

## NIRD RKVY Monitoring Unit Analytical Report on Orissa SAP

### 1. Name of the State

Orissa

### 2. What target the State decided to achieve using RKVY assistance during 11<sup>th</sup> 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 during 11th Five Year Plan (FYP) (*from 3 per cent rate observed during the 10<sup>th</sup> FYP*) for the agriculture sector as a whole. The SAP states targets to be achieved using RKVY assistance outlay during 11<sup>th</sup> FYP (under various sub sectors) in terms of the projects approved (in years 2007-08, 2008-09 and 2009-10) under RKVY. For example, the projects proposed in year 2009-10 include, *Command Area Development and Water Management Programme in Pillasalki Irrigation Projects* (Rs 2.55 crore) under sub sector *Development of Water Resources*; *Establishment of 4570 nos. of vermi-compost unit* (Rs 3.87 crore), *Establishment of 200 nos. of vermi hatchery unit* (Rs 0.55 crore), *Construction of 1200 nos. of low cost onion storage structures* (Rs 0.96 crore) under sub sector *Horticulture*; *Establishment of Ice Cream Plant at Chandrasekharpur, Bhubaneswar* (Rs 3.98 crore) and *Value Addition of Horticulture Produce of Orissa at OMFED Agri-Processing Centre* (Rs 1.76 crore) under sub sector *ARD & Dairy*; and *Management of Acid Soil* (Rs 3.61 crore), *Central Seed Godown in newly created 10 DDA offices* (Rs 5.0 crore), *Construction of Seed Storage Godown at Sambalpur, Bolangir & Bhananipatna* (Rs 1.25 crore) and *Popularization of Agriculture Implements* (Rs 9.0 crore) under sub sector *Agriculture*. Further, the SAP decides in general the targets (not specific to RKVY) to be achieved, such as increasing the production of *Rice* (from 76.55 lakh MT in 2007-08 to 94.45 lakh MT in 2011-12), *Cereals* (from 83.46 lakh MT in 2007-08 to 92.12 lakh MT in 2011-12), *Pulses* (from 9.08 lakh MT in 2007-08 to 10.86 lakh MT in 2011-12), *Foodgrain* (from 92.54 lakh MT in 2007-08 to 103.28 lakh MT in 2011-12), *Oilseed* (from 6.80 lakh MT in 2007-08 to 9.53 lakh MT in 2011-12), *Sugarcane* (from 26.79 lakh MT in 2007-08 to 100.78 lakh MT in 2011-12), *Cotton* (2.56 lakh MT in 2011-12), *Vegetables* (9,665.85 MT in 2011-12), *Milk* (from 1,549.48 '000 MT in 2007-08 to 2,185.54 '000 MT in 2011-12), *Meat* (from 58.82 '000 MT in 2007-08 to 73.84 '000 MT in 2011-12), *Eggs* (from 1549.48 million nos. in 2007-08 to 1864.84 million nos. in 2011-12), *Inland Fresh water fish production* (from 195.7 '000 MT in 2007-08 to 275.97 '000 MT in 2011-12), *Inland Brackish water fish production* (from 23.0 '000 MT in 2007-08 to 37.79 '000 MT in 2011-12), *Marine fish production* (from 130.8 '000 MT in 2007-08 to 156.86 '000 MT in 2011-12) and *Crab production* (from 1.8 '000 MT in 2007-08 to 2.08 '000 MT in 2011-12). Also, the SAP targets (projects) to increase the *Seed Replacement Rate (SRR)* in the major crop *Paddy* from 12 per cent in 2007-08 to 25 per cent in 2011-12. It targets to increase the area under *Sugarcane* crop from 0.38 lakh ha in 2007-08 to 1.5 lakh ha during the 11<sup>th</sup> FYP. The SAP also proposes for implementation of 237 micro-watersheds during the 11<sup>th</sup> Plan period with an outlay of Rs 119.38 crore under centrally sponsored scheme *National Watershed Development Project for Rain-fed Areas (NWDPRRA)*.

### 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?

The SAP **misses** to mention the methodology used for its preparation. Hence, it is not explicit that which method (Method 1 or Method 2) is used in the preparation of the SAP. Further, the SAP is not explicit on how the integration (methodology) of C-DAPs and prioritizing major interventions is done to prepare the SAP.

**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.**

The SAP **misses** to critically analyze and clearly state 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. However, some prominent SWOTs of the State are discernable in the text of the SAP. The strengths include rich water resources (*11 per cent of the total water resource of the country with 4 per cent geographical area*), high average rainfall (1,500 mm), diverse agro-climatic conditions suitable for varieties of fruits, vegetables, spices and flower crops, and diverse ecological habitats with rich flora and fauna. The weaknesses include poor fertility of soil, weak status of irrigation despite huge potential, frequent floods, and lack of good ports in a 480 km long coastline. The opportunities include diversification of agriculture towards horticultural crops in the high lands, considered as most suitable for their growing. The threats include a decline by 11 per cent in the net sown area (NSA) (from 63.04 Lakh ha to 56.24 Lakh ha) in last fifteen years and an increase in barren and unculturable land (from 5.32 Lakh ha in 2002-03 to 8.40 Lakh ha in 2007-08).

**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 is **not** explicit on attempting convergence of inter and intra department/programmes in the State. The extent of convergence is also not explicit in the SAP. Further, it is not explicit that whether all potential options for convergence have been identified and explored. However, the SAP states its intention for *ensuring of convergence of programmes and schemes of other departments at the three levels (State, District and Sub-district), to be achieved through further strengthening of capacity and consolidating the process of comprehensive district agricultural plan preparation (including RKVY) along with preparation of District Plan*; but it is not further elaborated upon and seen 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?**

The SAP is **not** explicit on studying the experience of on-going CSS and state schemes and incorporating the lessons learnt in SAP/C-DAPs for replication/ expansion/ modification in uncovered areas. However, it gives names of the on-going schemes under *State Plan, Centrally Sponsored Plan* and *Central Plan*, covering *Agriculture, Horticulture, Animal Husbandry* and *Fisheries* sectors. Further, the SAP discusses the implementation of some specific schemes in the State such as *National Horticulture Mission* (Centrally Sponsored Plan Scheme) and *Integrated Cashew Development Programme* (Centrally Sponsored Scheme) along with a number of *Watershed Development Programmes* (under Centrally Sponsored Schemes) that include *National Watershed Development Project for Rain-fed Areas* (NWDPR), *River Valley Project* (RVP), *Integrated Drought Prone Area Programme* (DPAP), *Integrated Wasteland Development Programme* (IWDP) and *Western Orissa Rural Livelihood Project* (WORLP).

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

The estimation of yield gaps and returns in different crops/livestock/fisheries in terms of the standard method of yield gap analysis (that measures gaps between the *progressive farmer yield* and the *average farmer yield*), is **not** evident in the SAP. However, the SAP gives the State-level and year-wise productivities of crops such as *Rice, Ragi, Maize, total Pulses, total Foodgrains, total Oilseeds, Sugarcane, Jute & Mesta* and *Cotton*, involving years 2002-03 to 2008-09. It also gives State-level yields of *horticulture* crops such as *fruits (Mango, Banana, Citrus, Pineapple, Papaya* and *Coconut)* for years 2006-07 and 2007-08; *total vegetables* (for the latest one year); and *total Spices* for years 2005-06 to 2007-08. Though the SAP does give an idea about trends in productivities of the (mentioned) crops over the years at State-level, yet it misses to compare them with the national averages of the respective mentioned crops (except in case of *total Pulses* for the latest year). Further, the SAP **misses** to state the productivities of various crops at district-level that limits the district-wide comparison of yield gaps. Also, productivities of livestock and fisheries products are not evident in the SAP though it attempts to give the *per capita availability* of livestock products like *Milk, Meat* and *Eggs*; it compares the annual milk requirement of 29.52 Lakh MT for year 2008-09 (for 80 Lakh families at 1 litre per family per day) against its availability of 15.98 Lakh MT for the same year (with *per capita availability Milk* of 102 gms per day).

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

Though it is not explicit in the SAP that how the technological and agronomic gaps are identified to contribute to yield gaps, yet the role of personal observation and experience along with the reference to the *Orissa State Agriculture Policy 2008* (OSAP, 2008) is evident in it. Further, the SAP also refers to a number of research studies/reports to substantiate its points. For example, the SAP links the poor production output (*and therefore productivity*) of vast number of small and marginal farmers (*83.8 per cent of the total farming community*) with the low use of agricultural inputs borne out by their endemic poverty. It further observes the positive impacts of improvements in watersheds and rain-fed area farming on the agricultural yield (refers to reports: *Evaluation of Watershed Development and Coffee Plantation in KBK districts under Revised Long-Term Action Plan (RLTAP)* and *Evaluation of Agricultural Diversification in Six KBK District, under Revised Long-Term Action Plan (RLTAP)*). The SAP states, as per the 'Guidelines on the National Project on Management of Soil Health and Fertility' (Dept. of Agriculture and Cooperation, Govt. of India, 2008), that factors like deficiency of NPK and of secondary nutrients (Sulphur, Calcium and Magnesium) and micro nutrients (Boron, Zinc, Copper, Iron, Manganese and Molybdenum etc.) in the soils of the State have become a limiting factor in increasing food productivity, besides the nutrient-imbalance caused by the intensive agriculture, giving way to *greater mining of soil nutrients every year, depleting soil fertility; emerging deficiencies of secondary and micronutrients; decline of water table and its quality of water; decreasing organic carbon content, and overall deterioration in soil health*. It cites the over burdens of mines, industrial effluents and inadequate application of chemical fertilizers and pesticides as the main causes of soil pollution in the State. Sourcing its information from OSAP, 2008, the SAP highlights the limits on increasing agricultural productivity caused by the low use of pesticides in the State to the tune of 53.2 kg/ha in year 2007-08 against the national average of 113 kg/ha in the same year. The SAP observes that the low productivity of many food crops in the State is a product of poor *Seed Replacement Rate (SRR)* which is only 12 per cent in *Paddy* (major crop); the SAP stresses on creating proper institutional and efficient mechanism to that end, as envisaged in OSAP, 2008. The SAP also observes the use of

the traditional agriculture practices behind low agricultural productivity; it contemplates to improve the situation through farm-mechanization. The reason cited for low productivity of pulses is untimely rains and unfavourable weather conditions. The SAP observes that *Paddy* grown especially in the vast (41 per cent of cultivated area) highland areas under rainfed conditions is most susceptible to moisture stress leading to drastic yield reduction in years of poor rainfall. The SAP observes that lack of proper care and maintenance has caused the plantations to become old, senile and unproductive, thereby reducing the productivity of the fruit crops.

**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?**

Though the SAP is not explicit on how the identified constraints are adjudged responsible for low crop productivity in general and specific crops in particular, yet it seems to be based on the personal observation and experience of people engaged in the preparation of the SAP, supported by an extensive use of OSAP, 2008 and various (mentioned) research reports. However, 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?**

Though the SAP is not explicit on how the interventions are identified to bridge the gaps in productivity levels, yet it seems to be based on the personal observation and experience of people engaged in the preparation of the SAP, supported by an extensive use of OSAP, 2008 and various (mentioned) research reports. Nevertheless, the SAP proposes strategic interventions for the development of *Agriculture, Animal Husbandry & Dairy and Fisheries* sectors.

**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?**

Though the SAP proposes strategic interventions for the development of *Agriculture, Animal Husbandry & Dairy and Fisheries* sectors; states *Eleventh Plan Strategies towards Development of Agriculture and Allied Sectors* and gives strategic recommendations under RKVY, yet a formal prioritization of the right strategies is not explicit in the SAP. Further, either an empirical basis for the appropriate strategies or their obtaining through a consultative process with all the relevant stake holders is not explicit in the SAP.

**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/schemes by major sectors and years while also stating funding for each of them. However, it lacks to state the targets, output and outcome for the mentioned programmes/schemes. Further, it misses to specify the source of funding (RKVY, other sources) with respect to these programmes/schemes. But, the SAP attempts to state *major outputs/deliverables of the proposed programmes* at a broader level only for the various agriculture & allied sectors. It is not explicit from the SAP that whether the viability of each project to achieve the expected output is considered.

**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 problem areas of the State such as those facing *water logging* and *acidic soils* by formulating some specific projects like *Development of Water logged areas* (Rs 64.0 Lakhs for year 2008-09) under *Centrally Sponsored Scheme*; *Acid Soil Management* (Rs 10.1 crore) under projects approved under *RKVY* in year 2007-08; and *Management of Acidic Soil* (Rs 3.61 crore) under approved projects under *RKVY* in year 2009-10.

**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 gives proposed outlays only for two years (i.e. 2010-11 and 2011-12) that form part of the 11<sup>th</sup> FYP (2007-08 to 2011-12); *the proposed Plan outlays are given in the SAP for years 2010-11 to 2014-15*. However, the SAP gives *actual expenditures* for the first two years (2007-08 and 2008-09) and *agreed outlay* for year 2009-10 of the 11<sup>th</sup> FYP. If we take the *actual expenditures* (for 2007-08 to 2011-12) and the *agreed outlay* for year 2009-10 as proxy to the proposed budgets for these years, we get total proposed outlay of Rs 5,195.12 crore for the 11<sup>th</sup> FYP (2007-08 to 2011-12); *it includes only the Stream-I projects under RKVY*. Thus, the total proposed outlay of Rs 5,195.12 crore for the 11<sup>th</sup> FYP comprises of Rs 352.52 crore and Rs 538.57 crore as *actual expenditures* for years 2007-08 and 2008-09, respectively; Rs 817.37 crore as *agreed outlay* for year 2009-10; and Rs 1,594.79 and Rs 1,891.88 crore as proposed outlay for years 2010-11 and 2011-12, respectively. The approved budgets for the State (as per the *consolidated statement* from *RKVY* website) for years 2007-08, 2008-09, 2009-10 and 2010-11 are Rs 46.59 crore, Rs 115.44 crore, Rs 121.49 crore and Rs 274.40 crore, respectively. Though the total proposed outlay of Rs 5,195.12 crore (comprising of 5 years) is not strictly comparable with the total approved budget of 557.92 crore (involving 4 years), yet there is a gap of Rs 4,637.20 crore (89.3 per cent) between the total *proposed* and *approved* amounts for the 11<sup>th</sup> FYP. On yearly-basis, there are gaps of Rs 305.93 crore (86.8 per cent), Rs 423.13 crore (78.6 per cent), Rs 695.88 crore (85.1 per cent) and Rs 1,320.39 crore (82.8 per cent) for years 2007-08, 2008-09, 2009-10 and 2010-11, respectively, between the *proposed* and the *approved* budgets; since approved budget for year 2011-12 is not available, hence comparison between the *proposed* and *approved* budgets cannot be done for this year. The huge mismatch between the proposed and approved amounts is expected to severely affect targets, expected outputs/outcomes/growth for programmes proposed.

**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 SAP also proposes some large projects/programmes. For example, *Acid Soil Management* (Rs 10.10 crore), *Command Area Development & Water Management of Salia Irrigation Project* (Rs 11.68 crore), *Development of 100 Watersheds* (Rs 47.50 crore), *Improvement of Poultry Farms & Establishment of Hatcheries* (Rs 12.26 crore), *Establishment of skimmed milk powder unit at Bhawanipatna* (Rs 10.35 crore), *Establishment of Farm Information Advisory centres* (Rs 25.0 crore), *Agriculture Research Infrastructure* (Rs 10.06 crore) and *Popularization of Agriculture Implements* (Rs 9.0 crore) as part of the projects approved under RKVY. Further, the SAP proposes projects/programmes like *Input subsidy* (Rs 35.80 crore), *Negotiable Loans* (Rs 46.20 crore),

*Popularization of Agriculture Implement Including manual Bullock Drawn and diesel pump sets (Rs 53.81 crore), Implementation of Integrated Scheme of Oil seed, Pulses, Oil palm and Maize (ISOPOM) (Rs 30.99 crore), National Food Security Mission (Rs 194.40 crore), National Project on Management of Soil Health and Fertility (Rs 26.65 crore) and National Horticulture Mission (Rs 156.85 crore), under Proposed Budget Provision (outlay) for the Plan Years involving last two years of the 11<sup>th</sup> FYP (i.e. 2010-11 and 2011-12) for which the *proposed* budget is available.*

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

Though the SAP formally does not mention the *Flagship* programmes, yet it proposes some large projects/programmes that are expected to be extensive to cover large part of the State and larger area. For example, *Acid Soil Management* (Rs 10.10 crore), *Command Area Development & Water Management of Salia Irrigation Project* (Rs 11.68 crore), *Development of 100 Watersheds* (Rs 47.50 crore), *Improvement of Poultry Farms & Establishment of Hatcheries* (Rs 12.26 crore), *Establishment of skimmed milk powder unit at Bhawanipatna* (Rs 10.35 crore), *Establishment of Farm Information Advisory centres* (Rs 25.0 crore), *Agriculture Research Infrastructure* (Rs 10.06 crore) and *Popularization of Agriculture Implements* (Rs 9.0 crore) as part of the projects approved under RKVY. Further, the SAP proposes projects/programmes like *Input subsidy* (Rs 35.80 crore), *Negotiable Loans* (Rs 46.20 crore), *Popularization of Agriculture Implement Including manual Bullock Drawn and diesel pump sets* (Rs 53.81 crore), *Implementation of Integrated Scheme of Oil seed, Pulses, Oil palm and Maize (ISOPOM)* (Rs 30.99 crore), *National Food Security Mission* (Rs 194.40 crore), *National Project on Management of Soil Health and Fertility* (Rs 26.65 crore) and *National Horticulture Mission* (Rs 156.85 crore), under *Proposed Budget Provision (outlay) for the Plan Years involving last two years* of the 11<sup>th</sup> FYP (i.e. 2010-11 and 2011-12) for which the *proposed* budget is available.

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

The SAP proposes a total of Rs 5,195.12 crore (*excluding Stream-II projects under RKVY*) for the 11<sup>th</sup> FYP that includes *actual expenditures* for the first two years (2007-08 and 2008-09), *agreed outlay* for year 2009-10 and *proposed outlays* for years 2010-11 and 2011-12. The SAP proposes highest allocation of Rs 1,470.73 crore towards *Crop Husbandry* constituting 28.3 per cent of the total proposed funds for the 11<sup>th</sup> FYP. The allocation share is quite appropriate as the *Crop Husbandry* sector, being mainstay of the State's economy, provides livelihood support to a large section of population as it employs about 65 per cent of the total work force. Further, 85 per cent of rural population depends mostly on agriculture for their livelihood, making increase in agricultural production and farm productivity essential for providing food security as well as increase in income levels of people. The SAP proposes second highest share of 15.8 per cent (Rs 821.34 crore) for the *Fisheries* sector. The allocation share is quite appropriate as the State is one of the major maritime States, offering vast scope for development of inland, brackish water and marine fisheries; it has long coastline measuring 480 km covering an area of 24,000 sq. km. and it is also endowed with brackish water area of 4.18 Lakh ha and fresh water area of 6.71 Lakh hectares. The largest natural brackish water lagoon of Asia *Chilika Lake* covers major water spread area of brackish water resource. Pisciculture is gradually gaining popularity among the prospective entrepreneurs due to availability of improved technology and rising public interest in fish consumption. Further, the *Industrial Policy Resolution 2001* of Government of Orissa identifies *Fisheries* sector as a sector providing pro-poor economic growth with enterprise development.

The SAP proposes 14.1 per cent (Rs 734.90 crore) for *Animal Resource Development (AH) & Dairy Development*. The allocation share is appropriate as *Animal husbandry*, being a complementary sector to *Agriculture*, provides livelihood to a large number of farmers in the State. Further, besides supplying milk, meat, eggs and hides, animals especially the bullocks are the major source of draught power for farmers. 80 per cent of rural households own livestock and earn supplementary income. While small and marginal farmers own about 47 per cent of land, together with the landless labourers they own 60 per cent of milch animals, 55 per cent draught animals, 73 per cent poultry, 80 per cent goats and 100 per cent sheep in the State. Owing to meager land holding (1.25 ha), animal husbandry sector is ideal to provide employment and income generating opportunities both as main and supplementary enterprise in the State apart from providing nutritious food like milk, eggs, and meat. The SAP proposes 12.2 per cent (Rs 635.34 crore) for *Soil & Water Conservation*. The allocation share is appropriate as the majority soils of the State, which are light textured red soils, have very low water retention capacity, varying degrees of acidity and poor fertility; besides the State faces problems of saline inundation, flood and water-logging. Further, the State, being predominantly rainfed, is required to make use of its huge water-resources to create needed irrigation-potential. It also needs to support various watershed development programmes currently being implemented in the State under various C.S.S. The SAP proposes 11.3 per cent (Rs 588.66 crore) for RKVY. The allocation share is appropriate as it may provide necessary boost to the agriculture & allied sectors in the State by implementing innovative programmes/projects, arrived at through participatory bottom-up approach at village/block/district levels, to strengthen/rejuvenate the basic agricultural infrastructure, necessary for expediting the growth-rate of agriculture & allied sectors. The SAP proposes 10.2 per cent (Rs 530.56 crore) for the *Cooperation* sector which also includes *crop insurance, agricultural statistics and agriculture marketing*. The allocation share is appropriate as the 2,728 number of *primary agricultural cooperative societies* active in the State play/have potential to play a key role in enabling the poverty stricken farmers, access to the credit-facility which is crucial in enhancing crop-productivity in modern-age of capital intensive agriculture. Further, cooperative societies provide an institutional mechanism that enables availability of quality inputs (including pesticides and fertilizers) in a reliable manner along with facilitating transmission of *modern agricultural technology/information* to farmers, the lack of which are identified (by the SAP) to have affected the agricultural productivity in the State. However, the SAP misses to mention the programmes/activities planned under *cooperation* to substantiate the allocation. It only mentions about *Loan for Cooperatives* scheme for *Fisheries* sector and some small-sized projects under RKVY like *Establishment of specialized maize mandies and Cotton market yards* (total cost Rs 3.57 crore). The SAP allocates 6.7 per cent (Rs 349.15 crore) for the *Horticulture* sector. The allocation is appropriate as the diverse agro-climatic condition of the State, suitable for varieties of fruits, vegetables, spices and flower crops, present opportunities for diversification of agriculture to horticulture crops, enabling the sector to become a major option to improve livelihood security of small farmers, besides ensuring their food and nutrition security, enhancing employment opportunities, providing them higher income through value addition and creating possibility of earning foreign exchange for the State through exports. It also provides opportunities for increasing number of agro-industries, and generating substantial employment opportunities. The SAP proposes 1.2 per cent (Rs 64.43 crore) for *Agriculture Research & Education*. The allocation share, though small in amount, is necessary for enhancing the growth of agriculture & allied sectors as it contributes in creating quality seeds/inputs through research and transmitting/spreading modern agricultural techniques. Thus, we conclude that the sectoral allocation of funds conforms to equitable and optimal distribution of resources. However, the

SAP misses to give spatial/district-wise allocation of funds; hence, we cannot comment on spatial allocation of funds conforming to equitable and optimal distribution of resources.

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

The SAP does not formally mention *innovative* projects. However, many of the proposed projects seem to be *innovative* in nature. For example, *Popularization of Agriculture Implement Including manual Bullock Drawn and diesel pump sets* (Rs 53.81 crore), *Contribution to Small Farmer's Agri-Business Consortium (SFAC)* (Rs 0.02 Lakhs), *Promotion and Strengthening of Agriculture Mechanism through training, testing and Demonstration* (Rs 0.95 crore), *Inter Cropping in Fruit Orchards* (Rs 2.04 crore), *Capacity building of Extension personnel* (Rs 0.63 crore), *Bio-fertilizer application for pulses and oilseeds* (Rs 1.06 crore) etc. These projects are expected to create an environment of awareness among farmers encouraging them to adopt agricultural mechanization, agricultural entrepreneurship, modern agricultural techniques, thereby providing them with higher output/income while also improving the soil-health.

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

The basis of planning certain projects for the State as a whole is not explicit in the SAP. Also, it is not explicit that how they are monitored. However, we anticipate that the projects planned for the State as a whole are those that address the agricultural needs/issues of a substantial/large part of the State as identified/perceived by the State Agriculture Department such as soil-fertility, irrigation, acidic soils etc.

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

The basis of sectoral fund allocation is not explicit in the SAP. It is not explicit whether it is based on expected marginal contributions. Further, any viability analysis is not explicit.

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

The SAP gives proposed allocations for just last two years of the 11<sup>th</sup> FYP (2010-11 and 2011-12) which is not sufficient enough to comment on allocation across years. However, we may consider the given *actual expenditures* for the first two years of the Plan (2007-08 and 2008-09) and *agreed outlay* for year 2009-10 as proxy to the proposed allocations for these years (2007-08 to 2009-10). Thus, the SAP proposes Rs 352.52 crore (6.8 per cent), Rs 538.57 crore (10.4 per cent), Rs 817.37 crore (15.7 per cent), Rs 1,594.79 (30.7 per cent) and Rs 1,891.88 crore (36.4 per cent) for years 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12, respectively (*totaling to Rs 5,195.12 crore for the 11<sup>th</sup> FYP*). The given allocation shares across years do not seem to follow prudent norm of allocations as they do not follow a *normal* distribution but increase continuously across years. Under prudent norm for allocations across years, the allocations follow a normal distribution. 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. Further, 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. It is in line with the major goals (and strategy) of the overall agriculture sector in the State such as food safety/food security, crop diversification, increase in production and productivity, conservation of environment and economic stability. It focuses on increasing the production of food-grains in the State by raising productivity levels and thereby increasing the income-levels of farmers while also augmenting the income generated through allied sectors like *fisheries, animal husbandry and horticulture* through adequate budgetary provisions. These are expected to contribute towards country's aim of achieving 4 per cent growth rate during 11<sup>th</sup> FYP.

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

Mechanisms for planning, baseline information collection, monitoring, documentation and regularly reporting progress are not explicit in the SAP.

**Directions for 12<sup>th</sup> 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 11<sup>th</sup> FYP and 12<sup>th</sup> 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 11<sup>th</sup> FYP and 12<sup>th</sup> 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 12<sup>th</sup> 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)** Further, the SAP should state programmes/projects/activities by sectors and years with clear cut objectives, targets, output, outcome, funding (RKVY, other sources) for each project.

- (iii) 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.
- (iv) Prioritization of interventions needs to be attempted using standard objective methods.
- (v) 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.
- (vi) The project proposals should emanate from Districts preferably Zilla Parishads on the basis of C-DAPs.
- (vii) There should be rigorous filtering of proposals by an expert Committee earlier and in SLSC meetings later.
- (viii) 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.
- (ix) Allocation of funds across years should follow prudent allocation norm.
- (x) The SAP must state in detail the methodology adopted for the preparation of the SAP.
- (xi) The SAP should undertake a systematic SWOT analysis and yield-gap analysis.

### Overall conclusion

The SAP requires significant improvements. It states target for the overall agriculture sector while also attempting to give targets decided to be achieved using RKVY assistance as *projects approved under RKVY*, covering various agriculture & allied sectors. It seems to make an earnest use of the *Orissa State Agriculture Policy 2008* (OSAP, 2008), besides referring a number of research studies/reports. It presents a detailed view of the overall *Agriculture* sector in the State, besides proposing strategic interventions for the development of *Agriculture, Animal Husbandry & Dairy* and *Fisheries* sectors. However, the SAP needs to improve upon in many areas. Firstly, it should give *methodology* for preparation of the SAP including that on integration of C-DAPs and prioritization of interventions. Secondly, it should critically analyze and clearly state the agricultural situation of the state vis-à-vis its districts through a SWOT analysis. Thirdly, the SAP should give examples of attempting convergence along with sources of funding (RKVY and others) for each project. Fourthly, the SAP should mention its attempts to summarize the main experiences of implementing CSS/State schemes and state whether/how they are made use of to prepare SAP for replication, expansion etc. Fifthly, the SAP must attempt yield gap analysis for different crops/livestock/fisheries. Sixthly, the allocation of funds across years should follow prudential allocation norms. Also, it should give allocation of funds across districts, necessary for analyzing the spatial allocation of funds. Further, it should attempt prioritization of the proposed strategies. Besides, it should attempt to state clear targets for various sub-sectors under agriculture sector as a whole. Also, the prioritized strategies should be translated into programmes/projects/activities by sectors and years with clear cut objectives, targets, output, outcome, funding (RKVY, other sources) for each project. 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 12<sup>th</sup> FYP.