post-harvest loss due to warehouse / storage facility; 19. Increased participation in local decision making process; 20. Improved formal credit accessibility due to guarantee / assurance by project promoted organisations; 21. Improvement in overall socio-economic condition due to better purchasing capacity.	
2	Agricultural Labourer / Daily Wage labourer / Landless	1. Creation of opportunity of employment in agricultural farms; 2. Opportunities of engagement in off-farm activities; 3. Additional days of engagement in agriculture and horticulture	**(+)**
3	Village Committee / Cluster Committee	1. Active participation of people in decentralized governance system; 2. A local platform of people to take up their own issues; 3. Improving project ownership and a greater role in project execution; 4. Assurance of quality of work due to local level monitoring by village / cluster committee; 5. Appropriate beneficiary targeting and need based intervention; 6. Bridging the gap between implementing entities and actual need of the people / villagers / community; 7. People's own platform for amicable settlement of grievances at local level;	**(+)**
4	Farmer Producer Companies	1. Farmers / producers own company which supports members and other farmers in adding value to their produces; 2. Development of agricultural produce based enterprises in the locality; 3. Higher value realization for agricultural commodities through value addition; 4. Increment in farmer share of market value of agricultural produce; 5. Financial sustainability from agri-business and income from CHCs.	**(+)**

Section VI: Institutional Assessment

The state has a variety of robust formal and informal institutions which are quite appropriate and adequate for the project delivery. At the grassroots, Gram Panchayat, lowest tier of the PIR shoulders mandatorily responsibility for all activities related to land and water. Likewise, PESA enables each village/ habitat to exercise full control of resources and decision making. The other bodies include: women self-help groups and Farmer Producers Organizations (FPO). As the project is expected to have key focus on the farmer producer organizations, the same is assessed hereunder.

6.1 Status of Farmer Producer Companies

A Producer Organisation (PO) is a legal entity formed by primary producers, viz. farmers, milk producers, fishermen, weavers, rural artisans, craftsmen. A PO can be a producer company, a cooperative society or any other legal form which provides for sharing of profits/benefits among the members. PO is a generic name for an organization of producers of any produce, e.g., agricultural, non-farm products, artisan products, etc. In some forms like producer companies, institutions of primary producers can also become member of PO. Farmer Producer Organisation is one type of PO where the members are farmers[9].

The main aim of PO is to ensure better income for the producers through an organization of their own. Small producers do not have the volume individually (both inputs and produce) to get the benefit of economies of scale. Besides, in agricultural marketing, there is a long chain of intermediaries who very often work non-transparently leading to the situation where the producer receives only a small part of the value that the ultimate consumer pays. Through aggregation, the primary producers can avail the benefit of economies of scale. They will also have better bargaining power vis-à-vis the bulk buyers of produce and bulk suppliers of inputs.

6.1.1 FPCs in Project Areas

In view of the potentials of the FPOs / FPCs to benefit its members, the project has strategically included it as a part of the intervention. The project districts are having 424 FPO/FPCs, promoted by different agencies under different schemes / programmes. Apart from SFAC and NABARD, World Bank also supported in a large scale for the formation and strengthening of FPO / FPC under MACP project. POCRA undertook an online assessment of FPO/FPCs in the project districts. Out of 424 FPO/FPCs, 148 FPO/FPCs in project districts participated in this online assessment. The study observed that about 55.0 percent FPCs are promoted by MACP whereas 9.0 percent FPCs are promoted by NABARD, 20.0 percent by SFAC and 16.0 percent are formed by the farmers directly with their own initiatives. The study reveals that the average number of members in FPC is about 481, ranging between a minimum of 10 members to more than 1000 members in the FPC.

6.1.2 Agri-business Activities of FPCs

FPO/FPCs are engaged in a number of activities such as aggregation of produces, primary processing, marketing / trading etc. Some FPCs are also engaged in value addition and seed production. Detail involvement of FPO/FPC in agribusiness activities are presented in the table.

Table 44 FPO/FPCs in agribusiness

Agribusiness	n=148	% to total
Aggregation of Produce	93	62.8%
Primary Processing	82	55.4%
Marketing/Trading	78	52.7%
Value Addition	69	46.6%

[9] Source: NABARD

Seed Production	58	39.2%
Seed Production, Processing and Marketing	64	43.2%

Majority of the FPO/FPCs are into one or more activities. Majority of the FPO/FPCs are in to aggregation of the produces. Only 39.2% are into exclusive seed production and 43.2% are into seed production and marketing. About 46.6% of the FPO/FPCs do some value addition.

6.1.3 FPCs Involvement in Field Crops

Out of 148 FPO/FPCs, majority of the FPO/FPCs deal with Soybean and pigeon pea. Sugarcane and pearl millet are least preferred by FPO/FPCs. The figure below gives an idea about the involvement of FPO/FPCs in field crops.

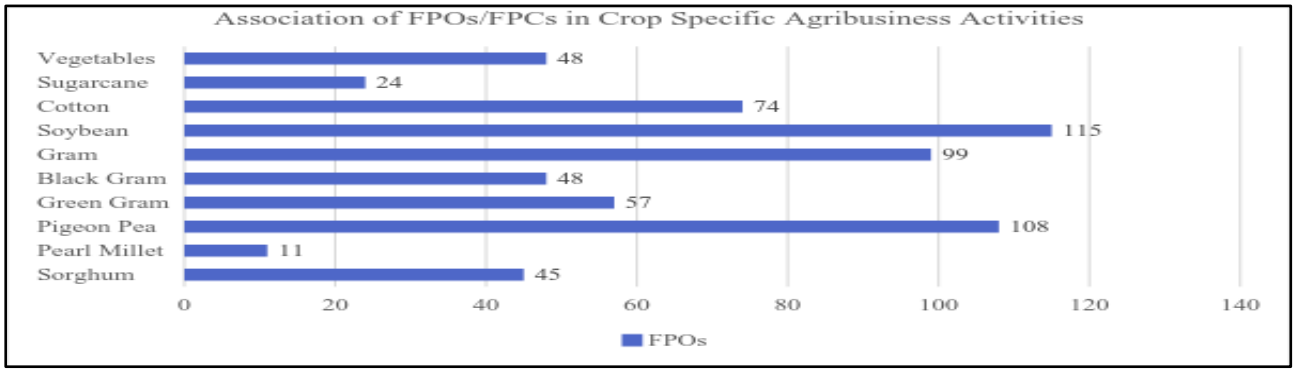

Figure 12 Major crops FPO/FPCs involved in

6.1.4 FPCs Involvement in Fruit Crops

In case of fruit crops, majority of FPO/FPCs are in to mango and pomegranate cultivation and aggregation followed by banana and different kinds of citrus fruits. The figure below gives an idea about the involvement of FPO/FPCs in different fruit crops

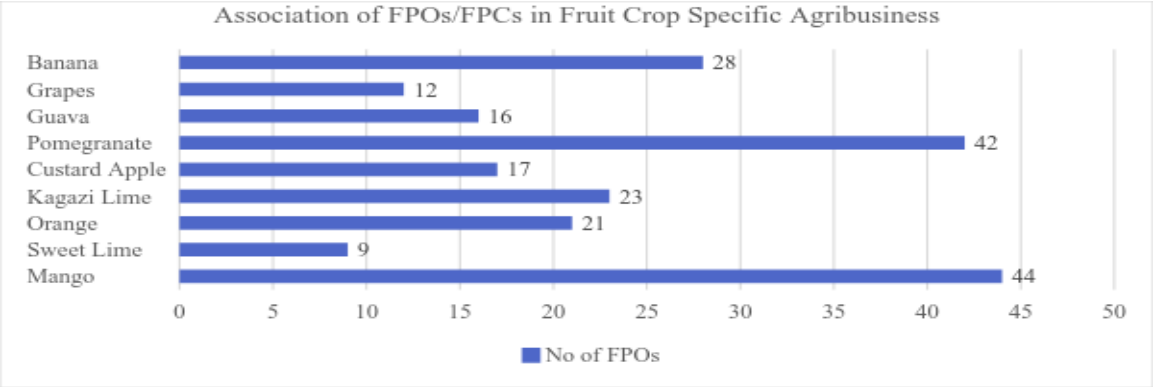

Figure 13 Involvement of FPO/FPCs in fruit crops

6.1.5 Quick Assessment of FPCs

PMU carried out quick assessment of FPCs in project area. Of the total FPC, 140 FPCs responded to the google questionnaire. The performance parameters used for assessment of the FPCs are (1) membership, (2) landholding, (3) paid up to authorized capital, (4) working capital, (5) per member shareholding, (6) agribusiness involvement, (7) coverage of field crops, (8) coverage of fruit crops,

(9) asset plan, (10) marketing license, (11) credit from bank, (12) growth in annual turnover, (13) number of staff associated in the FPC, (14) trained BOD and (15) FPC having business plan.

6.1.6 Key Issues in FPC Functioning

The FPCs are facing a number of issues in their functioning. Consultation with FPCs and the study reveals the followings.

Table 46: Key Challenges Faced by the FPCs and their Suggestions

Key Issues / Challenges	Suggestion of FPCs
• Unaware about required entrepreneur/ marketing skills, knowledge and low / lack of operating or working capital • Lack of required capacity building for FPO/FPC. • Poor or no linkage with government schemes / programmes • The small farmer is an efficient producer but does not enter the value chain. • Lack of market access for agricultural commodities • Lack of Information dissemination and awareness about strength of collective approach as FPC. • In existing FPO/FPC due to corruption and other irregularities unequal share capital collection from farmers. • Storage facilities/ godown are not available at nearby township areas • Challenges related to transportation, storing, cold storage and branding of products; • Shortage of breeder seeds for replication; • Technical formalities are very complicated and lengthy to get business license • High deposit requirement with pesticide and fertilizer companies for input business, • Fund support from external sources not available; • Unable to establish processing units due to poor capital base; • Technical issues for ROC compliance, taxation; • Group farming (commodity specific) seems less feasible; • Non availability of human resource for FPC due to poor finance base; • Inadequate availability of technical guidance; • Issues in registering own brand	• Government facilitation required for strengthening FPC Functioning; • Capacity building and support of working capital term on loan/ grant basis; • Guidance and training on marketing, market linkage and packaging • Government procurement of products / goods from FPC; • Strength of scale is required to undertake effective bargaining. • Support for seed program • Support for transportation/ mobile van • ROC compliance through easy processes; • Govt. may assist in creating a buy back arrangement along with financial support; • Distribution of agriculture equipment thorough FPCs; • Facilitate financial support mobilization on govt. guarantee; • Space in MIDC (Maharashtra Industrial Development Corporation) for FPCs; • Convergence with other schemes. • Support in ROC compliances, taxes / meeting statutory requirements etc. • Giving priority to FPCs in agriculture and other activities; • Facilitation from project for easy availability of bank loan and cold storage installation; • Equity shares to FPCs; • Specific action plan for development and empowerment of FPCs; • Supporting FPCs for organic farming; • Financial support for business expansion; • Supporting in preparation of bankable project plan & linking with banks for credit.

Keeping in view the above challenges and key issues, it becomes important that the project take required measures for strengthening the functionality of the FPCs with capacity building, facilitating credit accessibility, supporting linkage with market and forward linkage capabilities through value addition / value chain improvement. There is need to facilitate small and marginal farmers who are in majority and improve the forward and backward linkage to get a higher return of their produce. The project strategy for strengthening of FPO/FPC will help the marginal and small farmers to have a greater bargaining power for their produce and improved market accessibility.

Section VII: Social Management Framework (SMF)

7.1 INTRODUCTION

The expected social benefits of the project, in comparison to no-project scenario is discussed in this section. Assessment reveals that the project is not having any potential to disturb the current social structure at the intervention localities / villages. The project can influence and expedite some of the existing interventions in agriculture and allied sectors to improve the entitlement obligations of the current schemes. The inclusion and equity approach of the project will be beneficial to the marginalized segment and to the marginal and small farmers of the intervention villages. Overall, the project will be helpful to augment the economic condition of the farmers through forward and backward linkages and value chain improvement. The assessment finds the potentials within the scope of the project to involve women farmers and improving the current farming practices of tribal communities. While the existing schemes for social development / welfare will continue to operate, POCRA will create a scope for outcome oriented schematic convergence in feasible areas. However, the apprehension of inclusion of marginal and small farmers is planned to be managed through focused intervention.

The Social Management Framework (EMF) is prepared taking into account the key concerns of different stakeholders and their suggestions on different project components. While designing the framework, the project has taken a holistic view to deal with the concerns and ensure the outcomes of the project is realized in order to benefit the small holders and marginalized sections of the project locations.

7.2 ANALYSIS OF "NO PROJECT" SCENARIO

In case, the project on Climate Resilient Agriculture is not taken-up, the situation of small and marginal farmers, including women farmers may not change positively in the desired direction in the coming years. The current "as-is" situation may prevail and agricultural practices will continue the way it has been for years. A minimal change in positive direction is expected to happen in due course due to intervention of other government schemes and programmes. But accessing the available benefits by farmers of less holding category may continue to be a concern. Their current practices, which are less aligned with ecosystem friendly farming system may further affect the local environment. Based on field consultations and interaction with different stakeholder, the social aspects, with project and without project scenario is presented in the table (Table No. 48).

Table 46: With and Without Project Scenario

Particulars	**"No Project" Scenario**	**"With Project" Scenario**
Component A: Promoting Climate Resilient Agriculture System		
Component A.1: Participatory Development of Mini watershed Plans		
Development of Mini watershed Plan	Such plans would not have developed which captures key requirements of the small and marginal farmers, including differently abled, tribal and women farmers to promote climate resilient activities which is more localized.	Need of farmers of such categories can be identified and focused intervention can be planned accordingly to benefit them. The plan will be more inclusive catering to the need of farmers of these segments.

Particulars	"No Project" Scenario	"With Project" Scenario
Component A2: Climate Smart Agriculture and Resilient Farming System		
Demonstration of climate resilient agronomic practices dry land farming	In the process of area treatment, land of SF/ MF and farmers of such categories in scheduled areas may not be benefitted directly.	Project will initiate specific soil and water conservation measures for such category of farmers, based on the identified needs and priorities.
	Field assessment suggests that there is an increment in application of synthetic / chemical fertilizer and pesticides in scheduled area, thereby increasing the cost of cultivation	Project will have special emphasis to encourage the ST farmers to adopt Integrated Nutrition Management (INM) and Integrated Pest Management (IPM) to reduce the cost of cultivation and increase profitability
Protected Cultivation[1]	Restricted access of SF/MF and farmers belonging to tribal communities due to high initial investment	Focused intervention will improve coverage of such farmers and their land under protective cultivation. It will enhance their farm return. Crop loss due to unfavorable climatic condition will reduce.
Improvement of saline and sodic lands	Increasing salinity may reduce production and productivity of farmers having small land holding and thereby food insecurity.	Saline soil management through technological options will make farming more suitable and productive.
A3. Efficient and sustainable use of water for agriculture		
Rejuvenation or desilting of existing water harvesting structures	Small & marginal farmer normally may not have adequate water bodies in the coming years due to their lack of ability to invest	Acceleration in water conservation measures. Small farm ponds in the fields of SF & MF, promoting in-situ moisture conservation and thereby increasing productivity.
Micro Irrigation System	Less accessibility of small holders due to poor investment capacity	Improved coverage of SF & MF with micro irrigation system and hence increased water efficiency in the project locations. It will help to minimize water loss and improve water productivity.
Component B. Climate Resilient Value Chain and Post-harvest Management		
Component B1: Promotion of Farmer Producer Companies		
Strengthening of existing FPO / FPC	The existing FPCs may not realize their full potential due to poor capacities.	Strengthening / capacity building of the FPCs may enable them to initiate economic activities, thereby helping their shareholders
Custom hiring centre for Improving Farm Mechanisation	Current demand of SF / MF and women farmers in farming may remain unattended as existing provisions may not be adequate to address it.	Increased accessibility of such farmers to farm machinery due to Custom Hiring Centres. It will improve area under farm mechanization, reduce their drudgery and help to save their time.
Component B.2: Strengthening Emerging Value Chains for Climate Resilient Commodities		
Support to FIG/FPO/FPCs for product aggregation, handling, transformation &	Involvement of small producers in the value chain development process	Product aggregation strategy and supportive infrastructure will improve their inclusion. They can sell their produces remuneratively and participate in the overall process.

Particulars	"No Project" Scenario	"With Project" Scenario
marketing		
Component B.3: Improving the Performance of the Seed Supply Chain		
Production of foundation & certified seed of climate resilient varieties	Involvement of small holders in the seed multiplication process (from foundation to certified seed development)	Cluster approach will help the small holders to get engaged in the seed multiplication process, based on their need.
Component C: Institutional Development, Service Delivery & Knowledge for Climate Resilient Agriculture		
Capacity Development	In absence of required skillsets and exposure, the adoption of climate resilient agriculture practices may not increase	Training, exposure visits and use of IT will help small holders in adopting climate resilient agriculture practices.
	Accessibility to learn from such demo may be limited as less or no focus on integrated approach.	Farmer Field School (FFS) approach will be beneficial for small holders for learning and replication.

[1] Protected cultivation refers to a cropping technique where the micro climatic conditions are regulated as per the requirement of the crop during their period of growth. Protected cultivation practices cover green house, poly house, shade-net house etc.

The main social advantages of the project would be improving accessibility of small and marginal landholders to modern scientific climate resilient agricultural practices, irrigation management provisions, protected farming system, minimizing cost of cultivation through appropriate adoption of INM, IPM and improved agricultural practices, using climate resilient seed varieties to improve return during climate variability etc. Apart from this, the project will help to improve ecosystem services in the locality.

7.3 KEY ISSUES TO BE CONSIDERED BY THE PROJECT

7.3.1 Inclusion and Equity

Designing the project with the principles of inclusion and equity remains important. It becomes necessary to foster a approach that address the needs of small and marginal farmers and support them in ensuring sustainable income, even during adverse climatic conditions. Apart from this, it also becomes imperative that the project, in its life cycle, does not leave out marginalized sections such as tribes , women farmers and similar other sections of the society.

7.3.2 Active Participation and Ownership

It happens, in general, that people with better social and economic standing influence the local planning and decision-making process and take a larger share of the benefits in community oriented and community driven interventions. Active participation of people from lower strata of the society, whose number is much higher than people with better social standing, normally remain passive. So, it becomes a historically endowed challenge for the project to ensure that people from the lower part of the pyramid involve themselves actively in the process and use the scope which is created by the project for improving their social and economic status.

7.3.3 Transparency and Accountability

Transparency in project operation / execution and accountability to the stakeholders is most desirable in a condition when Right to Information Act (RTI) is in place. Building and integrating Transparency and Accountability norms in all the stages and levels of operation and its adherence will remain significant for the project. The project shall take up adequate required measures ensuring that required level of transparency and accountability norms are followed.

7.3.4 Decentralized Governance and Decision Making

After the implementation of 73rd constitutional amendment act (rural area) and establishment of Panchayati Raj Institutions for decentralized governance, it has become imperative that governance systems are to be decentralized and decision making should be more participatory and more localized, especially when it comes to planning and execution. So, building a system that adheres to these provisions will remain important for the project.

7.3.5 Scheduled Area and Tribal Development

The constitution of India has made exclusive provisions for the Scheduled Areas and tribals living in those areas. The constitution provides both protective and promotional safeguards to the tribals. The local governance mechanism of such areas is mostly guided by PESA Act. As the project will cover habitations of tribals, it becomes imperative to follow the constitutional prescriptions and ensure safeguard of tribals from exploitation and keeping their socio-cultural identity and ethos intact. On the other hand, it also becomes important to mainstream them in the development process so that they can stand at par with other social groups / communities. The inclusive strategy of the project will ensure the interest of the tribals with preferential treatment and discriminatory targeting approach in Scheduled Areas.

7.3.6 Gender Concerns

On an average, more than half of the farm activities are performed by women. Holding of land by women normally remain low and hence their involvement in farm level decision making is normally remain low or having less important. Hence, involving women farmers, based on their land holding, will be helpful.

7.3.7 Capacity Development

The project, "Project on Climate Resilient Agriculture (POCRA)" is a unique initiative of the Government of Maharashtra which is designed contextually, considering climate variability in the State and its impact on the farmers, more exclusively marginal and small farmers. While the overall objective of the project is to make agriculture climate resilient, it becomes crucial for the project to ensure that the farmers are having required skill and knowledge base to adopt the scientific agriculture management practices. To make agriculture climate resilient, different package of practices will be introduced by the project with which farmers may not be acquainted adequately. So, developing their capacity in such scientific practices and agricultural technologies is desirable for the realization of the expected outcomes. Such measures required large scale capacity development interventions at different levels of the project and ensuring that such learnings are cascaded down to practices.

7.3.8 Schematic and Objective Based Convergence

Different departments of the Government have been implementing several schemes / programmes which gives potential to the project for benefiting from such schemes. For example, Agriculture Department is having a number of schemes that can contribute to the project initiatives. Similarly, Tribal Development Department having various welfare schemes for the tribals which can be converged with the project activities in scheduled areas. While convergence of different schemes will improve beneficiary coverage, bridge the gap and drive the project towards achieving a higher order outcomes, bringing all such departments to a common platform will remain a challenge for the project.

7.3.9 Sustainability of Project Inputs

It is always desirable that the project approach and its inputs rendered during the lifetime of the project sustains beyond the life cycle of the project. Sustainability of any project depends upon many factors, such as relevance of the project inputs and its alignment with the need of the

community, people's ownership, financial sustainability of the promoted institutions to carry forward the operation beyond the life of the project etc.

7.4 DESIGN ELEMENTS TO APPROACH THE ISSUES

7.4.1 Inclusion and Equity

The project has taken a conscious decision to involve marginal and small farmers as primary target group, who normally have poor investment capacity and hence poor accessibility to different schemes that require cost sharing. Different inputs are designed for farmers of these categories where the project and its promoted institution acts as facilitating and supporting instruments. Further, in order to ensure that most vulnerable villages are benefitted from the intervention, the project has imbedded vulnerability based geographical inclusion approach under which the most vulnerable villages (based on climate change vulnerability assessment) are made part of the project. Apart from this, the project has an inbuilt strategy for tribals residing in Scheduled Areas of the project districts.

7.4.2 Active Participation and Ownership

Active participation and ownership of the project is ensured at the execution level through various strategic measures. Promotion of Village Climate Risk Management Committee (VCRMC), Cluster Committee composition taking representatives from VCRMC is another step for ensuring active participation and ownership by the community. Taking a step ahead, the project has planned to form and strengthen Farmer Producer Companies (FPCs), involving local agricultural producers so that they can promote agribusiness activities for benefitting themselves. Apart from institutional structures, different inputs are designed where farmers can actively participate and benefit from such provisions.

VCRMC

The project will be executed in a manner where local community will have greater say in planning and implementation. In order to ensure community participation and ownership, the project will mobilise the villagers and promote Village Climate Risk Agriculture Management Committee (VCRMC). VCRMC will be the basic unit at the project villages to ensure that the marginal and small farmers along with marginalised sections are benefitted from the project. The VCRMCs will be promoted as per the Village Panchayat Act (clutch no. 49) and function as a sub-committee of the local Gram Panchayat. The VCRMC will be involved in beneficiary selection, following the inclusive criteria and will be instrumental in bringing in transparency and accountability in project implementation.

Composition: The VCRMC, as a community organisation will be representative in character, having representation from all sections of the society. Each VCRMC will be comprised of 11 members, apart from invitees. The VCRMC will be headed by the Sarpanch as the President. The composition of the VCRMC will be as follows.

1. Local Sarpanch as the President of the VCRMC;
2. Farmer Friend as the member of the committee;
3. Two Progressive Farmers (Male); one from SC/ST community and one from other social category;
4. Four Women Farmers; two from SC/ST community and two from other social categories;
5. FPC as the member (one person);
6. Women SHG (one person);
7. Person involved in agribusiness / agri-enterprise (one person);
8. Agriculture Assistant (Government employee) as invitee;

9. Project Assistant as invitee.

As the VCRMC will be representative in nature, it will be responsive to the concerns of the marginalised section and promote equity in accessing project benefits. Apart from this, association of VCRMC in local planning process will be helpful to identify and address the needs of people of such category.

7.4.3 Transparency and Accountability

Role and responsibility of different institutional structures at different execution levels are well spelled out in the project implementation plan. Secondly, as local community based institutions will be involved directly in the execution process, as per the requirement, it will bring in operational transparency and improve accountability. Apart from this, project strategy for Suo-moto disclosure of information will enhance transparency. Grievance redressal mechanism using people's platforms (VCRMC and Cluster Committees) and institutional structures (State, District, Taluka level) will be further supportive to bring in transparency and accountability.

7.4.4 Decentralized Governance and Decision Making

The involvement of local Gram Panchayat and making VCRMC as a committee of the Gram Panchayat are part of the overall strategy of the project to ensure decentralized governance and decision making. Preparation of mini watershed level plans, taking village as the unit of planning and getting the plans approved at the Gram Sabha level is another step that the project has strategized in its intervention and made it mandatory. The bottom-up planning will help to capture the needs of the community appropriately, ensure that the plans meet the expectations of the community and activities are executed with the active involvement of their organisations.

In addition to the aforementioned approaches of the project, in Scheduled Areas, provisions of PESA Act will also be adhered so that tribals participate actively in the planning, implementation and decision-making process.

7.4.5 Scheduled Area and Tribal Development

The project has made provision for the tribals living in Scheduled Areas and prepared a comprehensive Tribal People Planning Framework (TPPF) to get the benefit of the project. The inclusive strategy of the project will ensure in addressing the interest of the tribals in the Scheduled Areas. The VCRMCs, to be formed in the Scheduled Areas, will be headed by the local Sarpanch who is from the Tribal Community.

7.4.6 Mini Watershed Planning (Village / Cluster Level)

In any intervention, planning based on local needs remains pivotal for a desired outcome. Adhering to this principle, the project POCRA will initiate the participatory planning process in all the villages in identified clusters. The planning will help to map the vulnerability that arise due to climatic and related factors and will identify key expectations of the community from the project. The planning will be basically related to agriculture and allied sectors, including measures that will improve ecosystem services. The local planning process will help in improving participation of the local people and create a platform where people can share their issues and suggest solutions.

After the preparation of village level plans, Cluster Development Plans (CDP) will be prepared, consolidating all the village plans of a particular cluster. The comprehensive Cluster Development Plan can be used as an instrument for taking up different activities, including convergence with other schemes. Each CDP will be discussed and approved by Gram Sabha for implementation. As the plan will be prepared in a participatory manner, households from different social and economic background will participate in the process. It will also be helpful to strategize the intervention making it inclusive in nature. Similar exercises will also be taken up in project villages / clusters

that are falling in scheduled areas. Based on the existing tribal development governance mechanism, the plans, prepared by the community, will be presented at the Gram Sabha and after its approval, it will be submitted to appropriate authority. These plans will have special sections on tribal people planning n framework in tribal areas and gender sub-plan.

7.4.7 Gender Concerns

Along with tribals, the project will also target women farmers having land holding. In order to address gender concerns, project will adopt compulsory inclusion strategy to involve women in different community level institutions, such as VCRMC, Cluster Committee and FPCs. Along with this, wherever deemed necessary, the project will facilitate greater accessibility of women farmers and / or their collectives to institutional credit and other project support provisions.

7.4.8 Capacity Development

The project has made exclusive provisions for the capacity of all stakeholders during the life of the project. The project will design different training modules and manuals on climate resilient agricultural practices which will be used for imparting training in an organized manner. Training of Trainers (TOTs) programmes will be organized for developing local resource persons who can further organize trainings at different levels. The project has made exclusive provision, in the shape of Farmers Field School (FFS) to demonstrate different farm technologies and agronomic practices which will be learning centres for the farmers. For developing capacity of the primary stakeholders, the project has also made provisions for organizing exposure visits to different learning centres by which marginal and small farmers can learn and adopt different practices. Even, at the project execution and facilitation level, project will take up capacity development measures so that they can deliver required services qualitatively.

7.4.10 Sustainability of Project Inputs

The project has instituted different measures in its operational strategy to ensure the sustainability of operation, such as contributory and cost sharing approach for greater ownership, decentralized planning and implementation mechanism, revenue generation model for FPCs, making investment in productive community asset base, maintenance of created asset base from operating incomes etc.

7.5 Assessment Findings and its Implications for SMF

The assessment concludes that the project will not exert any negative social impact. The inclusion strategy will help to involve the marginalized section and small land holders in the process and deriving benefits out of the project activities. The assessment did not find any requirement for displacement and hence Rehabilitation and Resettlement (R&R) is not expected from the project execution. At the community level, the FPCs and farmers willing to take land on lease or on purchase basis, based on requirement for construction of CHC and other processing infrastructure for value addition. Discussion with PRI members reveals that available GP land can also be utilized for construction of such infrastructure as it will be for the public purpose. The project also ensures the involvement of tribal community in the process by implementing the project in scheduled areas and secondly, involving dispersed tribal families in the project activities.

7.6 Social Management Framework (SMF)

The social management framework matrix has been given below:

Table 47: Social Management Framework and Monitoring Measures by Project Components

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	Secondary	Tertiary
Component A- Promoting Climate Resilient Agriculture Systems					
A 1. Participatory Development of Mini watershed Plans (Planning Stage Activity)					

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Sub Activity-Preparation of Cluster Level Plans	Identification of needs of MF/ SF/ WF and farmers belonging to ST and marginalized community and its inclusion in the plan	-Promotion of various village institutions to enhance community participation and ownership. -Constitution of VCRMC -Involvement of VCRMC in cluster planning through decentralized approach will ensure inclusion of marginalized section. -Need assessment followed by planning as per holding categories, social categories with special focus on women farmers. - Provisions of women FGD and Women Sabha/ Gram Sabha to ensure gender balanced cluster planning.	External Agency engaged for facilitating plan preparation SDAO	DSAO	PMU
A 2. Climate smart agriculture and resilient farming systems (Implementation Stage Activity)					
Demonstration of climate resilient agronomic practices-dry land farming Sub Activity-FFS for Technology Dissemination	Demonstration in inaccessible tribal areas / scheduled areas; Coverage of less holding farmers, including farmers' women ST/SC. Adoption/Learning Replication	Coverage of inaccessible pockets / scheduled areas under demonstration / FFS; Coverage of tribal farmers, women farmers and other farmers having less land holding (based on their interest); Hand holding support and on-farm guidance to farmers.	KVK SDAO VCRMC Lead farmer	DSAO	PMU
Enhancement in Carbon Sequestration Sub Activity-Agroforestry-farm periphery/ small block	Coverage of available culturable waste and other lands of small holders, farmers from ST / SC community, women farmers and farmers having land under FRA	- Area assessment for plantation of fruit trees In scheduled area - Rejuvenation of degraded land through plantation -For small holding promotion of integrated farming system -Adaptation of institutional setup for benefit sharing.	SDAO VCRMC Cluster Committee	DSAO	PMU

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Improvement of saline and sodic lands Sub Activity- Demonstration of Technology for Salinity Management FFS, Farm Pond Grass cultivation; Water Pumps; Sprinkler	Coverage of SF/MF/WF from ST/SC Community under different reclamation measures Access to Farm Ponds, Pumps and Sprinklers by Marginalised Sections	Inclusion of SF/MF/WF and farmers from ST/SC in land treatment measures, capacity building and demonstrations; Coverage of SF / MF / WF and farmers from ST/SC community in FFS as per need Capacity building of farmers on technology adoption on saline-sodic land management.	SDAO VCRMC KVK Lead farmer	DSAO	PMU
Protected Cultivation Sub Activity- shade Net House; Poly House; Poly Tunnels Planting Material	Accessibility of marginal and small holders for protective cultivation including tribal and women farmers	-As per technical specification designing the shade net / poly house for small patch of land -As per village / cluster level plans, inclusion of WF and HHs from ST/SC community for benefit sharing; -Provision of matching grant and facilitate in credit accessibility for SF/ MF/ WF including tribal/ SC farmers, adhering to the prescribed norms/ institutional arrangement	SDAO VCRMC Cluster Committee	DSAO	PMU
Integrated Farming Systems Sub Activity- Promotion of Small Ruminants; Backyard Poultry; Sericulture; Apiculture; Inland fishery; Other agro-based Livelihood	Appropriate targeting and coverage; Economic feasibility of livelihood support activities and its sustenance	-Through participatory approach village / cluster level planning for identification of beneficiary HHs (including in scheduled areas) and its approval in the Gram Sabha. -Coordination & Convergence with other departments for wider coverage of benefits; -Capacity building of the beneficiaries for livelihood intervention.	SDAO VCRMC Farmer Line Dept. / Other Institutions / Societies of Govt.	DSAO	PMU
Soil Health Improvement Sub Activity- Vermicompost and NADEP, Organic unit	Continuity of practice by farmers and its sustained adoption	Demonstration for vermicompost, NADEP through FFS learning and adoption; Capacity building of farmers on organic farming systems;	SDAO VCRMC	DSAO	PMU
A 3. Climate Resilient Development of Catchment Area (Implementation Stage Activity)					

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Catchment Treatment; Sub Activity- Continuous Contour trenches drainage Line treatment, Loose Bolder; Earthen Nala, cement Nala Bunds	Coverage of land given to tribal farmers under FRA (if such land required for treatment)	-Identification of treatment area during planning; -Coverage of forest lands, alloted under FRA to tribal farmers / other forest dwellers under treatment;	SDAO VCRMC Cluster Committee	DSAO	PMU
Construction of new water harvesting structures Sub Activity- Construction of Community Farm ponds; Individual Farm Ponds Open Dug Well	Less involvement of SF / MF / WF and farmers from ST/SC Communities due to poor investment capacity / non-availability of land for farm pond.	-Inclusion of SF/MF/WF, including farmers from ST/SC communities, as identified in the village / cluster planning; -Facilitate credit accessibility through appropriate institutional arrangement/ mechanism -Provision of matching grant for marginal and small farmers including ST/SC and WF. -In cases of SF / MF, where farm pond is not feasible due to less availability of land, construction of dug well can be taken up, as identified in the village / cluster level plan.	SDAO ATMA VCRMC Cluster Committee	DSAO	PMU

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Micro irrigation systems Sub Activity- Drip and Sprinkler irrigation systems	Involvement of SF / MF / WF and farmers of low holding categories from ST / SC communities	-Focus on small patch of lands of low land holding (MF / SM). -Inclusion of SF/MF/WF, and farmers from ST/SC community as per the village / cluster level plan; - Facilitate credit accessibility through appropriate institutional arrangement (like VCRMC) and mechanism; -Matching grant support to MF/SF/WF and tribal farmers, adhering to the prescribed norms; -Convergence with existing schemes for wider coverage; Tribal Development Dept. for improved coverage of tribal farmers under micro irrigation.	SDAO ATMA VCRMC Cluster Committee	DSAO	PMU
Protective Irrigation Sub Activity- Water pumps & carrying pipes	Coverage of SF / MF / WF and farmers of low holding categories from ST / SC communities	Inclusion of SF/MF/WF, and farmers from ST/SC community as per the local planning (village / cluster level plans); -Facilitate credit accessibility through appropriate institutional arrangement (like VCRMC) and mechanism; -Matching grant support (as per the norm) for marginal and small farmers in general and Farmers from ST/SC and women farmers in particular; -Facilitate convergence with existing schemes for wider coverage and Tribal Development Dept. for improved coverage of tribal farmers.	SDAO ATMA VCRMC Cluster Committee	DSAO	PMU
Component B. Climate Smart Post Harvest Management and Value Chain Promotion					
B 1. Promoting Farmer Producer Companies (Implementation Stage Activity)					

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Support to existing FPCs Sub Activity- Preparation of development plan of FIG/FPO/FPC Strengthening of existing FIG/FPO/ FPCs Developing market linkages	Inaccessible / poorly accessible pockets and Tribal Habitations may not have FPCs; Market linkage of agricultural commodities in interior pockets	-Assessment of existing FPCs and identification of areas of improvement; -Preparing detail plan and strategy for strengthening FPC/FPO in remote and scheduled areas; -Capacity building of FPC/FPO -Market assessment in general and in remote areas for different commodities (including value chain assessment) and developing market linkage strategy	Resource Agency SDAO FPC	DSAO	PMU
2. Establishment of Custom Hiring Centres	Availability of land for establishing CHC; Establishment of CHCs in less accessible / scheduled areas; Accessibility of MF, SF, tribal farming families and women farmers to the farm machinery	-Utilization of available land of FPC/FPO due scrutiny and verification; -In scheduled areas, decision of Gram Sabha will be followed. -Establishment of CHCs in after due verification of the feasibility. -Devising guiding principles / procedures of effective operation of CHCs for equal opportunity accessibility	SDAO ATMA FPC	DSAO	PMU
	Women friendly farm machinery / equipment	Women farmer friendly farm equipment in the CHCs (developed by ICAR institution/s)	SDAO ATMA FPC	DSAO	PMU
Component B2. Strengthening emerging value chains for climate resilient commodities (Implementation Stage Activity)					

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Support to FIG/FPO/FPCs for product aggregation, handling, transformation & marketing Sub Activity- Support to business plans appraised by financial institutions/ commercial banks	Inaccessible / poorly accessible pockets and tribal habitations may not have FPCs; Poor operating capital base of FPCs restraining from taking up business ventures.	-Involvement / engagement of nearby FPC/FPO for product aggregation and marketing in areas where no FPC is there and scale of production is having potential for remunerative market linkage; -Assessment of capacity and functioning of FPCs and preparing capacity building plan on identified aspects; Strengthening FPCs in inaccessible / poorly accessible pockets and scheduled areas through training, hand holding and exposure; -Technical support to FPCs for the preparation of bankable business plan.	SDAO FPC	DSAO	PMU
Sub Component B 3. Improving the Performance of the Supply Chain for Climate Resilient Seeds (Implementation Stage Activity)					
Production of foundation & certified seed of climate resilient varieties Sub Activity- Production of Climate Resilient Seed Varieties	Involvement of SF / MF in Seed multiplication; Inclusion of interior tribal areas / villages due to conveyance / monitoring issues	-Identification of farmers of different social and land holding categories during village / cluster planning process; -Initiative to involve SF / MF through consultation / discussion and with intermediation of VCRMC; FPO / FPC of the locality to be oriented accordingly if they are involved in the process; -Devising strategies for remote areas where transaction cost of seed supply expected to be higher due to poor conveyance facility. -Coverage of tribal habitations in scheduled areas for seed multiplication in view of the operational feasibility.	Mahabeej / Private Seed Companies SDAO FPC SAU	DSAO	PMU

Activity	Key Challenges	Proposed Project Measures	Responsibility		
			Primary	**Secondary**	**Tertiary**
Development of seed hub-infrastructure support Sub Activity- Seed Processing Equipment; shade net/ drying yard; storage / godown; Training of seed producer farmers; Strengthening of seed quality testing facility.	Establishment of Seed Processing and Storage Infrastructure in interior / scheduled areas; Availability of land for establishment of infrastructure	-Identification of areas where transaction cost of seed supply is be higher due to poor conveyance facility; -Assessment of feasibility of establishing infrastructure in interior / scheduled areas; Coverage of less accessible clusters / interior clusters to have seed processing and storage infrastructure, based on the identified needs in the planning process; Training / exposure of FPCs for management of infrastructural facilities Use of land available with FPCs for infrastructure	Mahabeej / Private Seed Companies SDAO FPC SAU	DSAO	PMU
Component C. Institutional Development, Knowledge and Policies for a Climate Resilient Agriculture					
J. Capacity Building Sub Activity- TNA, Training Design and Module Preparation Training of various project stakeholders Exposure Visits	Participation of women farmers and farmers from ST/SC community, especially in heterogeneous community; Identification and tailor made training modules as per needs of farmers from various social & land holding categories.	-Need assessment for capacity building of farmers specifically for WF, farmers belonging to ST/SC community. -Tailor made designing of training module for the farmers of different holding categories, their educational level etc.; - Organising specific/ on field trainings at local level to ensure participation of women farmers.	SDAO ATMA External Agency Engaged for Capacity Building	DSAO	PMU

7.7 AGRICULTURAL INFRASTRUCTURE AND LAND AVAILABILITY

Land is required for the purpose of creation of infrastructure such as (1) Custom Hiring Centre (CHC), (2) Agro-processing units, (3) sorting, grading and packing houses, (4) godowns / storage infrastructures, (5) cold storage etc. However, the project will not and need not resort any involuntary acquisition of lands, for creation of agribusiness infrastructure or any infrastructure that are supportive to agriculture promotion. As it is proposed that the FPCs will be the owner of such facilities and managing it, FPCs should have their own land for the creation / establishment of such infrastructures. The FPCs having suitable land can only apply for such infrastructure based support. FPCs may seek lands through purchases in the market involving willing buyer and willing sellers. Lands may also be secured through voluntary donations. The following key principles shall govern securing of lands.

1. The land must be free of squatters, encroachers, share cropping or other claims or encumbrances;

2. The facilities requiring land should not be site specific (exploration of alternatives shall be made);
3. This should not result in any physical relocation nor of adverse effects on livelihoods;
4. This should not result in restrictions on accesses and transit;
5. In case of voluntary donation of land, required legal process should be followed with verification by appropriate authority. Under no circumstances, the land user will be subjected to any pressure, directly or indirectly, to part with the land;
6. It is to be ensured that there shall be no significant adverse impacts on the livelihood of the household donating / selling the land.
7. Provision shall be made for redressal of grievances, if any.
8. Voluntariness of transactions as well as adverse impacts (if any) shall be ascertained and sign off from the local district DPD.

7.8 TRIBAL PEOPLE'S PLANNING FRAMEWORK (TPPF)

It is clear that the program interventions will not affect adversely the tribal people, but, they do require special attention from the viewpoint of ensuring inclusion and equity. Accordingly, the Tribal People Plan Framework (TPPF) has been developed to address tribal issues up-front and provide culturally compatible resolutions that ensure focused and exclusive attention towards tribal / indigenous people. A framework is prepared for the following reasons: one, the types of interventions are location specific and will become known only after the implementation starts; and two, villages will be selected for intervention over time and plans too will be prepared over time. As and when the tribal interface surfaces during the implementation, the framework will be adopted and a Tribal People Plan (TPP) will be prepared as a part of the overall development plan. The objectives of the TPPF are to ensure that the tribal populations are: (i) adequately and fully consulted; (ii) enabled to participate in the project and derive full benefits; and (iii) that the project's institutional and implementation arrangements take due note of the existing governance in the tribal areas as specified under the Constitution of India and relevant legal provisions. The TPPF is prepared in accordance with the World Bank's Operational Policy (OP) 4.10 on Indigenous peoples as well as legal provisions of Government of India and Government of Maharashtra.

The project will have exclusive strategic focus for greater inclusion of tribal and their active association in project interventions in scheduled areas. The strategy proposed for inclusion of tribal communities is discussed below (Table No. 49; refer TPPF for details).

Table 49: Project Approach and Strategy for Tribal Development

Project Stages	Project Approach and Strategy	Expected Outcome
Preparatory Phase	• Discussion with tribal families / farmers of the project area in general and exclusively in scheduled areas on project component and activities; • Identifying key issues in the way of their greater involvement and benefitting from the project intervention; • Preparing a priority list of actions, based on the identified issues and interest of tribal farmers / families of the project area. • Preparing cluster specific plan of action for better inclusion of tribal in different activities that are feasible for their greater participation.	Key intervention areas are identified and guidelines prepared for improved participation of tribal in general and tribal farmers, in particular. List of actions finalized for implementation to ensure greater involvement and participation of tribal by activities
Implementation Phase	• Implementing priority actions that are finalized during preparatory phase; • Initiatives for convergence with tribal	Participation of tribal / tribal farmers in different activities implemented under the project;

Project Stages	Project Approach and Strategy	Expected Outcome
	development schemes of Government at the village / cluster level; • Priority action in inaccessible scheduled areas (project clusters) for establishment of infrastructures that are planned under the project, based on feasibility; • Equal opportunity to dispersed tribal (living in a mixed community) for accessing project benefits, as per the plan for beneficiary coverage; • Ensuring greater participation of tribal community in activities / sub-activities taken up under each component / sub-components of the project; • Taking measures, adhering to the scope of the project, to build the capacity of tribal farmers in agricultural technologies, marketing, institution management etc., as per the project requirements; • Taking measures that are legally binding under PESA; • Monitoring of actions taken under the project for inclusion of tribal by project component / sub-components and initiating corrective measures accordingly; • Documenting success and learning from different initiatives undertaken by the project that ensures greater participation of tribal.	Project supported infrastructure and services in less accessible scheduled areas / tribal dominated areas; Inclusion of tribes and their active involvement ensured with better operational and management capabilities; Adoption of improved farming technologies by the tribal farmers and hence better yield from the available land.

Note: Refer the TPPF Annexed to this document for Details

7.9 GENDER ACTION PLAN (GAP)

During the social assessment, consultations were organised with different stakeholders to understand the gender issues and possible measures that can help women in ensuring their participation in the overall process. The assessment helped to identify certain key issues pertaining to women and their involvement in agricultural activities. It is observed that while participation of women in different development activities have been poor in general, their association in agricultural decision making remains marginal. Though, their contribution is significant in different stages of farm activities, still their contribution has been ignored to a great extent. In the labour front, the wage rate paid to the women workers are comparatively less than their male counterpart. Though Government has been taking required measures for giving land rights to women in shape of registering land jointly with the male counterpart, still in most of the earlier record of rights, male in most cases are title holder. This creates an imbalance as far as land holding is concerned. Access to market by women is also limited due to factors like social stigma, low quantum of sellable produce, distance of the market place from the village etc. However, in primary level value addition (drying, cleaning, grading and sorting), their involvement is quite significant at domestic front.

Gender issues that have significance for the Project are;

1. Occupational health hazards due to prolonged duration of engagement during farm activities / post-harvest activities;
2. Drudgery of women in agricultural activities due to less usable agricultural equipment;

3. Low awareness on agricultural technologies, hence its adoption;
4. Poor access to extension services and institutional facilities;
5. Few women holding productive resources such as land, animals, and machinery.
6. Negligible role of women in farm related decision-making process;
7. Women perform most of un-mechanized agricultural tasks and perform multiple tasks, which add more burden to them;
8. Women earn less wage for the same duration of work, especially in informal / private sector;
9. Poor market information and hence high dependency on local market
10. Active participation in community institutions is limited to a few women and large section either do not participate or remain passive;
11. Limited institutional platform of women to have a better bargain for their produces and market access.
12. Access to formal financial credit institution for agricultural activities is limited for women farmers and hence limited investment in agriculture;
13. Low land holding and hence low production and insecure livelihood
14. Poor Capital Investment capacity for agricultural and allied activities

7.9.2 Project Strategies

Women constitute about 70.0 percent of workforce in agriculture, however they are not geared up for higher skills and knowledge required for new agriculture interventions. Most operations in agriculture undertaken by women are often causes drudgery and reduces efficiency. Training modules for their capacity development will be developed that are suitable to regional / local conditions. Project strategies for greater involvement of women are discussed below.

The project will take feasible and implementable actions, that will support greater participation of women. The project will focus on women specific issues across different project components that would help women for a better participation and decision making along with benefitting from the project interventions. The project approach, therefore, would be more inclusive in nature. The project will use the operational definition of women farmers[10] in its intervention plan by which they will not be left out. In all the project activities, across the components, such strategies will be taken that help the women to participate and access project benefits. The project level gender development strategy is presented below.

Looking at the issues pertaining to women, more particularly women associated with agriculture sector, project will take following measures, in an inclusive manner.

Table 50: Approach and Strategy for Greater Balance and Women Participation in the Project

Project Stages	Project Approach and Strategy	Expected Outcome
Preparatory Phase	Discussion with women of the project area in general with exclusive emphasis on women farmers by project component and activities. Preparing a priority list of actions, based on the identified issues and interest of women. Preparing cluster specific plan of action for better inclusion of women in different activities that are feasible for their greater participation.	Key intervention areas are identified and guiding note prepared for improved participation of women in general and women farmers, in particular. List of actions finalized for implementation to ensure greater participation of women

[10] Operational definition of women farmers refers to women having land in her name and directly associated in the agricultural activities and substantially involved in farm related decision-making process.

Project Stages	Project Approach and Strategy	Expected Outcome
Implementation Phase	Implementing priority actions that are finalized during preparatory phase; Ensuring greater participation of women / farming women in activities / sub-activities taken up under each component / sub-components of the project; Taking measures, adhering to the scope of the project, to build the capacity of women farmers in agricultural technologies, marketing, institution management etc., as per the project requirements; Ensuring measures that are legally binding like equal and minimum wage norm, prevention of women harassment at workplace, membership of women in different committees etc.; Monitoring of actions taken under the project for inclusion of women by project component / sub-components and initiating corrective measures accordingly; Documenting success and learning from different initiatives undertaken by the project that ensures greater participation of women.	Participation of women / women farmers in different activities implemented under the project; Reduced gender biasness and positive discrimination to bring gender equity. Inclusion of women and their active involvement ensured with better operational and management capabilities; Parity in wage (equal work equal pay) payouts ensured and legal provisions are abided by.

Screening and Identification: Identification of vulnerable women headed households / women farmers that are primarily dependent upon agricultural activities for their livelihood. A feasible and executable action plan will be prepared for households of such categories, within the scope of the project, after due analysis of their needs and preferences.

Participation in Community Institutional Governance: Ensuring active participation of women in local institutions, such as VCRMC, Cluster Committee and Farmer Producer Organisations, following mandatory inclusion criteria. In the VCRMC, there will be four women farmer representatives along with one women representative from the local Women Self-Help Group (WSHG) from the community.

Women Representation: Each FPC should have at-least one women director in its board of directors. The FPC, may also take woman member as independent director in the company.

Strengthening Women Producer Group: Based on the feasibility and requirement, existing Women Producer Groups (WPG) will be provided with necessary inputs for improving their functioning in line with the mandate of their FPC. The WPGs shall be treated at par with any other FPCs, in terms of provisioning of project benefits. In case of requirement, existing WPG/s will be tied up with other local FPC / WPG based on their nature of business engagement (if type of business of WPG and FPCs are same or in related areas).

Capacity Development: Special capacity building measures will be taken for women farmers to acquaint them with the climate resilient agricultural practices. To design the training module,

specific capacity building needs of the women farmers to be assess and the curriculum is to be designed accordingly. In the exposure visits, which is part of capacity development initiative of the project, representation of women farmers will be ensured. The project will develop required technology kits for promoting knowledge and skill empowerment on various topics related to farming practices.

Identifying the right training and extension needs of women is one of the most important steps. Giving women farmers more access to meetings, trainings, exposure visits and demonstrations, organizing training programmes based on the needs of the women. Local / village based trainings to be organized as per the convenience of the women farmers. Farmer-to-farmer training or participatory training methods will be further helpful for the women farmers.

Drudgery Reduction: Reduction of drudgery of women, engaged in agriculture, will be taken up by supporting them with women friendly farm machinery / tools. The Custom Hiring Centres (CHCs) will have such tools available for hiring of women farmers.

Credit Access: The project, through local institution (VCRMC), will facilitate linkage of women producer groups (if so exists in the project area) to formal credit sources in order to enable them to take up agri-business activities.

Support for Integrated Farming: In order to improve the economic condition of the vulnerable women farmers, the project will support them for adopting integrated farming system. Such identified households (identified during planning process) will be supported with livelihood improvement avenues, such as poultry, small ruminant, involvement in apiculture, sericulture, inland fishery and other feasible agro-based livelihood activities. Looking at the interest of the women and their collectives in project area, wherever feasible, they will also be involved in developing nurseries, managing CHCs and agro-processing units. Apart from this, based on the identified needs during the planning process, project will extend its support to women agricultural labourer / daily wage earner for improving their livelihood by supporting them with sericulture, apiculture and other agro-based activities.

Standardization of women specific field practices: Certain agricultural practices that are women friendly, will be promoted whereby it will improve their productive engagement with reduced drudgery. Identification and improvement of farming systems suited to farm women will be taken up in collaboration with the SAUs and other technical institutions. The experience of National Research Centre for Women in Agriculture (NRCWA) can be used for this purpose. Based on their intense involvement in vegetable cultivation or in field crops, supportive activities in the area of vermin composting, preparation of natural plant pesticides etc. can be taken up individually or through group approach and linked to other farmers of the locality. The project will extend support in identification of gender implications in farming systems approach and adopt women specific technologies under different production systems.

Technology Promotion:
Involvement of women farmers will be encouraged in agricultural technology promotion such as seed treatment, soil testing, IPNM / IPM, organic farming, organic inputs / biofertilizer production unit, natural resource conservation etc.

Improved Agricultural Tools and Implements:
Agricultural tools and implements are usually designed to match the physical requirement and capacities of men and the women have difficulties in operating these tools and implements. Appropriate set of tools for work in the field will not only improve her work efficiency but also

reduce drudgery. Project will give attention to the needs of the women farmers with regard to farm tools and implements. The National Research Centre for Women in Agriculture (NRCWA) project ergonomically evaluated fifteen equipment out of which 11 equipment namely seed treatment drum, Naveen dibbler, wheel hoe, improved sickle, tubular maize sheller, groundnut decorticator, hanging type cleaner, fertilizer broadcaster, CIAF seed-cum-fertilizer drill, PAU seed drill and hand ridger were found suitable and appreciated by farm women. Such equipment would be popularized/promoted among the farm women.

Strategies for Gender Mainstreaming in Agricultural Activities

Gender mainstreaming is the approach for advancing gender equity and equality in the society. It involves incorporating gender perspective into policies, plan, programmes and projects to ensure that these impact women and men in an equitable way. However, below-mentioned strategy could be useful for mainstreaming the gender:

Farmer Field Schools:
Active farming women will be selected, trained and they would be provided with necessary support to practice the improved technology. Their fields can also be used as demonstration plots for training other women farmers in case of emergence of a need.

7.9.4 Involvement of Women in Project Activities

The agriculture sector remains central to Maharashtra's economic and political landscape, and growth in the sector is critical for the state as over 50 percent of its population depends on agriculture. Agriculture sector as a whole has developed and emerged immensely with the infusion of science and technology. But this latest emergence is not capable of plummeting the ignorance of women labour as an integral part of farming system.

Damisa et.al (2007) highlighted in their study that despite of various social, economic and various other constraints women have high level participation in agriculture and they are very committed in their agricultural activity. Overall the level of involvement of women in farm decision making was found very medium. The extent of involvement and decision making in activities like intercultural operations is 48 percent, in harvesting of crops 45.33 percent, storage of farm produce is 42.67 percent; 42.00 percent in sale of farm produce and in subsidiary occupation like animal husbandry and dairy business is 38.67 percent and financial management is 36 percent only (Unati et.al, 2011). Keeping in view the higher involvement of women in farming activity, in PoCRA provisions has been made to adequately address the special needs of women farmers and tribal groups in the project area to ensure maximum inclusion and avoid elite capture under the subsidies/matching grants scheme. Project has ensured the active involvement of the women as well as gender balanced benefit distribution in project area. Following arrangements have been made under project for active involvement and proportionate equity sharing for women beneficiaries-

- VCRMC is key functionary at village level and its has been mandate that in VCRMC out of total 10 members at least 3 members (30%) should be female, i.e. two Progressive women farmer (General-1 and Scheduled Caste/ Schedule tribe - 1) and one women Farmers from Self Help Group (SHG).
- During micro planning of the village, Focus Group Discussion (FGD) with female beneficiaries has been mandatory and leveraging constitutional platforms of Mahila Sabha & Gram Sabha
- To enhance the women participation in decision making process, project has ensured that during Mahila Sabha various project related information & data and proposed interventions will be shared to include their perspective.

- Project has special emphasis on small, marginal and women farmers (social category wise inclusion of SC/ ST) and in every component their concerns will be incorporated and priority will be given to them.
- Project has conducted a situational analysis on climate change and the study findings specifically analyzed impact on small, marginal and women farmer. Based on the study project has developed 'Integrated Farming System' approach which will primarily support women farmers.

These allied agricultural activities are mostly carried out by women along with their farming for example Promotion of Small Ruminants; Backyard Poultry; Sericulture; Apiculture; Inland fishery; other agro-based Livelihood etc.

- Under Component A: Participatory development of mini watershed plans women will be involved -
  - ➢ at cluster level planning Involvement of women / their groups in the village / Cluster planning Process
  - ➢ Involvement of women farmers in FFS, including women from ST communities in Scheduled Areas
  - ➢ Under enhancement in Carbon Sequestration for agro forestry activity tribal women having land under FRA in scheduled areas would be covered suitably, based on their identified need.
  - ➢ Promotional support to proven models like WADI / similar successful initiatives.
  - ➢ Under protected cultivation distribution of shade Net House, Poly House, Poly Tunnels, Planting Material etc. women will be given priority.

- Under component B: Climate Smart Post-Harvest Management and Value Chain Promotion following arrangements have been made for women's inclusion in project activities-
  - ➢ To support the existing FPC there is sub activity of developing plan of FIG/FPO/FPC to strengthen the existing FIG/FPO/ FPCs and develop market linkages. Under this sub activity arrangements have been made for training the of women FIGs/ SHGs and women members of FIGs/ SHGs; managerial grant to women FIGs/ SHGs based on their ranking / grading; facilitate credit linkage of women FIGs/ SHGs (Note: This will be for the existing women FIGs/ SHGs in the project area.).

- Under component C: Institutional Development, Knowledge and Policies for a Climate-resilient Agriculture.
  - ➢ Agro met advisories will be delivered to stakeholders and emphasis will be given women stakeholders.
  - ➢ Training need assessment of women in different project components; In case of need, exclusive training for women farmers apart from common trainings;
  - ➢ Arrangements are made to organize trainings at local level for active and improved participation of women;
  - ➢ Representation of women in exposure visits for learning and replication
  - ➢ Training and exposure visit of women staff / experts of the project;

5.7 Perceived Impact on Beneficiaries

1. The proposed measures under the project will benefit small and marginal farmers in general and women and tribal farmers in particular. The inclusion strategy adopted by the project will be helpful to the deserving target mass.

2. The VCRMC, as a people's platform at village level, will look into active participation of marginalized section in the project planning and execution process. It will ensure that people participate in complete local planning and implementation process. This will help to bring ownership of the community and sustenance of the process.

3. In the less accessible tribal areas, creation of agricultural infrastructure will improve people's accessibility to the facility. Agro-processing and storage facility will be helpful to the tribal farmers to have a higher return of their produce with minimized distress sale.

4. Promotion of integrated farming system will be helpful to vulnerable families for improving their livelihood. Further, apiculture and sericulture will be beneficial for the tribal farmers in both scheduled and non-scheduled areas. This project framed activity will be helpful for women members for improving their engagement and income.

5. Arrangements has been made to benefit the landless families by involving them in allied activities as apiculture, sericulture and other agriculture based processing and value addition activities. The project will create a scope for them to participate in the value chain improvement and marketing. Efforts will be made for their skill development so that they can involve themselves in non-land based activities.

6. The capacity building plan of the project will further improve the knowledge and skill base of the farming community and driving them towards climate resilient agricultural practices.

Table 51: Project Approach and Strategy by Project Components

Activity	Sub-Activity	Proposed Approach and Strategy
COM A-A1		
Participatory Development of Mini Watershed Plans	Preparation of Cluster Level Plans	Involvement of women / their groups in the village / Cluster planning Process Women component planning, involving women farmers/others
COM A-A2		
Demonstration of climate resilient agronomic practices(CRAP) dry land farming	Farm Field School (FFS) for Technology Dissemination	Involvement of women farmers in FFS, including women from ST communities in Scheduled Areas
Enhancement in Carbon Sequestration	Agroforestry- farm periphery/ small block	Tribal women having land under FRA in scheduled areas would be covered suitably, based on their identified need. In tribal habitations / settlements within the scheduled areas; community FRA land can be used for plantation, after its due approval by the Gram Sabha; Promotional support to proven models like WADI / similar successful initiatives
Improvement of saline and sodic lands	Demonstration of Technology for Salinity Management	Involvement of women farmers in demonstration of salinity management technologies; Promotion of agronomic practices among the women

Activity	Sub-Activity	Proposed Approach and Strategy
	Farm Field School (FFS) Farm Pond with Inlet & Outlet and Grass Cultivation; Water Pumps; Promotion of Sprinkler	farmers through on-site escorting and hand holding support;
Protected Cultivation	Shed Net House; Poly House; Poly Tunnels Planting Material	Identification of needs of women farmers for protected cultivation during the planning process; Coverage of women farmers of the based on their holding size and identified needs during the village / cluster level planning; Provision of matching grant to the women farmers; Facilitation support to access formal institutional credit through their local institution/s.
Integrated Farming Systems	Promotion of Small Ruminants; Backyard Poultry; Sericulture; Apiculture; Inland fishery; Other agro-based Livelihood	Identification of vulnerable households / women farmers during the planning process; Identification of needs of such families for livelihood supportive activities under Integrated Farming System; Required hand holding and technical support to women / their collective for effective management.
Soil Health Improvement	Vermi-compost and NADEP Units; Organic input production unit	Involving women farmers / their collectives in organic input production and adopting Vermi-compost / NADEP unit;
COM A-A3		
Catchment Treatment; Drainage Line Treatment	Continuous Contour trenches Model1 & Model 2; Construction of Loose Boulder Structures; Earthen Nala Bunds; Cement Nala Bunds	Area treatment approach will automatically cover land of women farmers;
Construction of new water harvesting structures	Construction of Community Farm ponds; Individual Farm Ponds (with/without lining); Open Dug Well	Identification of need of women farmers for farm ponds and dug well during planning;
Micro irrigation systems	Drip and Sprinkler irrigation systems	Coverage of women farmers / households owning land and cultivating; Women farmers of the project area would be supported for micro irrigation system, based on their needs; Facilitating convergence with other schemes / programme for wider coverage.
Protective Irrigation	Water pumps & carrying pipes	Based on the identified needs, women farmers of low holding categories will be supported with water pumps and pipes for irrigation purpose.
COMP B		
SUB. COM B.1		
Support to existing FPCs	Preparation of development plan of	Training of women FPCs / WPGs and women members of FPCs;

Activity	Sub-Activity	Proposed Approach and Strategy
	FIG/FPO/FPC Strengthening of existing FIG/FPO/ FPCs Developing market linkages	Managerial grant to women FPCs / WPGs based on their ranking / grading; Facilitate credit linkage of women FPCs / WPGs. If required, restructuring of existing FPCs and induction of women members in the board of directors. (***Note***: This will be based on the existence of women FPCs / WPGs in the project area. Project will not promote any new FPO / FPC)
Establishment of Custom Hiring Centres	Custom Hiring Centres	Management opportunity to women FPCs / WPGs; Women farmer friendly equipment in the CHCs;
SUB. COM B.2		
Support to FIG/FPO/FPCs for product aggregation, handling, transformation & marketing	Support to business plans appraised by financial institutions/ commercial banks	Supporting Women FPOs / FPGs for business plan development; Training and capacity building; Facilitation credit linkage and financial support
SUB. COM B.3		
Production of foundation & certified seed of climate resilient varieties	Production of Climate Resilient Seed Varieties	Identification of women farmers who are interested for involving themselves in seed multiplication activities; Involvement of interested women farmers in production of certified seeds (in both scheduled / non-scheduled areas);
Development of seed hub- infrastructure support	Seed Processing Equipment; Seed processing shed/ drying yard; Seed storage/ godown; Training of seed producer farmers; Strengthening of seed quality testing facility.	Engagement of women collectives / groups in facility management, wherever feasible, based on their capacity; Employment of women in day to day operation of seed processing units / operation of storage structure; Capacity building of women farmers associated in seed multiplication activities and extension of required technical guidance / support.
COM C		
Capacity Building	TNA, Training Design and Module Preparation; Training of Project Officials / experts, Farmer's Friend, VCRMC, Farmers Exposure Visits	Training need assessment of women in different project components; In case of need, exclusive training for women farmers apart from common trainings; Training modules to be prepared taking into account the needs of women; Organising trainings at local level for improved participation of women; Representation of women in exposure visits for learning and replication Training and exposure visit of women staff / experts of the project;

Chapter VIII: Implementation Plan for SMF

8.1 INSTITUTIONAL ARRANGEMENT

The State Project Management Unit of POCRA will take required measures to ensure proper implementation of the SMF and the strategies outlined hereunder.

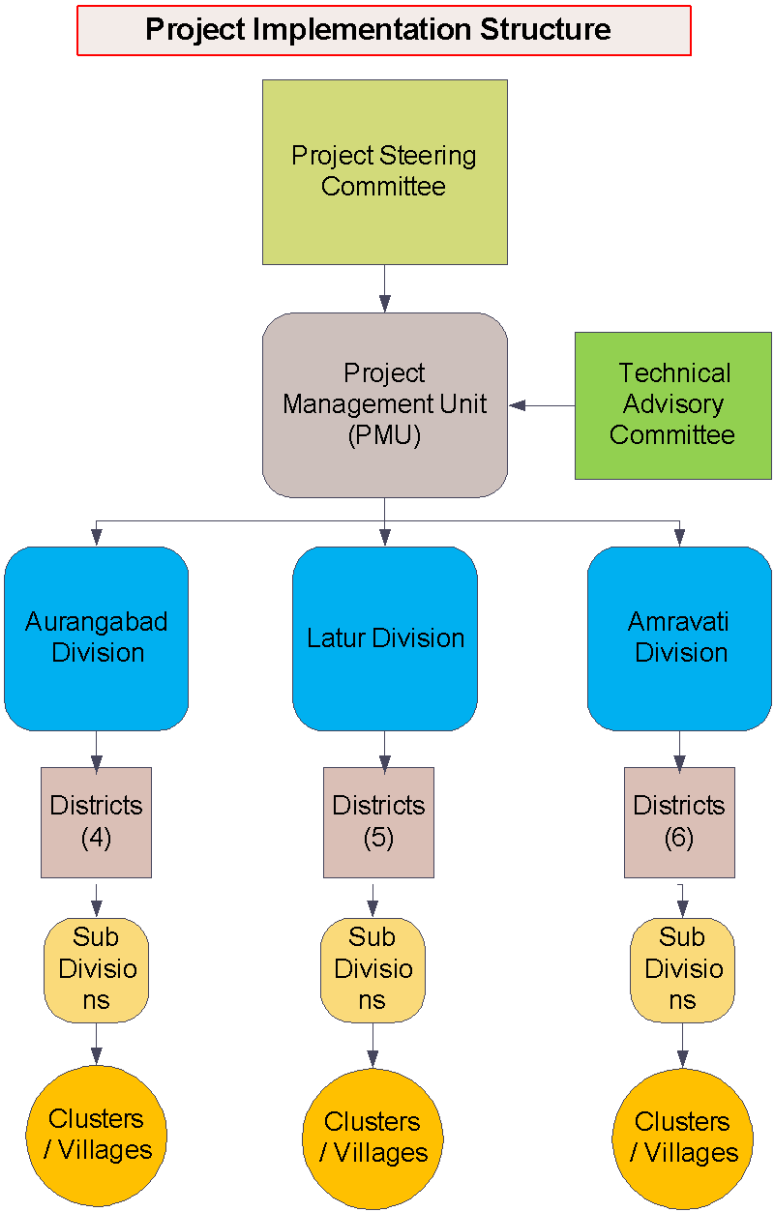

Figure 14: Project Implementation Structure, POCRA, Maharashtra

8.1.1.1 Association of Social Expert

The project will have a Social Development Expert within the State Project Management Unit, located at the Project Directorate. He/she will work closely with the District Project Units, different institutional partners, facilitating agencies, state agricultural universities and other line departments that are associated with the project from time to time. He/she will ensure that the project interventions are consistent with the agreed strategies and framework. The expert will be looking after social aspects of the project, including monitoring of social indicators and coordinating with

different agencies / institutions. The expert will be guided by the Project Director and reporting to the Project Director.

The Social Expert at the PMU level will be the responsible person to guide the overall process related to social aspects. The district / sub-district level implementing agencies will execute and monitor the social components in consultation with the Social Expert. She / he will be associated in the screening process of such activities that require involvement of women and/or need special focus on tribal involvement. She/he will monitor the social processes followed in execution of the planned activities and realisation of the social inclusion parameters.

8.2 CAPACITY BUILDING PLAN

The concerned officials / experts at the PMU and DPMU level will be oriented on different social aspects by which they will be equipped well to manage the social issues effectively and efficiently. The capacity building on social aspects would take into account the current issues that may influence the project activities, measures that are required to be taken to ensure greater involvement of socially and economically backward families and deprived sections of the society. A detail capacity building plan will be prepared for different stakeholders of the project, based on the assessment of their capacity requirement, in line with the project objective and its activities.

Table 52: Capacity Building Plan (Based on Coverage of Clusters in Different Phases)

Training / Workshop	**Project Level**	**Stakeholders**	**PY 1**	**PY 2**	**PY 3**	**PY 4**
Orientation Training	PMU	Project Officials / Experts				
(On Project & SA-SMF)	DPMU	Project Officials / Experts				
	SDPMU	Project Officials / Experts				
	Cluster	Village/Cluster Committee				
	Other	FPO / FPC				
Best-Practice Workshop	PMU	All Project Staff of all levels				
Exposure Visit	SPMU/DPMU	Thematic Expert/s				
	SDPMU	Cluster Coordinators				
	Cluster	Selected Farmers				

8.3 MONITORING AND EVALUATION

Project has developed an M&E system and indicators for all components desired to be monitored and evaluated, under which feedback from beneficiaries and related field data will be systematically collected and analyzed. SMF will be an integral part of such M&E mechanism and this will be helpful in taking informed decisions and making any mid-course correction in implementation strategy and activities. The M&E system will closely linked with the project's results framework and avoid duplication in collection of similar information. The M&E system also provides a mechanism for third party audit to ensure that all social due diligence e.g. active participation and ownership of the community, decentralized governance & decision making, inclusion & equity,

transparency & accountability, gender concerns etc. are being addressed and conducted in accordance with the provisions of the SMF. Thus there is no need to develop separate monitoring and evaluation mechanism for SMF part and will be taken care under project's Monitoring and Evaluation system.

It has been ensured by the project that in each component social safeguard measures are taken care thus activity wise role and responsibilities has been allotted to concern person. The social safeguards will be monitored at different operational levels of the project, i.e., at the village / cluster level, sub-divisional level, district level and state level. The project component wise social safeguard tracking activities are as follows-

Table 16: Component wise Social Safeguard Tracking Activities

Activity	Activity	Responsibility		
	(With Reference to Planning Outcome / Baseline)	**Primary**	**Secondary**	**Tertiary**
Components (A) Promoting Climate Resilient Agriculture Systems				
Participatory Development of Mini Watershed Plans **Sub-Activity** Preparation of Cluster Level Plans	● Needs assessment of farmers of different social and land holding categories, including women farmers in general and tribal women in particular; ● Segregated plan prepared by project component / sub-component / activities covering of inclusion of ST/SC farmers, women farmers and HHs belonging to marginal and small holding category.	SDAO	DSAO	PMU (Third Party Monitoring Agency)
Demonstration of climate resilient agronomic practices(CRAP) dry land farming **Sub-Activity** Farm Field School (FFS) for Technology Dissemination	● No. of FFS in inaccessible / less accessible / interior areas / scheduled areas; ● No. of farmers from ST/SC community and women farmers having demonstration plots; ● No. of farmers exposed to FFS for learning and adoption of practices.	SDAO VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Enhancement in Carbon Sequestration **Sub-Activity** Agroforestry- farm periphery/ small block	● Total area (in Ha.) covered under plantation, including unculturable waste and fallow land; plantation / agro-forestry in scheduled areas; ● No. of ST/SC and women farmers covered under agro-forestry	SDAO VCRMC	DSAO	PMU (Third Party Monitoring Agency)

Activity	Activity (With Reference to Planning Outcome / Baseline)	Responsibility		
		Primary	**Secondary**	**Tertiary**
Improvement of saline and sodic lands **Sub-Activity** ●Demonstration of Technology for Salinity Management ●Farm Field School (FFS) ●Farm Pond with Inlet & Outlet and Grass Cultivation; ●Water Pumps; Sprinklers	● No. of SF / MF / WF and tribal farming families participated in demonstration and adopted the practices. ● percent of total holding covered under soil improvement measures; ● percent of marginal, small, women and tribal farmers adopted green manuring and other soil improvement practices; ● No. of farmers, by social and holding categories supported with pumps, farm pond and sprinklers.	SDAO VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Protected Cultivation **Sub-Activity** shade Net House; Poly House; Poly Tunnels Planting Material	● Total number of farmers from various categories supported with protected cultivation and planting materials out of which no. of women farmers. ● Total no. of farmers from various category trained on protected cultivation	SDAO VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Integrated Farming Systems **Sub-Activity** Promotion of Small Ruminants; Backyard Poultry; Sericulture; Apiculture; Inland fishery; Other agro-based Livelihood	● No of farmers, by social and holding categories supported integrated farming system of which total no. of women farmers involved / supported with integrated farming system (by category); ● Number of farmers trained on integrated farming system by support areas	SDAO ATMA VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Soil Health Improvement **Sub-Activity** Vermi-compost and NADEP Units; Organic input production unit	● Number of farmers, by social and holding categories supported / having vermi-compost / NADEP unit; of which no. of ● Number of women farmers having / supported with vermi-compost / NADEP unit (by category); ● Number of farmers trained on vermi-compost; ● Number of farmers / their collectives / women groups having organic input production unit	SDAO ATMA VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Catchment Treatment and Drainage Line Treatment **Sub-Activity** Continuous Contour trenches; Construction	● Total area treated and no. of farmers accessed benefit of soil and water conservation; ● Area covered under soil and water conservation in tribal habitations / scheduled areas;	SDAO ATMA VCRMC	DSAO	PMU (Third Party Monitoring Agency)

Activity	Activity (With Reference to Planning Outcome / Baseline)	Responsibility		
		Primary	**Secondary**	**Tertiary**
of Loose Bolder; Earthen Nala, Cement Nala Bunds				
Construction of new water harvesting structures **Sub-Activity** Construction of Community Farm ponds; Individual Farm Ponds (with/without lining); Open Dug Well	● New WHSs constructed / renovated in inaccessible pockets, tribal habitations and farmers benefitted; ● Number of SF / MF / WF and tribal farming families supported with farm ponds and dug wells; ● Number of farmers (of the total) accessed institutional credit, average worth of credit;	SDAO ATMA VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Micro irrigation systems **Sub-Activity** Drip and Sprinkler irrigation systems	● Number of SF / MF / WF and tribal farming families having drip / sprinkler irrigation. ● Area (In Ha. & % of total area) of such families / households covered under drip / sprinkler irrigation system; ● Area covered under drip / sprinkler irrigation of the total cultivated area; ● Improvement in area under irrigation coverage of the total cultivated area of different holding categories.	SDAO ATMA VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Protective Irrigation **Sub-Activity** Water pumps & carrying pipes	● Number of farmers having water lifting devices, including women farmers and farmers from ST/SC community; ● Number / percent of farmers accessed institutional credit for purchasing pumps / pipes	SDAO VCRMC	DSAO	PMU (Third Party Monitoring Agency)
Component (B) Climate Smart Post-Harvest Management and Value Chain Promotion				

Activity	Activity	Responsibility		
	(With Reference to Planning Outcome / Baseline)	**Primary**	**Secondary**	**Tertiary**
Support to existing FPCs **Sub-Activity** Preparation of development plan of FIG/FPO/FPC Strengthening of existing FIG/FPO/ FPCs Developing market linkages	● Number of FPCs having development plan; ● Number of FPCs associated in tribal habitation / in scheduled area / interior villages; ● Number of SF / MF / WF and tribal farming HHs, associated with FPC are benefited and having membership to contribute their share money; ● Number of tribal and women farmers associated in FPC; ● Number of FPCs having women in the Board of Directors; ● percent coverage of ST/SC and women farmers in capacity building initiative. ● Number of FPCs in inaccessible pockets / scheduled areas received management grant and average value of grant;	SDAO VCRMC FPC	DSAO	PMU (Third Party Monitoring Agency)
Establishment of Custom Hiring Centres	● Number of tribal habitations in scheduled areas having CHC & required farm machinery; ● Number of CHCs having women friendly farm equipment; ● Increase / reduction in cost of cultivation due to farm mechanization by farmer category / social category. ● Number of SF / MF / WF and tribal farming families accessed the available facilities of CHC. ● percent of total area of tribal farmers and women farmers covered under farm mechanization.	SDAO ATMA FPC	DSAO	PMU (Third Party Monitoring Agency)
Support to FIG/FPO/FPCs for product aggregation, handling, transformation & marketing	● Number of FPCs having business plan and no. of business plan supported by formal financial institutions; ● No. of business plans supported by the project	SDAO ATMA FPC	DSAO	PMU (Third Party Monitoring Agency)

Activity	Activity (With Reference to Planning Outcome / Baseline)	Responsibility		
		Primary	**Secondary**	**Tertiary**
Production of foundation & certified seed of climate resilient varieties	● Number of SF / MF / WF and from ST/SC community covered under seed multiplication; ● percent of land holding utilized for seed multiplication and replacement; ● Total number of tribal habitation in the intervention block and no. of such habitation selected / covered; ● Quantum of seeds produced and percent of demand met and no. farmers supplied with;	MAHABEEJ SDAO ATMA FPC	DSAO	PMU (Third Party Monitoring Agency)
Development of seed hub- infrastructure support **Sub-Activity** Seed Processing Equipment; Training of seed producer farmers; Strengthening of seed quality testing facility	● No. of tribal habitations in scheduled area / interior pockets having seed processing, storage infrastructure and related facilities; ● No. of seed producing farmers by sex, social category and holding categories trained on seed production;	MAHABEEJ SDAO FPC SAU	DSAO	PMU (Third Party Monitoring Agency)
Component (C) Institutional Development, Knowledge and Policies for a Climate-resilient Agriculture				
Capacity Building **Sub-Activity** ●Training need assessment, Design & Module Preparation; Training of Project Officials / experts, Farmer's Friend, VCRMC ●Exposure Visits	● Identification of capacity building needs of different category of stakeholders; ● Thematic areas of training / exposures and coverage of persons from different operational levels; ● Coverage of number of trainees (SF/MF/WF/SC/ST) by thematic areas	SDAO ATMA External Agency Engaged for Capacity Building	DSAO	PMU (Third Party Monitoring Agency)

MF-Marginal Farmer; SF-Small Farmer; WF-Women Farmer; ST-Scheduled Tribe; SC-Scheduled Caste; CHC-Custom Hiring Centre; SDAO-Sub-Divisional Agriculture Officer; PMU-Project Management Unit; DSAO-District Superintending Agriculture Officer

The Farmer Field School (FFS) approach is a participatory and interactive learning approach that emphasizes problem solving and observation based learning. The FFS aims to build farmers' capacity to analyze their production systems, identify problems, test possible solutions, and eventually encourage the participants to adopt the practices most suitable to their farming systems (FAO, 2003 c). FFS can also provide an opportunity for farmers to practice and test/evaluate sustainable land use technologies, and introduce new technologies through comparing their conventional technologies developed with their own tradition and culture. FFS is usually a time bound activity (generally one agricultural production cycle or a year), involving a group (commonly 20 30) of farmers. It is facilitated by extension staff or by farmer facilitators (FFs). The method emphasizes group observation, discussion, analysis, presentation, and collective decision making and actions. The basic component of FFS is setting up of a Participatory Comparative Experiment (PCE), commonly referred to as Participatory Technology Development (PTD), whereby the farmers put the FFS concept into practice. A PCE can be developed using subjects of

agriculture, livestock, forestry, agroforestry, livelihoods and others (Farmer Field Schools Implementation Guide, FAO).

8.4 Reporting Plan

The social expert will be reporting directly to the Project Director at the Project Management Unit. S/he will prepare periodic report on progress of social parameters and will be submitted with the Project Director for feedback. The institutions / agencies associated in the implementation process will also prepare their reports, covering social aspects as per the social management frame.

8.5 Grievance Redressal Mechanism

During implementation of the project, certain grievances may arise which require time bound redressal. The project will have grievance redressal mechanism in place to take care of grievances of the people in general and tribals in particular, if any such cases arises. The grievances redressal framework at appropriate levels for the project implementation structure is as below-

8.5.1 Village Level

The project will promote Village Climate Resilient Agriculture Management Committee (VCRMC) to execute, monitor and look after the project affairs at the village level. The VCRMC will be a sub-committee of the Gram Panchayat that will be associated to implement project activities at the village level. The VCRMC will be the first step of grievance redressal. Any grievance arising at the village level, due to the execution of the project, will be resolved by the Gram Sabha.

8.5.2 Cluster Level

Any issue, which transcends the boundary of more than one village, will be referred to the Cluster Committee for solution. The cluster committee, which is represented by all the villages under the cluster and having representatives from VCRMCs will take up the issue and will attempt to address it. All such issues referred by the VCRMC to Cluster Committee will be recorded at the Cluster Committee level and settled mutually.

8.5.3 Upward Movement for Grievance Redressal

Any grievance, which the people's committees find difficult to settle amicably, it may be referred to the office of the SDAO for redressal. Grievances not solved at the SDAO level will be referred to the district SAO for amicable solution. Issues of specific characters and related to policy or legal aspects, would be referred to the PMU for decision.

8.5.4 Toll Free Number for Grievance Redressal

The project will introduce a toll-free number for suggestions/ grievances and its timely redressal of grievances. Any beneficiary of the project can make call and register the suggestion/ complaint. After reviewing the details and field facts, appropriate authority will resolve the issue or can take up suggestion.

8.5.5 IT based Grievance Redressal Mechanism

The project will extensively use IT platform for receiving, processing and addressing the grievances. Any person having any project related grievance can use the IT platform to share the grievance to the appropriate project authority for amicable solution. The decision, made by the appropriate authority, based on available facts and figures will be communicated to the concerned person using the same platform.

8.5.6 Recording of Grievances and its Dispose-off

From VCRMC to Cluster Committees, at every stage the grievances received, number of grievances addressed, time consumed for decision making and decision of the VCRMC and Cluster committee related to the raised grievance would be documented. In case of IT based grievance redressal

mechanism or use of toll free number, such aspects will be electronically recorded for future review.

8.6 BUDGET

SMF will be the part of complete implementation strategy and will be executed at field level through FFS approach and other climate resilient interventions. Various steps of SMF i.e. beneficiary assessment; stakeholder analysis; impact assessment; institutional analysis; risk assessment & analysis; monitoring & evaluation and capacity building framework; and implementation arrangements will be inbuilt steps under project interventions. There is sufficient fund allocation for various component and subcomponents for project interventions. Thus, there is no need for separate budget allocation for SMF activities.

Annexure: A

Field Consultation and Observation

1.0 Introduction

The Project on Climate Resilient Agriculture (POCRA) is expected to promote farming system that is more resilient to climate variability in the identified vulnerable locations of the state. As the project aims to cater to the needs of marginal and small farmers, the social impact of the project would remain positive. However, the project requires a strategy which is more inclusive in nature and address the relevant concerns of the marginalized sections. Apart from this, the project should have an exclusive strategy for tribals as some project districts have tribal population.

Stakeholder consultation process was initiated as a part of social assessment to understand the response / opinion of different stakeholders at different levels of the project (State / district / village). The consultation and assessment was conducted in proposed project districts of the State, involving Government departments, academic institutions like agriculture universities,tribal communities living in less accessible areas of the project districts, farmer organizations (FPCs), marginal and small farmers, women farmers, women entrepreneurs and community in general etc. Details of stakeholders consulted in the process are discussed below.

2.0 Objectives

The objectives of carrying out the stakeholder / community consultation process were;

1. To understand current situation of the people in general and small and marginal farmers in particular, covering tribal farmers and women farmers;
2. To identify key expectations of the stakeholders and potential social impacts of the activities to be undertaken through the project;
3. To develop a Social Management Framework (SMF),based on the consultation inputs, that would be used by the project to mitigate adverse social impacts, if any, of the project supported activities and bringing in inclusiveness in the project implementation strategy;
4. To identify the scope for taking up mitigation measures based on the identified social risks in the project design and making it more participatory and inclusive.

3.0 Approach and Methodology

The methodology adopted for consultation was participatory in nature covering different stakeholders, including government and non government entities. Districts, two each, were selected from Vidharva and Marathwada region where the project is proposed to be implemented. The districts were selected based on their vulnerability (vulnerability Index) and HDI values. Tribal block was purposefully selected in Amaravati district to understand the implication of the project on Scheduled Tribes and their key expectations. The assessment was exploratory in nature to understand possible social impact of the project. Specific approach and methodology followed in the assessment are;

1. Discussion with officials of Agriculture Department at district and sub-district level;
2. Discussion with officials of ATMA;
3. Consultation with community in general and farmers in particular (FGD mode);
5. Discussion with input suppliers / private players;
6. Discussion with PRIs in Scheduled and non-Scheduled Areas;
7. Discussion with Women Farmers and Women Entrepreneurs;
8. Discussion with officials of APMC;
9. Discussion with Seed Growers (under MAHABEEJ linkage) etc.

4.0 Field Consultation

The consultation held with various stakeholders in different phases comprising social and environment experts. The supporting agency was also involved in the process of assessment. A number of consultation workshops were also organized in different locations of the state to assess the possible adverse impact of the project. The team also consulted with different agricultural scientists, agricultural universities and officials of agriculture department to assess the expected adverse impact of the project.

5.0 Collection of Primary Data

Required data were collected during field visit and interaction with different stakeholders. Collected primary data were analyzed to understand the current situation and overall trend. A detailed discussion was conducted on different project components with the community to understand their views on the possible impact of the project suggested measures on the local socio-cultural and economic condition. Economic benefit aspects were discussed with different stakeholders at the community level, covering marginal and small farmers, women farmers, women entrepreneurs, tribal farmers etc.

6.0 Key Stakeholders

The field assessment reveals that the proposed project will influence different stakeholders at different levels of the project execution. Stakeholders identified in the process covers both individuals (farmers and others) and group/s at the village / project area who may be influenced or influence the project. Different stakeholders identified in the process are as follows.

7.0 Key Findings from Consultations

1. Farmers dismantled/broke the graded bunds created in earlier WS work to reclaim more land for cultivation
2. Non-availability of Gypsum for soil amendment which is affecting agricultural production
3. Farmers engaged in Cotton, Soybean and Pigeon pea always face shortage of seed supply, in particular Mahabeej seeds.
4. Shortage of Mahabeej supply compel the farmers to purchase costly seeds of the private seed companies which increased cost of cultivation.
5. In case of poor germination, it is very difficult to follow up with Mahabeej for replacement or compensation. In comparison, commercial seed company's grievance redressal is faster and quicker.
6. Zero budget farming proponents are conducting 4 days' residential orientation camps. In Latur, about 1000 farmers were attending the camp, each paying Rs. 600/- as participation fee.
7. Selection of seeds, fertilizer and pesticides and its application is a usually a result of peer pressure / motivation, desperation, lack of timely availability of advisory service on the application of fertilizer and pesticides.
8. Limited storage capacity at the household / community level. Farmers / producers cannot wait/withhold until favourable market condition is available as they need cash immediately after harvesting for making repayment to different individuals / suppliers etc.
10. Shortage of inputs at the time of need due to transportation limitation – difficult terrain and distance from the railway downloading facility and market places (interior tribal pockets).
11. Pesticides and fertilizers were hardly utilized upto 1990s. Now it has reached to such a stage that tribal farmers almost believe that farming is not possible without these inputs
12. Storage and marketing with proper rate is necessary. Tribal Development Corporation is not delivering effectively.
13. Goat rearing and poultry can be promoted for women farmers to support their current livelihoods.
14. Traditionally small but regular savings by women of the farming households plays important role in purchase of the inputs – seeds, fertilizers. In several cases the same is now facilitated by the women SHGs.
15. Agriculture extension services are poor in less accessible and distant tribal habitations.
16. Poor capital base to invest in agricultural implements.
17. Limited formal institutional credit accessibility of small / marginal holders due to factors like outstanding of earlier credits, poor asset base, and requirement of less amount of credit which bank feel not feasible etc.
18. Prevalence of informal credit system for agricultural activities, including credit based purchase of inputs from input suppliers.
19. Available weather information (information provided through SMS) is less used by the farmers as there is no guidance on type of fertilizer and pesticides to be used for different crops in different conditions and during occurrence of different diseases.
20. Local cropping pattern is more influenced by lead farmers. Other farmers follow them as far as growing different crops during different seasons is concerned. It results with high production of a crop in the locality which reduces the price of the produce.

21. Scarcity of water for irrigation remains a major constraint to meet the crop-water requirement during dry spell and post-monsoon farming. The situation is improving but limited to few farmers having land in plain areas.
22. 21. Farmers having their land near forest area normally suffer from destruction of crops by wild animals. However, no such attack on wild animals and their killing is reported due to awareness of farmers for wild life protection.

8.0 Key Identified Issues

1. As the project, will benefit directly to the farmers, it may happen that interest of big farmers may impact upon the small and marginal farmers. Their accessibility to the project created resources may be limited.
2. The project intends to promote farm mechanization by establishing custom hiring centres (CHC). It is apprehended that sharecroppers / lease holders may not be given due importance to hire / access farm machinery:
3. The backend subsidy provision may not be of interest of small and marginal farmers in incurring upfront investment and any delay in direct benefit transfer may impact them negatively.
4. Farmers with low level of operational holdings may not be interested to adopt the INM / IPM due to time and cost factors (it is perceived that such scientific practices will enhance farm level engagement period and may cost them high.
5. Accessibility of small and marginal farmers to micro irrigation systems may be limited due to initial investment requirement and fragmented land parcel.
6. Inaccessible / poorly accessible pockets may not have FPOs / FPCs which may limit / delay execution of certain project activities like agro-processing and value addition activities.
7. Establishment of processing units in interior / inaccessible clusters will remain an issue and may require additional investment.
8. Interior tribal areas / villages near forest may have less attention due to conveyance / monitoring issues and cost of transportation.
9. Certain project locations may not have existing FPCs which will restrict involvement of farmer's association in seed multiplication process.

9.0 Issues related to Inaccessibility and Participation of Tribal and Women

1. Tribal habitations may not have FPCs which may restrict their association in seed multiplication process.
2. Availability of suitable land (non-agricultural) for establishment of CHC may remain a challenge.
3. The backend subsidy provision may not be of interest for small and marginal tribal farmers in incurring upfront investment and any delay in direct benefit transfer may impact them negatively. In a dispersed tribal community, their inclusion may remain a challenge.
4. Initial Investment for the construction of individual farm ponds may remain an issue.
5. Accessibility of small and marginal tribal farmers to micro irrigation systems may be limited due to initial investment requirement.
6. Establishment of packing / grading units in interior / inaccessible tribal villages / scattered tribal hamlets may remain a challenge with regard to operational feasibility.
7. As some tribal farmers are yet to be issued ROR for the land alloted under FRA, their coverage under different project provisions may be limited.
8. Establishment of storage facility in interior / inaccessible tribal villages / scattered tribal hamlets may remain a challenge from operational point of view.
10. Participation / membership of tribal members in the proposed village level committee
11. Capturing needs of women farmers and their preferences for seeds and other agricultural inputs may get sidelined in the process.
12. Active involvement of women farmers in FPCs may be constraints due to current nature of engagement in different economic / non-economic activities.
13. Involvement of women farmers in value chain development and management may be limited due to the nature of engagement required for value addition activities and supply chain management.

10.0 Project Proposed Activities and Perceived Impact on Beneficiaries

1. The proposed measures under the project will benefit small and marginal farmers in general and women and tribal farmers in particular. The inclusion strategy adopted by the project will be helpful to the deserving target mass.
2. The VCRMC, as a people's platform at village level, will look in to active participation of marginalized section in the project planning and execution process. It will ensure that people participate in the local planning process and suggest solution to the issues that pertain to agriculture and its resilience to climate variability. Implementation of activities, based on the local planning will help to bring ownership of the community and sustenance of the process.
3. In the less accessible tribal areas, creation of agricultural infrastructure will improve people's accessibility to the facility. Agro-processing and storage facility will be helpful to the tribal farmers to have a higher return of their produce with minimized distress sale.
4. Promotion of integrated farming system will be helpful to vulnerable families for improving their livelihood. Further, livestock/poultry, apiculture and sericulture will be beneficial for the tribal farmers in both scheduled and non-scheduled areas. These traditional activities will be helpful for women for improving their engagement and income.
5. The landless families in an intervention cluster / village will also be benefitted due to the project, in terms of getting employment and involving themselves in activities in apiculture, sericulture and other agriculture based processing and value addition activities. The project will create a scope for them to participate in the value chain improvement and marketing. They may be associated in skill development initiatives, aggregation of farm produces and marketing of produces. They may be given preference in non-land based activities.
6. The capacity building plan of the project will further improve the knowledge and skill base of the farming community and driving them towards climate resilient agricultural practices.