

NIRD; RKVY Monitoring Unit Analytical Report on Jharkhand SAP

1. Name of the State

Jharkhand

2. What target the State decided to achieve using RKVY assistance during 11th Five Year Plan (FYP) for the agriculture sector as a whole and for the sub sectors?

The State decides to achieve a growth rate of 4 per cent per annum for the agriculture sector as a whole during the 11th FYP. However, the SAP does not state targets at the sub-sector level; instead it gives project-specific targets that encompass various sub-sectors. The targets that the State has decided to achieve during the 11th Five Year Plan (FYP) include: increasing Net Sown Area (NSA) by 3.14 lakh ha *from 18.08 lakh ha*, increasing cropping intensity from 114 to 128 per cent – *increasing cropped area from 24.19 ha to 27.16 ha*, treating 49253 ha cultivable waste land and 89099 ha of other fallow land, treating 39000 ha cultivable waste land through watershed development, increasing area under assured irrigation from 1.57 to 3.14 lakh ha – *50 per cent through creating irrigation potential and 50 per cent through minor irrigation*, achieving a seed replacement rate of 100 per cent (from present 10 per cent in field crops and 20 per cent in vegetables), developing 12 *State Agricultural Farms as Model Agri Farms with Public-Private Partnership*, providing *micro-nutrient enrichment kit* to 500 progressive farmers in each district, distributing 17,800 *Integrated Pest Management* kits to farmers, distributing 35430 number of various kinds of farm equipments to farmers (such as 6040 *plastic drum seeders*, 7920 *Cono weeder*, 5285 *Sprayer to farmer groups/clubs*, 769 *Winnowers cum Threshers*, 1306 *Power tiller* and 14110 *Paddy Paddle Thresher*), assistance for horticulture development in 10359 ha of land (3570 ha for *Mango*, 1830 ha for *Guava*, 2650 ha for *Jack fruit*, 250 ha for *Amla*, 1270 ha for *Citrus*, 300 ha for *Spices*, 450 ha for *Medicinal and aromatic plants* and 39 *Nurseries* of 1 ha size), support for vegetable cultivation in 1,20,681 ha of land at a cost of Rs 15,000 per ha, setting up 119 number of various marketing infrastructure units (18 *Pack Houses*, 17 *Market Yards*, 22 *Grading/Packaging*, 30 *Refrigerated Van*, 32 *Cold rooms for vegetables*), setting up 28 *Krishi Gyan Avam Udyog Kendra* for strengthening extension along with 184 *Agri information centre*, promoting 5000 units of adult cattle community pastures of size 5 ha each, setting up 13 *modern dairy demonstration centres*, supplying 2 cross-bred (CB) milch cows at 80 per cent subsidy to 6451 farmers, providing mini dairy units of 5 CB cows each to 450 progressive farmers at 50 per cent subsidy, 3 *Tassar Silk Production Centres with Grainage House*, 18 *Silk Cocoon Banks*, setting up 123 *Fish seed Hatcheries*, constructing 2500 *fish seed rearing tanks* and *renovation of 420 government tanks*.

3. Which method (Method 1 or Method 2) is used for the preparation of SAP? How integration (methodology) of C-DAPs and prioritizing major interventions was done to prepare SAP?

Formally, the SAP does not make explicit that which method (*Method 1* or *Method 2*) is used for its preparation. However, it is implicit that the SAP has attempted to follow a mix of both the methods. The methodology stated for the preparation of C-DAPs/SAP mentions use of district/block-wise secondary data on *potentials of crops/agriculture & allied activities, infrastructure, market and extension services*; primary data from line departments, development agencies and research institutes; and village-level consultations, in the preparation of the C-DAPs. Further, the SAP states that the consultancy has carried a series of workshops of all stakeholders

at the district levels for obtaining their expectations and suggestions, which include the line department officials of the districts, farmers and the NGOs; the SAP provides a district-wise list of suggestions, emanating from the district-level consultations. These indicate the use of Method 1 (*the State Nodal Agency/Agriculture Department takes the draft DAPs from the districts at the first instance to ensure appropriate capture of the State's priorities w.r.t. agriculture and allied sectors in the C-DAPs so that their integration in to the SAP meet priorities, targets and resources of the State*). However, the facts such as preparation of the C-DAPs and the SAP by the same agency (NABCONS); preparation of the SAP in a consultative approach, incorporating inputs from the line departments, Strategic Research Extension Plan (SREP) by ATMA under guidance from SAMETI, Potential-linked Credit Plans from NABARD, Birsa Agricultural University, ICAR (HARP) & IINRG research institutions and RRBs/commercial banks; and collection of data on policy direction, programmes & plans etc. from the State level agencies, supports the use of Method 2 (*State Nodal Agency/Agriculture Department conveys to the districts in the first instance, the State's priorities, targets and resources that are also ought to be reflected in the respective district plans*). Though, the SAP states a last step in the mentioned *Methodology* that involves *consolidation of district plans into the State Plan*, yet it is not explicit on integration (methodology) of C-DAPs and prioritizing major interventions to prepare the SAP. However, the SAP expresses its intent of carefully utilizing the feedback, findings from the village, block and district level surveys, technical inputs obtained from various sources and information/data base from GOI, concerned State government departments, research institutes, various study reports, etc, in arriving at the Plan. As per the Planning Commission guidelines, the SAP has attempted to keep in view the uniqueness of districts while proposing allocations for various programmes/projects. For example, the C-DAP of *Bokaro* district states that the district has potential for providing irrigation to a large area through construction of *Check-dams* and *Lift-irrigation* on a number of perennial streams/rivers flowing through the district; the SAP responds by proposing project *Subsidy assistance for Irrigation* that includes provision for 2270 number of *Check-dams* (Rs 61.29 crore) and 3181 number of *Microlift Irrigation* (Rs 54.71 crore).

4. Whether SAP has critically analyzed and clearly stated the agricultural situation of the state vis-à-vis its districts through a SWOT analysis covering agro-climatic conditions, natural resources, infrastructure, institutions, technologies, manpower etc

Though the SAP misses a formal SWOT analysis, yet it attempts to state the major weaknesses and threats of the State under topic *broad constraints and handicaps in agriculture development in the State*, and the important opportunities under topic *State-level potentials*. However, the SWOTs are discernable in the text of the SAP. The major strengths include, a high average annual rain-fall of 1400 mm, a number of perennial rivers and streams flowing through the State, rich fauna and flora, 29.26 per cent of the geographical area under forests *against national average of 18 per cent*, agro-climatic conditions conducive for commercial cultivation of large variety of horticultural crops, 40 per cent of the nation's mineral reserves (ranks first in India in production of *Coal, Mica, Kyanite* and *Copper*) and extensive railway network providing vital links to important cities in country & a national airport. The weaknesses include, a high poverty-level (40.3 per cent in the State against 27.5 per cent at national level) with high-level of food & nutritional insecurity; 40 per cent of the geographical area under soil erosion due to uneven land surface that results in a low net sown area of 18.08 lakh ha against the cultivable area of 41.80 lakh ha; 88 per cent of the total cultivated area is un-irrigated; agricultural economy is characterized by its dependence on nature, low investments, low productivity, mono-cropping, inadequate irrigation facilities and small & marginal holdings; only 15 per cent of the villages are electrified; only 26 per cent of the

villages have road-connectivity; and a large share of small & marginal land-holdings (80 per cent of total farm-holdings). The opportunities include, the agro-climatic conditions favourable for commercial cultivation of large variety of fruits, vegetables, flowers and medicinal & aromatic plants, present opportunity for meeting the local consumption requirements as well as exploiting the export potential; the importance of forest-based industries in economic development of rural-people has increased after the feasibility of use of bamboo-biomass for power-generation has been verified, in the background of rising demand for power; huge investment potential exists for units engaged in bamboo-based laminates, composites, boards, plywood, *Tasar & Lac* based industries and medicinal plants; and the 16 identified river basins may be harnessed through major, medium and minor irrigation schemes. The threats include, significant deficit in food grains (52 per cent), vegetables (12 per cent), fruits (52 per cent), milk (52 per cent) and fish (52 per cent) makes the State highly vulnerable in terms of food-security and nutritional-level; the factors like prevalence of small-sized land holdings, low productivity, predominantly grain-oriented subsistence agriculture and lack of adequate surplus de-motivate an individual farmer from making capital investments in the farm, thereby restraining entrepreneurial growth, which is necessary for growth of the agriculture sector; and water table in the State is going down due to low ground recharge rate, despite a good rainfall.

5. Whether Convergence- inter and intra department/programmes- been attempted and what is the extent of convergence? Have all potential options for convergence been identified and explored?

The SAP mentions (under *Methodology* part) of identifying the programmes/components being implemented by the government departments for **convergence** in agriculture development plan through interaction with these departments. Further, the SAP mentions some pursuits that may involve *convergence* such as implementing various *Central Sector* and *Centrally Sponsored Schemes* for development of agriculture & allied activities, integrating 27 ongoing *Centrally Sponsored Schemes* under *Macro Management Scheme*, issuing common guideline for *National Watershed Development Project for Rain-fed Areas* to harmonize the implementation norms with other watershed development projects, etc. However, the SAP is not explicit on its attempts for convergence of inter and intra department/programmes. It misses to give any evidence of convergence of proposed projects/programmes with other existing schemes. Hence, the extent of convergence is not explicit in the SAP. Therefore, we cannot comment on whether all potential options for convergence have been identified and explored in the SAP.

6. Has the experience of on-going CSS and state schemes been studied and lessons learnt have been incorporated in SAP/C-DAPs for replication/ expansion/ modification in uncovered areas?

Though the SAP is not explicit on whether the experience of on-going CSS and state schemes has been studied and lessons learnt have been incorporated in SAP for replication/ expansion/ modification in uncovered areas, yet we may discern some instances given in the SAP that support the argument. For example, the SAP intends to replicate the successful implementation of the *Integrated agri-horti (Orchard)* model in *West Singhbhum* district to the predominantly tribal districts of the State through its proposed project *Integrated Agri Horti farming for livelihood improvement of Tribal families* (Rs 35.75 crore). Similarly, the SAP brings a shift in the approach of the extension programmes/projects from *technology transfer* to *capacity building* mode, as it realizes that building capacity and confidence in farmers is necessary for making them accept and adopt the market oriented production system. Further, recognizing the constraints of *Major and Medium Irrigation projects* (such as *long gestation periods, environmental issues, high costs and*

rehabilitation of project affected people), on one side and the advantages of minor irrigation schemes (such as their implementation and management by farmers themselves, no requirement of high technical know-how, generation of sizable employment and scope for farmers to develop themselves the designs suitable for different agro-climatic zones) on the other, the SAP gives special thrust for minor irrigation through the project Subsidy assistance for Irrigation; the project targets the setting-up of 45 Deep tubewells (Rs 54.0 lakhs), 1269 Shallow tubewells (Rs 6.35 crore), 36564 Dug wells (Rs 372.95 crore), 32401 Water Harvesting Tanks (Rs 59.13 crore), 1730 Checkdams (46.71 crore), 2641 Microlift Irrigation (Rs 45.43 crore) and 60 Bamboo boring (Rs Rs 1.44 lakh) . The SAP targets doubling the area under assured irrigation from 1.57 lakh ha to 3.14 lakh ha, 50 per cent of this through irrigation potential created and 50 per cent through minor irrigation investments proposed.

7. Whether the yield gaps and returns in different crops/livestock/fisheries have been estimated?

A systematic estimation of the yield gaps and returns in different crops/livestock/fisheries is **not** explicit in the SAP. However, the SAP mentions the low yield of major staple crop *paddy* in the State (ranging from 1062 kg/ha in *Western plateau* to 1314 kg/ha in the *Central-North Eastern plateau*) against the national average of 1984 kg/ha. The SAP states that the yields of other field crops such as wheat, maize, tur and other pulses and oilseeds etc. in the State are lower than the national average. The SAP gives yields of some major field crops such as paddy, wheat, maize, pulses and oilseeds for multiple years up to 2006-07, outsourced from the stated secondary sources. The SAP also compares the yields of some major fruit-crops at State-level with the All-India figures (in **tons/ha**), for example, *Mango* (State: 10.09, India: 8.43), *Leechi* (State: 7.59, India: 7.51), *Guava* (State: 9.96, India: 11.41), *Banana* (State: 10.32, India: 30.24), *Papaya* (State: 9.92, India: 21.83), *Lemon* (State: 12.96, India: 8.37), *Others* (State: 9.83, India: 12.45).

8. How the technological and agronomic gaps were identified to contribute to yield gaps?

The SAP is not explicit on how the technological and agronomic gaps are identified to contribute to yield gaps. However, it mentions about involving a number of activities as part of the *methodology* to prepare the C-DAPs/SAP, which may have contributed to identifying the technological and agronomic gaps. For example, *collection of secondary data (district/block-wise) regarding potentials of various activities/crops relating to agriculture & allied sectors, infrastructure, market and extension services; primary data from line departments, development agencies and research institutes; village level consultations; assessment of present level of development, identification of gap in infrastructure, support service, extension services, marketing support, capacity building, etc.*

9. How the identified constraints are adjudged responsible for low crop productivity in general and specific crops in particular? Is it an opinion or stated on the empirical basis?

It is not stated in the SAP that how the identified constraints are adjudged responsible for low crop productivity. However, it mentions about involving a number of activities as part of the *methodology* to prepare the C-DAPs/SAP, which may be suggested to have contributed in adjudging the identified constraints responsible for low crop productivity in general. For example, *collection of secondary data (district/block-wise) regarding potentials of various activities/crops relating to agriculture & allied sectors, infrastructure, market and extension services; primary data from line departments, development agencies and research institutes; village level consultations; assessment of present level of development, identification of gap in infrastructure, support service,*

extension services, marketing support, capacity building, etc. The SAP is not explicit on whether it is an opinion or stated on the empirical basis.

10. How the interventions are identified to bridge the gaps in productivity levels?

It is not explicit in the SAP that how the interventions are identified to bridge the gaps in productivity levels. However, it mentions about involving a number of activities as part of the *methodology* to prepare the C-DAPs/SAP, which may have contributed to identifying the interventions to bridge the gaps in productivity levels. For example, *collection of secondary data (district/block-wise) regarding potentials of various activities/crops relating to agriculture & allied sectors, infrastructure, market and extension services; primary data from line departments, development agencies and research institutes; village level consultations; assessment of present level of development, identification of gap in infrastructure, support service, extension services, marketing support, capacity building, etc.*

11. Whether the right strategies have been prioritized to bridge the yield gaps in crop/livestock/fisheries and maximize returns to farmers have been clearly spelt out? Whether the empirical basis for appropriate strategies provided? How far they have been obtained/decided through a consultative process with all the relevant stake holders?

A systematic prioritization of strategies is not explicit in the SAP. It is not explicit whether an empirical basis for appropriate strategies has been provided. However, we do not rule out the role of a consultative process involving all the relevant stakeholders in obtaining/deciding the appropriate strategies as the SAP clearly mentions that the *entire Plan has been prepared in a consultative approach with active participation of all the stake-holders*. The SAP mentions about carrying-out a series of district-level workshops of all stakeholders (such as line department officials, farmers and the NGOs) for obtaining their expectations and suggestions.

12. Whether the prioritized strategies have been translated into programmes/projects/activities by sectors and years with clear cut objectives, targets, output, outcome, funding (RKVY, other sources) for each project? Whether the viability of each project to achieve the expected output considered?

The SAP attempts to translate the strategies into programmes/projects/activities by sectors and years with objectives, targets and funding. However, it does not specify the source of funding (RKVY or other source). Though it is not explicit whether the viability of each project to achieve the expected output is considered, yet it is evident for some projects. For example, the SAP proposes the project *Integrated Agri Horti farming for livelihood improvement of Tribal families* (Rs 35.75 crore) after observing successful implementation of *Integrated agri-horti (Orchard)* model in the *West Singhbhum* district.

13. Have border areas/ insurgent areas/problem areas (mining, acidic soils etc) have been addressed by formulating any specific projects?

The SAP attempts to address the problems faced by insurgent areas/problem areas. For example, it proposes project *Soil amelioration programme for acidic soils under Current Fallow Land* (Rs 18.13 crore). Similarly, for the tribal-dominated districts of the State, the SAP proposes project *Integrated Agri Horti farming for livelihood improvement of Tribal families* (Rs 35.75 crore).

14. What is the mismatch (difference between estimated budget in SAP/C-DAP and the approved and used budget) between the projections and funding in SAPs/C-DAPs and the projects (difference between planned projects in SAP/C-DAP and approved projects and funding being implemented)? How this mismatch affects the targets, expected outputs/outcomes/growth impact?

The SAP proposes a total budget of Rs 2882.63 crore (**involving all 24 districts**, given at the end of the SAP) for last four years (2008-09 to 2011-12) of the 11th FYP; the year-wise break-up of the total budget comprises of Rs 341.41 crore, Rs 760.78 crore, Rs 876.05 crore and Rs 904.19 crore proposed for years 2008-09, 2009-10, 2010-11 to 2011-12, respectively. *The SAP does not give proposed budget for year 2007-08 and states that the Plan for 2007-08 has been integrated in the Plan for 2008-09. It also states that the State government could not incur expenditure for Stream I under RKVY during 2007-08 due to late receipt and procedural issues. However, the Statement from the RKVY department shows approved allocation (Rs 61.66 crore), total release (Rs 55.68 crore) and expenditure incurred (Rs 50.07 crore) by the State during year 2007-08.* The total approved allocations under RKVY (*sourced from RKVY website*) for period 2007-08 to 2010-11 is Rs 351.37 crore; the year-wise break-up of the total approved allocation is Rs 61.66 crore, Rs 58.62 crore, Rs 70.13 crore and Rs 160.96 crore, for years 2007-08, 2008-09, 2009-10 and 2010-11, respectively. There is a gap of Rs 2531.06 crore (87.8 per cent) between the total proposed budget (2008-09 to 2011-12) and the total approved allocations (2007-08 to 2010-11). Further, on yearly basis, there are gaps of Rs 282.79 crore (82.8 per cent), Rs 690.65 crore (90.8 per cent), Rs 715.09 crore (81.6 per cent) between the proposed and approved allocations for years 2008-09, 2009-10 and 2010-11, respectively. *The SAP does not give proposed allocation for year 2007-08, while approved allocation is not available for year 2011-12 in the RKVY website, therefore we cannot match the proposed and approved allocations for these two years.* For the three years (2008-09 to 2010-11) for which data are available on both proposed and approved allocations, there is a gap of Rs 1688.53 crore (85.4 per cent) between the proposed budget and the approved allocations for period 2008-09 to 2010-11. Since the mismatch is quite large (over 80 per cent of the proposed allocations), it is expected to severely affect the targets, expected outputs/outcomes/growth impact.

15. Are the projects/programmes large enough, instead of being small and prolific pilot type schemes, to make a visible (impact) in the sectors?

The projects/programmes are large enough, instead of being small and prolific pilot type schemes, to make a visible (impact) in the sectors. For example, project *Buy Back of certified seed produced by seed villages for Paddy* (Rs 89.11 crore), *Wheat* (Rs 44.10 crore) and *Pulses* (Rs 21.11 crore) of the *Accelerated Seed replacement programme* under *Integrated Development of Major Food Crops*; projects *Treatment of cultivable waste land* (Rs 215.01 crore), *Treatment of other fallow land* (Rs 91.80 crore), *Soil amelioration programme for acidic soils* (Rs 198.40 crore) and *Watershed Development* (Rs 50.40 crore), under *Land Development programme*; project *Subsidy assistance for Irrigation for Dugwells* (Rs 376.32 crore), *Water Harvesting Tanks* (Rs 64.61 crore), *Checkdam* (Rs 61.29 crore), *Microlift Irrigation* (Rs 54.71 crore); project *Support for vegetable cultivation (Certified seed, compost, plant protection etc.)* (Rs 186.10 crore) under *Horticulture Development*; and projects *Goat Breeding Unit of 10 Does + 1 bucks for grading up of local population with Improved goat breeds* (Rs 143.20 crore) and *Promotion of Improved pig breeds* (Rs 183.99 crore).

16. Has the SAPs identified Flagship programmes (extensive to cover large part of the state and larger area)?

The SAP does not make a formal mention of the *Flagship programmes*. However, many programmes proposed during the 11th FYP involve huge budget allocations. *Though the district-wise allocation of funds is not explicit*, yet the SAP indicates that the programmes are extensive to cover large part of the State. For example, the **Integrated Development of Major Food Crops programme (Rs 296.35 crore)** that comprises of sub-programmes/projects such as *Accelerated Seed replacement programme, Support to State Seed farms, Seed Testing Labs and Integrated Pest Management*; the **Land Development programme (Rs 587.70 crore)** that comprises of projects such as *Treatment of cultivable waste land, Treatment of other fallow land, Soil amelioration programme for acidic soils, Watershed Development, Soil Health Cards, Micro-nutrient testing, Micro-nutrient enrichment, Soil testing labs at district level and Mobile soil and water testing lab cum mobile Agri school*; the **Subsidy assistance for Irrigation programme (Rs 563.83 crore)** that involves support for minor-irrigation sub-programmes/projects such as *Deep tubewells, Shallow tubewells, Dug wells, Water Harvesting Tanks, Checkdam and Microlift Irrigation*; the **Horticulture Development programme (Rs 383.24 crore)** that comprises of sub-programmes/projects such as *Assistance for Plantation of horticulture crops, IPM & INM for horticulture crops, Support for vegetable cultivation, Integrated Mix Farming and Integrated Agri Horti farming for livelihood improvement of Tribal families*; and Animal Husbandry/Dairy programmes/projects such as **Goat Breeding Unit of 10 Does + 1 bucks for grading up of local population with Improved goat breeds (Rs 143.20 crore)** and **Promotion of Improved pig breeds (Rs 183.99 crore)**.

17. Whether sectoral and spatial allocation of funds conforms to equitable and optimal distribution of resources?

The SAP misses to allocate funds at the sector-level for the *Agriculture* sector, though it provides sectoral allocations for the *Horticulture, Seri-culture, Animal Husbandry/Dairy* and *Fisheries* sectors; however the SAP gives allocations for various programmes related to the *Agriculture* sector. The SAP allocates highest share of 22.13 per cent (Rs 636.09 crore) to the animal husbandry/dairy sector. This is highly recommended in the light of the fact that most of the farming in the State is at the subsistence level with over 70 per cent of the rural population depending on agriculture & allied sectors for their livelihood. Factors such as rain-fed farming in 88 per cent of the area, 80 per cent of the land-holdings belonging to small & marginal size and poor status of soil (40 per cent of area under soil-erosion) have contributed to very poor agricultural productivity and practice of mono-cropping (predominantly *paddy*) prevalent in eighty-eight per cent of the area. Over 40 per cent of the population is below-poverty-line. In this scenario, the *Animal Husbandry/Dairy* sector presents a huge potential to increase the earnings and employment of the farmers; it justifies the allocation size. The SAP proposes second highest share of allocation of 20.44 per cent (Rs 587.70 crore) towards *Land Development*. This is quite appropriate as the State has large areas under cultivable waste land/fallow land that present tremendous potential for extensive cultivation; *the State has a low-level of net sown area of 18.08 lakh ha against the cultivable area of 41.80 lakh ha*. The third highest share of allocation of 19.61 per cent (Rs 563.83 crore) is proposed for the *Irrigation* (through subsidy for minor irrigation programmes). The allocation is well-justified as minor-irrigation offers great potential to enhance the irrigation-status of the State which is deprived of irrigation with just 12 per cent of the area under irrigation; the State can also capitalize on its good annual-average rain-fall by encouraging

minor irrigation. Besides, minor irrigation schemes have advantages such as *their implementation and management by farmers themselves, no requirement of high technical know-how, generation of sizable employment and scope for farmers to develop themselves the designs suitable for different agro-climatic zones*; in contrast the *Major and Medium Irrigation projects* face constraints such as *long gestation periods, environmental issues, high costs and rehabilitation of project affected people*. The SAP proposes an allocation share of 13.33 per cent (Rs 383.24 crore) for the *Horticulture* sector. The agro-climatic conditions of the State are conducive for the cultivation of a variety of horticultural crops and the proposed allocation is expected to play a key role in tapping that potential beside increasing nutritional and food security of the State. The SAP proposes an allocation share of 10.38 per cent (Rs 298.35 crore) for the *Integrated Development of Major Food Crops*. The allocation is justified as majority of farmers are compelled to use the seeds of low-yielding varieties due to poor availability and affordability. The SAP proposes an allocation share of 4.03 per cent (Rs 115.87 crore) for *Strengthening Extension* as poor state of *extension* has been identified as one of the major bottlenecks in agricultural development in the State. The SAP proposes an allocation share of 2.43 per cent (Rs 69.75 crore) for the *lac cultivation* sector. Lac cultivation can be undertaken in rain-fed conditions (prevalent in the State) and the State has very suitable climate for it. Further, lac growing regions have high proportion of tribal population; the tribal population mainly depends on rain-fed agriculture and forest produce for their livelihood of which lac is an important source of income contributing about 28 per cent of their agricultural income. Hence, the sector deserves the allocation share. The SAP proposes allocation shares (**in per cent**) of 1.77, 1.50, 1.46, 0.75 and 0.29 for *Fisheries, Innovative schemes, Sericulture, Strengthening market infrastructure* and *Research & Development*, respectively. The allocations are justified as the State offers tremendous potential under *Fisheries, Sericulture* and proposed *innovative schemes* for increasing income and employment of farmers. The allocation for research & development is appreciable. However, the allocation share for *marketing infrastructure* (0.75 per cent) may not fully compliment with proposed initiatives under *Horticulture development*. The SAP also proposes 1.81 per cent for *Contingency* and 0.07 per cent for the Plan preparation. In nut-shell, we can say that the sectoral allocation of funds conforms to equitable and optimal distribution of resources. The SAP misses to give spatial (district or region-level) allocation of funds. Hence, we cannot comment on the spatial allocation of funds.

18. Are there any innovative projects? If so, how do they contribute to fulfill the special needs outside ongoing programs?

The SAP proposes a number of innovative projects. For example, *Adoption of SRI technology in paddy Production including farm pond (Unit Area 1 acre)* (Rs 8.13 crore), *Tea Cultivation* (Rs 50.0 lakh), *Demonstration of Gravity drip system* (Rs 2.48 crore) and *Demonstration of Sprinkler irrigation* (Rs 27.71 lakhs). The Project *Adoption of SRI technology in paddy Production* is based on the *System of Rice Intensification* technology; the cultivation requires less quantity of water, small-size of land and more labour. This suits to the farmers of the irrigation-starved State who have more labour than land and capital. The project *Tea Cultivation* shall help in providing better returns to farmers from cultivation of tea which is a cash crop. The project *Demonstration of Gravity drip system* shall promote adoption of low-cost drip-system in progressive farmers who wish to diversify their cropping system. The project *Demonstration of Sprinkler irrigation* shall promote efficient-irrigation and diversification to high-value crops. The innovative projects shall help farmers come out of subsistence farming and increase their income-levels.

19. What is the basis of planning certain projects for the State as a whole and how do they get monitored?

The SAP does not specify the *State-planned* projects vis-à-vis the *district-planned* projects. Many projects involve huge budget allocations and seem to be planned for the State as a whole. However, for some projects the SAP clearly suggests planning for the State as a whole. The SAP does not make explicit the basis of planning certain projects for the State as a whole. But, we conclude from the SAP that the projects which are planned for the State as a whole are those that have appeal for the overall-State. For example, *Margin money assistance to seed villages for setting up of seed processing, assistance for seed testing equipments* (Rs 13.20 crore), *Subsidy on foundation seeds* (Rs 13.45 crore), *Buy Back of certified seed produced by seed villages* (Rs 170.18 crore), *Purchase of certified seeds from outside agencies* (Rs 47.22 crore) *Support to Government seed farms* (Rs 27.30 crore), *Seed Testing Labs* (Rs 7.56 crore), *Treatment of cultivable waste land* (Rs 215.01 crore), *Treatment of other fallow land* (Rs 91.80 crore), *Soil amelioration programme for acidic soils* (Rs 198.40 crore), *Watershed Development* (Rs 50.40 crore), *Subsidy assistance for Irrigation* (Rs 563.83 crore), *Support for vegetable cultivation (Certified seed, compost, plant protection etc.)* (Rs 186.10 crore), *Goat Breeding Unit of 10 Does + 1 bucks for grading up of local population with Improved goat breeds* (Rs 143.20 crore), *Promotion of Improved pig breeds* (Rs 183.99 crore), etc. Further, we anticipate that the projects planned for the State as a whole are those that involve State-level agricultural priorities, adjudged or identified by the State Agricultural Department/'agency preparing the SAP', that may not have been reflected in the District Agricultural Plans. It is not explicit in the SAP that these projects are monitored.

20. What is the basis of sectoral fund allocation? Is it based on expected marginal contributions? Any viability analysis is made?

The SAP is not explicit on the basis of sectoral fund allocation. However, we anticipate the role of the activities involved in the preparation of C-DAPs/SAP in helping the *State Agriculture Department/'agency preparing the SAP'* (such as *collection of secondary data (district/block-wise) regarding potentials of various activities/crops relating to agriculture & allied sectors, infrastructure, market and extension services; primary data from line departments, development agencies and research institutes; village level consultations; assessment of present level of development, identification of gap in infrastructure, support service, extension services, marketing support, capacity building, etc.*) in identifying the agricultural priorities for the State; this aided by the experience, commonsense and judgment of the *State Agriculture Department/'agency preparing the SAP'* may have formed basis of sectoral fund allocation. It is not explicit whether sectoral fund allocation is based on expected marginal contributions. Though viability analysis is indicated in case of some individual projects, yet it is not explicit in general.

21. Whether the allocations across years were right? What was the basis for yearly allocations?

The SAP allocates Rs 341.41 crore (11.84 per cent), Rs 760.78 crore (26.39 per cent), Rs 876.05 crore (30.39 per cent) and Rs 904.19 crore (31.37 per cent) for years 2008-09, 2009-10, 2010-11 and 2011-12, respectively, amounting to a total budget outlay of Rs 2882.43 crore (100 per cent), during the 11th FYP. However, the SAP does not give budget allocations for year 2007-08. The allocations seems to be correct during the initial and intermediate years of the Plan as the allocation share increases from 11.84 per cent in 2008-09 and 26.29 per cent in 2009-10 to 30.39 per cent in 2010-11. However, the allocation-share further increases to 31.37 per cent in the last year of the Plan. This does not go well with the prudent norm of allocation according to which the

allocation share should have declined in the last year of the Plan). *Ideally, the allocation share should be minimum in the first year, being the planning stage for the project/s involving comparatively less investment capacity; the allocation share should increase in the intermediate years as subsequent years demand higher investments for the execution of the planning; and allocation share should decline in the last year because having invested sufficiently in the in-between years, the fund requirements again become low in the last year of the plan-period.* The basis for yearly allocation is not explicit in the SAP.

22. Is the SAP in line/ tune with overall agricultural strategy and goals of the country/ state?

The SAP seems to be in line/ tune with overall agricultural strategy and goals of the country/ state. The SAP gives special thrust on *animal husbandry/dairy, lac-cultivation, fisheries and sericulture* sectors for enhancing the earnings of farmers dependent on subsistence agriculture. It targets raising agricultural productivity and production through measures like integrated development of food crops, land development and subsidy for irrigation; these along with the proposed horticultural initiatives are expected to increase the incomes of farmers and strengthen the poor food/nutrition-security status of the State. These are expected to contribute towards country's aim of achieving 4 per cent growth rate during 11th FYP.

23. Whether mechanisms for planning, baseline information collection, monitoring, documentation and regularly reporting progress are clearly spelt out?

The SAP is not explicit on mechanisms for planning, baseline information collection, monitoring, documentation and regularly reporting progress.

Directions for 12th FYP

1. Whether the planning, monitoring and evaluation mechanisms exist, functional and made use of to fulfill the expectation and bridge the gaps? If not, what is the plan for strengthening PME mechanisms and making them functional during the remaining years of 11th FYP and 12th FYP when it gets launched? Whether the baseline information is maintained for comparison of performance of the project later?

The SAP is not explicit on whether the planning, monitoring and evaluation mechanisms exist, functional and made use of to fulfill the expectation and bridge the gaps. Further, the SAP is not explicit on the plan for strengthening PME mechanisms and making them functional during the remaining years of 11th FYP and 12th FYP when it gets launched. Also, it is not explicit on whether the baseline information is maintained for comparison of performance of the project later.

2. Whether the mid-term evaluation by the external agency is done for change of the targets and inter-sectoral resource adjustments?

The SAP is not explicit on the mid-term evaluation by an external agency.

3. Is social audit done to facilitate publicity on status of the implementation and maintenance of transparency?

It is not mentioned.

4. What are the major lessons from RKVY implementation in the State for the 12th FYP?

- (i) The SAP should provide funding details under various CSS and State-level schemes (including RKVY) along with their respective share of funding, for all the projects. If not given, analyzing the extent of convergence of existing schemes with the RKVY will be difficult. Convergent approach within the sector and outside the sector should be attempted, particularly with MGNREGS to avoid duplication in respect of soil and water harvesting and conservation. MGNREGS resources can be tapped for this. Instead the SAP should come out with more interventions to concentrate on cropping and production systems including horticulture, livestock and fisheries in areas that have been developed under watershed and NRM.
- (ii) The main experiences of implementing CSS/State schemes should be summarized and stated whether/how they are made use of to prepare SAP for replication, expansion etc.
- (iii) Prioritization of interventions needs to be attempted using standard objective methods.
- (iv) The mismatch between budget proposal and allocation sanctioned should be minimum - it can be bridged quite a bit if convergence is attempted as indicated in 4.(i) above.
- (v) The project proposals should emanate from Districts preferably Zilla Parishads on the basis of C-DAPs.
- (vi) There should be rigorous filtering of proposals by an expert Committee earlier and in SLSC meetings later.
- (vii) There should be a dedicated PM&E mechanism at the State level for facilitating project screening, database management, monitoring, evaluation and reporting of RKVY projects.
- (viii) The SAP should provide yield-gap & return estimates, both at State and district-level, for major crops and other enterprises.
- (ix) The SAP should specify the projects emanating from the C-DAPs vis-à-vis the State Plan.
- (x) The SAP should provide the spatial allocation of funds (i.e. district-wise/region-wise).
- (xi) It should incorporate a systematic SWOT analysis of the State.
- (xi) Besides the given project level targets, the SAP should also state broad sector-specific targets.

Overall conclusion

The SAP is very descriptive and is well attempted. It states year-wise physical and financial targets for all the projects while also attempting to give objectives and strategies. The SAP gives a systematic account of methodology followed in the preparation of C-DAPs/SAP. The SAP is stated to have been prepared in a consultative approach involving all stakeholders. The SAP lists district-wise suggestions emanating from each district. The SAP clearly mentions its objectives for the 11th FYP. It states the profile of the State while touching on its major strength and weaknesses. It attempts to state various potentials existing in agriculture & allied sectors. It also attempts to give an account of the critical gaps/constraints existing in the agricultural development of the State and suggests strategies to combat them. It gives description of the proposed projects, attempting to state the objectives and the rationale behind them. The SAP also proposes some very innovative schemes for the State. The SAP gives an account of the requirements emanating in *village-level assessment* of agricultural & allied activities along with glimpses of feedback received from a few villages across districts regarding their perception on the resource gaps and requirements. The SAP gives various models for *integrated mixed-farming* and discusses *integrated agri-horti-silvi farming* and *watershed development*. However the SAP needs to improve on some aspects. The SAP should mention attempts towards convergence; *it should give funding details under various CSS and State-level schemes (including RKVY) along with their respective share of funding, for all the projects*. The SAP should provide the spatial allocation of funds across districts/regions. It should provide yield-gap & return estimates, both at State and district-level, for major crops and other enterprises. It should incorporate a systematic SWOT analysis of the State. The SAP should also attempt

to give main experiences of implementing CSS/State schemes and state whether/how they are made use of to prepare SAP for replication, expansion etc. The SAP should specify the projects emanating from the C-DAPs vis-à-vis the State Plan. Besides the given project level targets, the SAP should also state broad sector-specific targets. The allocation of funds across years should follow the prudent-norm of allocation. Further the SAP should involve a systematic prioritization of interventions and strategies. The SAP should also make provision for a dedicated PM&E mechanism at the State level for facilitating project screening, database management, monitoring, evaluation and reporting of RKVY projects. These points require priority attention during 12th FYP.