

NIRD; RKVY Monitoring Unit

Analytical Report on Chhattisgarh SAP

1. Name of the State

Chhattisgarh

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?

Though the SAP states the objective of boosting agricultural production through a number of proposed strategies and interventions, yet it remains silent on specific targets to be achieved using RKVY assistance during 11th Five Year Plan (FYP) for the agriculture sector as a whole and for the sub sectors. Further, the SAP does not provide projected growth rates/ outcomes for the plan. This may be considered as a limitation of the SAP.

However, the SAP does mention of some targets to be achieved during XIth plan under State's irrigation programme. It targets to increase area under irrigation from 12.82 lakh ha at present to 23.25 lakh ha and treat 14484.20 ha of rainfed area under the watershed development programme.

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?

It is not clear from the SAP that which method is used for its preparation. The methodology of integration of C-DAPs is not stated in the SAP, though it does mention that the gaps identified in the DAPs of various districts form a basis for formulating strategies in the SAP. The SAP proposes various interventions for agriculture & allied sectors but does not give an indication of prioritizing them.

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

Yes, SAP has critically analyzed and clearly stated the agricultural situation of the state through a SWOT analysis covering agro-climatic conditions, natural resources, infrastructure, institutions, technologies, manpower etc. A systematic SWOT analysis is done separately for each of the agriculture & allied sub sectors.

Major strengths include, State's location amidst six other neighbouring States and passing of National Highway and a major Howrah-Mumbai rail-route through its industrialized areas/important cities providing strategic advantage in terms of developing logistics/warehousing networking for serving entire region; several agro-ecological situations favour cultivation of a wide variety of crops/bio-resources; low population density (154/sq. km as compared to 331/sq km for All-India) and low urbanization-ratio (17.4 per cent as compared to 28.5 per cent for the whole country), enables greater per capita availability of land; a significantly large livestock population (1.437 crore) and poultry (1.421 crore) providing livelihood to poor rural masses as source for milk, egg, meat and large quantities of organic matter for agriculture; and a large forest cover (45 per cent of geographical area) through abundant *minor forest produce* providing livelihood to over 60 per cent of rural households.

Notable weaknesses include severe soil erosion in 50 per cent of the total geographical area; more than 75 per cent soils of acidic nature; considerable area under degradation/wasteland; insufficient infrastructure for agriculture & allied sectors; and wide variability in rainfall having adverse effect on rice-yield.

Important opportunities include potential to boost productivity by identifying /developing crop-varieties suitable for different agro-ecological situations existing in the three distinct agro-climatic zones of the State; heterogeneity in soil and topography can be best exploited through activities like soil health improvement, land management and crop diversification according to the land / soil suitability; and wide scope for cultivation of a variety of horticultural crops with high income and employment potential.

The threats include an increasing share of cultivators and agricultural labourers in total work force (70 per cent in 1991 to 76 per cent in 2001) presents a challenging trend indicating poor economic development; change in pattern of monsoon arrival and decline in quantity of rainfall during past 5-6 years; unscientific exploitation of bio-diversity poses threat of extinction of many species; and an increasing incidence of naxalite activities adversely affecting State's development.

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 seems to have attempted convergence - inter and intra department/programmes - to a great extent. It separately gives proposed outlay for RKVY and for ongoing schemes in the SAP, both at intervention level and at project level, for all agriculture & allied sub sectors. However, it does not clearly mention the names of ongoing schemes. Since it has bifurcated the total proposed outlay in the SAP to those under 'RKVY' and those under 'other schemes' both at intervention and project levels, we may say that all potential options for convergence might have been identified and explored.

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?

It is not mentioned explicitly in the SAP whether the experience of on-going CSS and State schemes has been studied and lessons learnt have been incorporated in SAP/C-DAPs for replication/expansion/modification in uncovered areas. However, the SAP incorporates a lot of facts, figures and data, suggesting rigorous work and knowledge-base involved in its preparation. It also mentions some of the ongoing schemes in passing and refers to their achievements in view of the targets for XIth plan. For example, under NWDPR scheme, a total treatable area of 133101 ha has been identified for watershed development. Out of this, 10081 ha has been already treated up to 2007-08. Remaining 123020 ha shall be treated according to the revised guidelines of NWDPR. During the XIth five-year plan, a total of 14484.20 ha are proposed for treatment. Further, it mentions a central government scheme entitled, "Development/Strengthening of Agricultural Marketing Infrastructure, Grading and Standardization", under which development of fruit and vegetables markets in 6 identified towns has been taken up with 25 per cent subsidy from the central government.

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

No, the SAP has not estimated the yield gaps and returns in different crops/livestock/fisheries. However, it provides yields of various crops, livestock/animals, and fisheries sector. It cites reasons for the lower yields. It also describes both ongoing and planned efforts in terms of various interventions/strategies/programmes/projects aimed at increasing yields.

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

It is not evident from the SAP that how the technological and agronomic gaps are identified to contribute to yield gaps. The SAP includes a systematic SWOT analysis for various agriculture & allied sub sectors, along with a general description on SWOTs for the State. The main reasons stated for low productivity of crops are large number of small (22 per cent) and marginal farmers (54 per cent), lack of irrigation facilities (27 per cent of agricultural area is irrigated), inefficient use of irrigation water, imbalanced and insufficient use of fertilizers, prevalence of broadcast and biyasi system of rice cultivation, erratic rainfall, low seed replacement rate and lack of institutional infrastructure. The reasons given for low yields in livestock sector include, limited availability of quality (high yielding) milch animal, scarcity of green fodder (64.6 lakh tones against requirement of 372.4 lakh tones, inadequate supply of concentrate cattle feed, inadequate veterinary health coverage and lack of marketing network.

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 clear from the SAP that how the identified constraints are adjudged responsible for the low crop productivity. It seems to have involved opinions and no indication of empirical basis could be traced.

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

Again, it is not clear from the SAP that how the interventions are identified to bridge the gaps in productivity levels.

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?

The SAP states that general SWOT analysis and gaps/constraints identified in C-DAPs of various districts form the basis for strategies proposed in the SAP. There is no indication on prioritization of strategies. There is also no indication of empirical basis for the strategies. There is no mention in the SAP of involving consultative process to identify strategies with all relevant stakeholders.

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?

Yes, 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. It is not explicit in the SAP that whether the viability analysis of each project to achieve the expected output is undertaken.

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

Yes, insurgent areas have been addressed by formulating specific projects. For example, projects on *improvement of infrastructures in Main Markets* (proposed allocation Rs 25.39 crores), *development of Sub Market* (proposed allocation Rs 24.83 crores), *Development of Hatt Bazar* (proposed allocation Rs 153.18 crores) have been planned for left wing extremists affected districts of the State. Apart from this, the *horticulture* sub sector that entails a very high growth potential, particularly in the naxal-infested districts, has been given special attention with a proposed allocation of Rs 1221.73 crores (32 per cent of total proposed allocations).

Further, since 75 per cent soils in the State are acidic in nature, a number of projects relating to *soil health management, green manuring and soil ameliorants & micro nutrients* have also been planned.

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 is for the XIth five-year plan. But, it misses to mention proposed allocations for the first two years of the plan period i.e. years 2007-08 and 2008-09. However, the RKVY website provides information on projects approved/implemented during years 2007-08 and 2008-09. A look at the approved projects gives an impression that these projects conform to the strategies in the SAP and are as per the guidelines.

Information on the approved budget is available in the website for years 2007-08 and 2008-09, while proposed allocations are given in the SAP for years during 2009-10 to 2011-12 in the State. Therefore, the mismatch cannot be determined. However, the SAP provides yearly proposed financial outlay for the 9 agriculture & allied subsectors/categories. The total proposed outlay for years 2009-10, 2010-11 and 2011-12 are Rs 1328.50 crores, 1239.98 crores and Rs 1229.66 crores respectively. Total proposed outlay for all the three years is 3798.14 crores.

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 total proposed outlay for the plan period (2009-10 to 2011-12) is large enough for some projects. For example, projects such as *subsidy on use of Zinc sulphate* (Rs 31.09 crores), *vermi compost* (Rs 36.29 crores), *assistance for distribution of cereals' seed* (Rs 53.04 crores) and *farm mechanization through power operated & power drawn implements* (Rs 76.19 crores) are large enough.

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

The SAP does not mention any Flagship programme. However, it has an ambitious programme of increasing the area under irrigation in the State from 12.82 lakh ha (27 per cent of agricultural area) at present to 23.25 lakh ha during the XIth five year plan. Under various interventions on irrigation development, an allocation amounting to Rs 224.23 crores (6 per cent of total proposed allocations) has been proposed. The main projects include *RMS* (Rs 32.11 crores),

Water Recharging (Rs 33.32 crores), *Construction of Tubewell* (Rs 89.19 crores) and *Construction of New wells* (Rs 19.91 crores).

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

The sectorial allocation of funds seems to conform to the equitable and optimal distribution of resources. However, the SAP does not give spatial (by districts or by agro-climatic regions) allocation of funds. The *Agriculture* and *Horticulture* sub sectors have shares of 37 per cent and 32 per cent, respectively in the total proposed allocations for XIth plan. *Agriculture* being the main sub sector rightly deserves highest share. Out of 37 per cent allocated to *Agriculture*, 10 per cent, 6 per cent, and 5 per cent are allocated to strengthening of infrastructure, development of irrigation resources and seed management, respectively. The State has a very poor infrastructure that is adversely affecting the development process and hence needs prioritized attention. Currently a low 27 per cent of the total agricultural area is under irrigation that needs to be increased for enhancing crop yields. Distribution and production of quality seeds is necessary for raising crop yields, hence deserve appropriate focus. Horticulture is a promising area for the State and entails huge potential of growth in production of fruits, vegetables, medicinal & aromatic plants and floriculture. Therefore, a share of 32 per cent in the total proposed allocations is commensurate with the State's requirement.

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

Yes, many innovative projects/activities have been planned under the XIth plan. Some innovative projects relate to the development of irrigation resources, such as recharging of tubewell, water recharging, construction of underground *Bandhara* across small streams for moisture conservation, terrace-farming etc. These projects shall contribute to government's efforts towards tapping the irrigation potential of the State. Similarly a project under livestock subsector involving establishment of operation of 200 *integrated livestock development centre* for door step AI, shall contribute to government's efforts towards improving the livestock breed and increasing yields for livestock-product in the State. A project on *Model Agriculture Village* shall help in the comprehensive development of the community.

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

Those projects that entail usefulness for a large part of the State, such as projects on strengthening of agricultural-infrastructure, development of irrigation and the horticulture sub sector, are planned for the state as a whole. However, no mechanism for monitoring of such projects is mentioned in the SAP.

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

No clear basis is explicit in the SAP for the sectorial allocation of funds. It might have been based on perception of the officials. For example, the horticulture sub sector has been identified as a very promising sub sector in terms of growth and employment/income generation. It has been allocated a high share of 32 per cent in the total proposed allocations for the State for the plan period.

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

Almost equal allocations across years seem to be right. Rs 1328.5 crores, Rs 1239.98 crores and 1229.66 crores have been allocated for years 2009-10, 2010-11 and 2011-12 respectively. Since allocations proposed belong to the last three years of XIth plan, a relatively large share is needed in the first year to give impetus to the ongoing programmes and to quickly begin work on the new planned projects, so that to complete the proposed work within the plan period. The basis for yearly allocations seems to be the understanding and experience of the State Agricultural Department.

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

Yes, the SAP is in line/ tune with overall agricultural strategy and goals of the country/ state. For example SAP's thrusts towards strengthening of agricultural-infrastructure, development of irrigation, horticulture sub sector, mandi board infrastructure and seed management, are in line with the priority needs of the State and necessary for the quick agricultural growth. It is an attempt to contribute to the country's target of achieving 4 per cent growth rate during 11th five-year plan.

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

It is not explicit from the SAP that whether mechanisms for planning, baseline information collection, monitoring, documentation and regularly reporting progress exist.

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?

It is not explicit whether the planning, monitoring and evaluation mechanisms exist, functional and made use of to fulfill the expectation and bridge the gaps. Also, there is no mention in the SAP of the plan for strengthening PME mechanisms and making them functional during the remaining years of 11th FYP and 12th FYP when it gets launched. It is not mentioned 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?

It is not mentioned.

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). 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 whether/how they are made use of to prepare SAP for replication, expansion etc should be stated.

(iii). Prioritization of interventions needs to be attempted using standard objective methods.

(iv). The project proposals should emanate from Districts preferably Zilla Parishads on the basis of C-DAPs.

(v). There should be rigorous filtering of project proposals by an expert Committee earlier and in SLSC meetings later.

(vi). 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. It should facilitate mid-term evaluation by external agency and also social audit to facilitate publicity and maintenance of transparency.

(vii). The SAP should give expected outcomes of implementing proposed interventions (schemes) at the State level.

(viii). The SAP should explicitly mention target for agriculture & allied sectors / sub-sectors to be achieved using RKVY funding during 11th five-year plan.

(ix). The SAP should provide yield-gap estimates, both at State and district-level, for major crops and other enterprises. It should clearly spell-out the specific factors responsible for the yield-gaps.

(x). One of the positive features of the SAP indicating convergence of resources is that it provides the resource requirements for various sectors under RKVY vis-à-vis other sources of funding. However, it fails to provide the list of major on-going schemes.

(xi). The C-DAPs are rich in providing information on annual *Physical* and *Financial* targets for all the projects under various mentioned ongoing schemes including RKVY. However, they are only statements with no text which gives a summarized analytical picture of the detailed information.

Overall conclusion

In general, the SAP is prepared well. But further improvements are needed in terms of information/analysis on sources of funding including RKVY, experience of implementing earlier/ongoing schemes, objective prioritization of interventions, uniqueness of plans/interventions of districts, rigorous selection of project proposals, dedicated PME mechanism, quantified output/outcome indicators, targets for agriculture & allied sectors for the State during the 11th Plan, estimation of yield gaps and the factors responsible for the yield gaps. These improvements require special attention during the 12th FYP.