

NIRD; RKVY Monitoring Unit Analytical Report on Bihar SAP

1. Name of the State

Bihar

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 SAP decides to achieve a number of targets using RKVY assistance during 11th Five Year Plan (FYP); however, the given targets are limited to the agriculture and horticulture sectors only and the SAP misses to give targets for other important sectors like animal husbandry and fisheries. Further, the targets are set for the last three years of the 11th FYP, i.e. (2009-10, 2010-11 and 2011-12) and exclude years 2007-08 and 2008-09. The SAP targets to increase the productivity (in **Quintal/hectare**) of rice, wheat, maize, pulses, oilseeds and sugarcane crops from 14.86, 20.55, 26.71, 7.22, 10.32 and 455.6 in year 2006-07 to 29.72, 30.50, 35.25, 10.13, 12.00 and 600.00 in year 2012 (in Quintal/hectare); and that of fruits and vegetables from 109.32 and 165.92 in 2005-06 to 146.05 and 200.60 in year 2012, respectively. Further, the SAP targets increasing the crop intensity (in per cent) from 133 (2004-05) to 161 per cent, per capita annual agricultural production in value terms from Rs 661 (2004-05) to Rs 1061, and land productivity level in value terms from Rs 7351 (2004-05) to Rs 11799, during the 11th FYP. It targets to achieve a Seed Replacement Rate (SRR) of 35 per cent for wheat and paddy crops, 20 per cent for pulses, 55 per cent for rapeseed/mustard and 70 per cent for maize; the annual seed requirements of foundation seed are projected (in Quintals) for wheat (18193.6), rice (5458.1), maize (1819.3), arhar (1819.4), gram (5404.0), lentil (3189.4), moong (1160.6), rai/sarson/toria (454.8) and linseed (1562.2). The SAP targets to utilize the waste and unproductive lands for the purpose of new plantations of horticulture crops, such as mango (15500 ha), litchi (4500 ha), guava (4500 ha), aonla (4000 ha) and banana (10000 ha); it targets to supply farmers with quality planting material/saplings (in numbers) for mango (1275000), litchi (337500), guava (938250), banana – *tissue culture + suckers* (318.72) and aonla (468000). It targets to increase total fertilizer consumption in the State from 2145117 M.T. in 2006-07 to 3385000 M.T. in 2011-12. The SAP targets opening 330 soil testing labs and 3 bio-control labs during the 11th FYP. It proposes to give 50 per cent subsidy to farmers on purchase of agricultural implements, such as power tiller, zero till machine, rotavator, combine harvester, paddy trans-planter, conoweeder, reaper, sugarcane cutter/planter and land leveler, while 25 per cent subsidy for the purchase of tractor and some specified instruments, with a budget of Rs 278 crore. The SAP targets various measures for transfer of agricultural technology from ICAR/RAU to farmers, such as opening 12000 *Farmers field school* (Rs 34.81 crore), *farmers training on crop production* (Rs 11.24 crore) and *demonstration on seed production technology* (Rs 6.50 crore) & *demonstration on integrated nutrient management* (Rs 12.71 crore). The SAP targets opening 330 block-level *e-Kisan Bhawans* (Rs 82.50 crore), that will act as *farmer information and advisory centre, soil testing lab, training centre, dormitory for farmers, plant protection centre and IT and market intelligence centre*. The SAP targets to include an area of 3 lakh ha under *integrated farming* (Rs 9.00 crore). It targets to construct 2200 *water harvesting structures*, 1108 structures of *silt detention dams*, 5280 structures of *earthen check dam* and cover 4,000 ha of degraded land under *dryland horticulture and agro-forestry*. The SAP targets to bring 2 lakh ha of agricultural land under drip and sprinkler

irrigation systems, covering 534 blocks in 38 districts (Rs 708 crore). The SAP targets development of marketing infrastructure for 3 *modern terminal markets*, 35 *agri-business centres*, 1125 *rural haats* and 8,500 *on farm primary processing centres*, during the 11th FYP.

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 does not mention methodology for its preparation. It is not explicit on how integration (methodology) of C-DAPs and prioritizing major interventions has been done to prepare SAP. However, 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 *Buxar* district proposes for development and utilization of the wasteland; the SAP responds with a proposed programme for covering 4,000 ha of degraded land under *dry land horticulture* and *agro-forestry*. Also, the C-DAP of *Buxar* (a rain-fed district) proposes for micro-watershed development, farm-mechanization *to avoid late sowing of wheat*, increasing area under irrigation *through promoting micro-irrigation* and maintenance of soil-health. The SAP responds to the C-DAP by proposing programmes such as construction of water harvesting structures, silt detention dams and earthen check-dams; farm mechanization; micro irrigation; and soil testing labs, supply of fertilizers, Vermi/NADEP Compost, integrated nutrient management and distribution of micro-nutrients.

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 formal SWOT analysis. However, SWOTs are discernable in the text of the SAP. The major strengths include, rich water-resources and a healthy rainfall average of 1271.9 mms, 49 per cent area under irrigation (45.67 lakh ha against total geographical area of 93.6 lakh ha), the agro-climatic diversity with high rainfall distributed over five-month monsoon favours cultivation of a variety of horticultural crops, the State grows a variety of fruits & vegetables, it ranks 3rd among States in vegetable production in the country and the yield per ha of maize (2541 kg/ha in the State against 1907 kg/ha at all-India level) and pulses (735 kg/ha in the State against 616 kg/ha in all-India) are higher than the all-India average. The weaknesses include, agricultural productivity in general is lowest among States in India (e.g. yield of *rice* is 1500 kg/ha against national average of 2100 kg/ha), 83 per cent of total land-holdings are marginal (i.e. less than 1 ha), low level of urbanization with 90 per cent population living in rural areas, dependence of agriculture on monsoons – irrigation itself depends on monsoon (30 per cent of total irrigated area is served by canal water), and both rainfall and distribution of water resources is not uniform across the State, causing uneven irrigation potential/coverage The opportunities include, estimated ultimate irrigation potential of 102 lakh ha in the State (much above the net sown area of 56.03 lakh ha) and favourable agro-climatic conditions present excellent prospects for the growth of a diversified basket of vegetables, fruits, spices, tubers, flowers and medicinal & aromatic plants. The threats include, decline in production and productivity of major staple food-crops such as rice (decline in production from 5442.6 thousand tones to 3775.4 thousand tones, and productivity from 1489 kg/ha to 1143 kg/ha, for rice crop during period 2000-01 and 2007-08; decline in production of wheat from 4438 thousand tones to 3474 thousand tones during period 2000-01 and 2006-07); wheat cultivation in particular is suffering from problems of delayed

sowing, increase in cost of production due to rise in cost of petroleum oil, lack of small duration varieties and aberrations in weather conditions.

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 gives instances of attempting convergence- inter and intra department/programmes. For example, the SAP plans to involve the *Mahatma Gandhi National Rural Employment Guarantee Programme* (MGNREGP), *Pradhan Mantri/Mukhya Mantri Sdak Yojana* and *Road Construction* department for funding construction of road infrastructure for connecting *model terminal markets* and other markets under its *Agricultural Market Development Programme*. Similarly, the SAP plans to pool funds from all schemes like MGNREGS, NHM etc. to fund the development of *rural hats* (markets) proposed in the Plan. Though the SAP misses to support these two instances quantitatively, yet in case of many other programmes, it provides the contribution-share of each scheme involved (including RKVY) in their funding both in terms of physical and the financial targets. For example, *Agriculture Mechanization* programme involves contribution from *Plans/schemes* such as *Macromode* (31.7 per cent), *N.F.S.M.* (20.1 per cent), *RKVY* (16.9 per cent), *ISOPOM* (12.2 per cent), *Jute Technology Mini Mission – II* (0.08 per cent) and *State Plan* (19.1 per cent), for five year period 2007-08 to 2011-12. Similarly, the SAP exhibits convergence of *National Watershed Development Project for Rainfed Area* (NWDPR), flood prevention plan (FPR), *State Plan* and *RKVY*, in terms of physical and financial targets for year 2008-09; their respective funding contributions (in per cent) being 28.3, 2.3, 40.9 and 28.5, respectively. A soil-conservation programme (part of *Physical & Financial Plan for the Development of Agriculture Sector*) displays convergence of *MACROMOD*, *State Plan* and *RKVY* (during period 2009-10 to 2011-12), and their respective contributions (in per cent) of 69.7, 20.6 and 9.6, respectively. The *Physical & Financial Plan for the Development of Horticulture Sector* gives convergence of NHM, *State Plan* and *RKVY* in total fund requirements of Rs 323.22 crore (during 2009-10 to 2011-12). The *Quality Control of Pesticide, Fertilizer & Soil Testing Lab* programme has been proposed contributions from *RKVY* (74.2 per cent), *State Plan/State share* (10.8 per cent) and *National Project on Management of Soil Health & Fertility* (15.0 per cent).

Thus, we see that convergence has been attempted to a good extent. We also anticipate that the SAP has attempted to identify and explore all potential options for convergence.

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 does not formally indicate that 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. However, the SAP mentions a number of on-going CSS and State schemes while stating their year-wise physical and financial contributions (from 2006-07 onwards in many cases) towards various ongoing agricultural and horticultural programmes; this suggests that the SAP has taken experience of on-going CSS and state schemes and lessons learnt have been incorporated in SAP for replication/ expansion/ modification in uncovered areas.

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 gives yields of some major crops/enterprises at the State-level and compares them with yields at the national-level. For example, rice (*State*: 1500 kg/ha,

*national: 2100 kg/ha); maize (State: 2541 kg/ha, national: 1907 kg/ha); pulses (State: 735 kg/ha, national: 616 kg/ha); sugarcane (State: 41,252 kg/ha, national: 64,615 kg/ha); and sugar industry (State: 45,552 kg/ha, national: 70,469 kg/ha). Further, it gives year-wise change (i.e. decline or increase over the previous year) in productivity (in quintal/ha) during years 2006-07 to 2008-09, for agricultural crops, such as paddy (2007-08: **-2.45**, 2008-09: **3.52**), wheat (2007-08: **3.3**, 2008-09: **-4.07**), maize (2007-08: **0.26**, 2008-09: **-3.01**), pulses (2007-08: **0.78**, 2008-09: **0.25**), oilseeds (2007-08: **-0.14**, 2008-09: **0.25**), sugarcane (2007-08: **-105.82**, 2008-09: **56.78**). It also gives improvement in yields of fruits, vegetables, spices and flowers, for years 2006-07 to 2008-09.*

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 attempts to identify gaps contributing to the low yields. For example, *delayed sowing, increase in cost of production due to rise in cost of petroleum oil, lack of small duration varieties and aberrations in weather conditions*, for the wheat crop; and *replacement of upland rice by higher income generating crops like pulses, oilseeds & maize*, for the rice crop. We feel that the State Agriculture Department has used its experience, common sense and judgment, in identifying the technological and agronomic gaps that contribute to the yield gaps.

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?

The SAP is not explicit on how the identified constraints are adjudged responsible for low crop productivity. However, we feel that the State Agriculture Department has used its experience, common sense and judgment, in adjudging the identified constraints responsible for low crop productivity. 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, we feel that the State Agriculture Department has used its experience, common sense and judgment, in identifying the interventions 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?

Though the SAP states strategies adopted under various programmes, yet it lacks evidence of a systematic prioritization of strategies. It is not explicit whether an empirical basis for appropriate strategies has been provided. Further, the SAP is not explicit on how far the strategies have been obtained/decided through a consultative process with all the relevant stake holders.

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 years along with funding for each project with clear cut objectives and targets; it also provides break-up of

funding by source (RKVY, other sources) for some programmes/projects. It is not explicit whether the viability of projects 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 addresses the problems faced by rain-fed areas of the State (lying in sub-plateau region spreading from *Banka* district to *Kaimur* district in the south of Ganges) where agriculture is complex, diverse and risk prone. The SAP proposes a number of soil & water conservation activities, aiming holistic and sustainable development of rain-fed areas based on watershed approach. For example, *1600 water harvesting tanks (structure)* (Rs 16 crore), *808 Silt detention dams (structure)* (Rs 7.38 crore), *3,960 Earthen Check dam (structure)* (Rs 4.87 crore), *Dry land horticulture in 1,564 hectares of land* (Rs 2.35 crore) and *agro-forestry* (Rs 2.16 crore), are targeted for soil & water conservation activities in the rain-fed areas, during last three years (2009-10 to 2011-12) of the 11th FYP.

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 2982.52 crore for the last three years (2009-10 to 2011-12) of the 11th FYP. It misses to include the years 2007-08 and 2008-09 in the proposed budget. The SAP proposes budget allocations of Rs 1012.90 crore, Rs 1019.79 crore and Rs 949.83 crore for years 2009-10, 2010-11 and 2011-12, respectively. However, Rs 780.02 have been approved for the first four years of the 11th FYP, i.e. 2007-08 to 2010-11 (information is available in RKVY website); Rs 60.42 crore, Rs 193.48 crore, Rs 171.34 crore and Rs 354.77 crore have been approved for years 2007-08, 2008-09, 2009-10 and 2010-11, respectively. There is a gap of Rs 2202.50 crore (i.e. 73.85 per cent of the total proposed budget) between the total proposed budget (2009-10 to 2011-12) and the total approved budget (2007-08 to 2010-11). Information on both approved and proposed budget is available for years 2009-10 and 2010-11 only; the budget gaps between the proposed and approved budgets for years 2009-10 and 2010-11 are Rs 841.55 crore (83.1 per cent) and Rs 665.02 crore (65.2 per cent), respectively. The extent of gap for these years is significant enough to seriously 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?

A number of projects/programmes are large enough to make a visible (impact) in the sectors. For example, various projects under *Seed Plan*, such as *crash programme including breeder seed and subsidy on foundation seed* (Rs 23.95 crore), *production of foundation seed in State farms* (Rs 18.90 crore), *seed village programme* (Rs 15.94 crore), *distribution of quality seed* (Rs 129.0 crore) and *infrastructure development* (Rs 30.80 crore); projects under *Horticulture: Planting Materials programme*, such as *Banana (Tissue culture + Suckers)* (Rs 20.72 crore), *Potato seed (foundation and breeder)* (Rs 6.54 crore) and *sugarcane seed* (Rs 44.27 crore); projects under *soil health*

management programme like, supply of fertilizer (Rs 30.0 crore), Vermi/NADEP Compost (Rs 198.0 crore), integrated nutrient management (Rs 45 crore) and distribution of micronutrients (Rs 60.0 crore); and projects under agriculture marketing development, such as 3 modern terminal markets (Rs 300.0 crore), 1125 rural haats (Rs 393.75 crore), 35 agri-business centres Rs 199.5 crore) and 8,500 on-farm primary processing centres (Rs 102.0 crore), etc.

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 proposed programmes are large enough to cover large part of the State and therefore, can be put into the category of *Flagship programmes*. For example, the Seed Plan programme (Rs 218.39 crore) targets to enhance the availability and use of quality seeds in the State through various sub-programmes/projects such as *crash programme including breeder seed and subsidy on foundation seed, production of foundation seed in State farms, seed village programme, distribution of quality seed and infrastructure development*. Similarly, the Soil Health Management programme (Rs 385.50 crore) operates through sub-programmes/projects like, *supply of fertilizer, Vermi/NADEP Compost, integrated nutrient management and distribution of micronutrients*. The agriculture marketing development programme (Rs 995.25 crore) targets creation of an integrated market infrastructure to ensure a larger share of final price for farmers in the State through initiatives such as development of *3 modern terminal markets, 1125 rural haats, 35 agri-business centres and 8,500 on-farm primary processing centres*, during the 11th FYP.

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

The SAP restricts its domain to two sectors only, i.e. agriculture and horticulture. However, it provides proposed fund allocations for different programmes/*sub-sectors* belonging to the agriculture sector. The total proposed budget outlay as well as the budget outlays for various individual programmes/*sub-sectors*, are given in the SAP for only three years of the 11th FYP, i.e. 2009-10 to 2011-12 (except the *Bihar State Micro-Irrigation Project (BSMIP)*, which gives proposed allocations for year 2008-09 also; *we have excluded the proposed allocation for 2008-09 year (Rs 57.307 crore) for BSMIP and considered Rs 438.29 crore as the proposed allocation for the project instead of the given figure of Rs 495.60 crore, for our analysis purpose*). The SAP gives an overall proposed budget outlay of Rs 2982.52 crore (for 2009-10 to 2011-12). However, the sum of the budget outlays proposed under various programmes/*sub-sectors* aggregate to Rs 3082.37 crore; *we have no clue for this discrepancy*. We shall use the figure of Rs 3082.37 crore in analyzing the sectoral allocation of funds, as it is the sum of the budget outlays proposed under various programmes/*sub-sectors*. The SAP allocates highest share of 32.3 per cent (amounting to Rs 995.25 crore) to the *Agriculture Marketing Development* programme. The State needs to focus on development of integrated market infrastructure, comprising of *modern terminal markets, developed rural haats, agri-business centres and on-farm primary processing centres*, to take optimum advantage of the prevailing conducive agro-climatic conditions for attaining a rapid growth in overall agriculture sector. Hence, the high allocation share is fully justified. The SAP allocates second highest share of 14.2 per cent (Rs 438.29 crore) to *micro irrigation*; the allocation is well-justified as it is expected to be useful in optimally harnessing the irrigation-potential of the State through improvement in water utilization efficiency. The SAP allocates 12.5 per cent (Rs

385.50 crore) for the *soil-health management* programme; the allocation share seems to be appropriate as the State needs to seriously look into the problem of deterioration in soil owing to disproportionately high use of N fertilizer vis-à-vis P and K fertilizers that distorts N:P:K: ratio, impoverishment of micronutrients in the soil as practice of intensive cropping system like rice-wheat with high yielding varieties continues and inadequate use of organic manures. The SAP allocates 10.5 per cent (Rs 323.73) crore for the *horticulture: planting materials* programme; the allocation share seems appropriate as the favourable agro-climatic conditions of the State present a vast potential for growing large variety of horticultural crops, useful for enhancing employment opportunities and attaining food and nutritional security. The SAP allocates 9.1 per cent (Rs 279.20 crore) towards *farm mechanization*; the allocation share is justified as the productivity of cereals is adversely affected by late-sowing in the State, while mechanization helps in timely land preparation, sowing and harvesting of crops, thereby saving cost and time. The SAP allocates 7.1 per cent (Rs 218.59 crore) towards *seed plan* programme; the allocation share is right as the availability and promotion of quality seeds is pre-requisite for raising agricultural productivity. The SAP allocates 6.0 per cent (Rs 184.15) for *agriculture extension*; the allocation share is justified as the village level agricultural extension system is in poor condition in the State and urgently needs rejuvenation. The SAP allocates 4.5 per cent (Rs 138.87 crore) towards *transfer of technology* to farmers; the allocation is well-deserved as transfer of modern agricultural technology is useful to farmers for attaining high yields of quality produce. The SAP allocation of 2.5 per cent (Rs 77.03 crore) towards *crop protection* is important as crop losses due to insect-pests and diseases considerably reduce the farm income. The SAP proposes 1.1 per cent (Rs 32.75 crore) for *soil & water conservation activities in rainfed areas*; it will be useful in a holistic and sustainable development of rain-fed areas based on watershed approach. The SAP allocates 0.3 per cent (Rs 9.0 crore) for *integrated farming model* that is modeled for farms of one acre-size; the model is based on farming system approach which incorporates different enterprises viz. crop production, animal rearing and fisheries and ensures higher income to farmers. Though the sub-sectoral allocation for agriculture and horticulture sectors is satisfactory, yet absence of allocations for other sectors like fisheries and animal husbandry prevents us from adjudging the sectoral allocation of funds as conforming 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?

Though the SAP does not mention the term ‘innovative project’, yet some projects mentioned in the SAP may be considered as *innovative* in nature. For example, the project on *integrated farming model* involves following an integrated farming approach incorporating different enterprises viz. crop production, animal rearing and fisheries; the project is modeled for a small plot of one acre and targets to cover 3,00,000 acres of area in the State with project cost of Rs 9.0 crore. This programme is expected to raise the income-levels of a large number of small and marginal farmers in the State. Similarly, project on *Farmers’ field school* (Rs 120.0 crore) is expected to play a key role in crucial transfer of modern agricultural technology to the farmers.

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 make explicit the basis of planning certain projects for the State as a whole. However, we anticipate the role of some State-level agricultural priorities adjudged or identified

by the *State Agricultural Department* that may not have been reflected in the District Agricultural Plans, in forming the basis of planning certain projects for the State as a whole. For example, improving the water utilization efficiency in the State for taking optimum advantage of the irrigation-potential is an area of focus or priority mentioned in the SAP, which is reflected through the proposed *Bihar State Micro-Irrigation Project* (BISMIP) (Rs 438.29 crore). The micro-irrigation project (BISMIP) envisages bringing an area of 2,00,000 ha under *drip* and *sprinkling* irrigation systems, covering 534 blocks in 38 districts of the State. However, the SAP is not explicit on how do these projects get 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. Further, it is not explicit whether sectoral fund allocation is based on expected marginal contributions. Also, no viability analysis is explicit in the SAP. However, we feel that the experience, commonsense and judgment of the *State Agricultural Department* may have contributed in forming basis of sectoral fund allocation.

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

The SAP allocates Rs 1012.90 crore (33.96 per cent), Rs 1019.79 crore (34.19 per cent) and Rs 949.83 crore (31.85 per cent) for years 2009-10, 2010-11 and 2011-12, respectively, amounting to a total budget outlay of Rs 2982.52 crore (100 per cent) during the 11th FYP. However, the SAP misses to give budget allocations for years 2007-08 and 2008-09. Hence, comment on the allocation across years can be made by considering only the last three years of the 11th FYP. Assuming that the allocation shares during the first two years of the 11th FYP are lower than the given allocations for the third (2009-10) and fourth (2010-11) years (as per the prudent norms), the allocations across years look to be broadly right. The allocation shares are 33.96 per cent in the third year (2009-10), 34.19 per cent in the fourth year (2010-11) and 31.85 per cent in the fifth year (2011-12) of the FYP; the allocation shares are higher in the two intermediate years (2009-10 and 2010-11) and slightly recede in the final year (2011-12) of the FYP. *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 focuses on developing infrastructure for agriculture marketing, soil health management, horticulture planting materials, farm-mechanization, quality seed production & promotion, agriculture extension and transfer of modern agricultural technology; these are expected to result in attaining high agricultural growth, food & nutritional security and increased earnings/employment for the farmers. 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?**

Though the SAP proposes various programmes/actions as part of the 11th FYP, yet it 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 that 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 include in the Plan other sectors also (such as animal husbandry and fisheries) besides the agriculture and horticulture sectors; it should give information on all the projects by sectors and years with clear cut objectives, targets, output, outcome, funding (RKVY, other sources) for each project. The SAP should provide funding details under various CSS and State-level schemes (including RKVY), in relation to 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 enumerate the methodology used in its preparation.
- (x) The SAP should specify the projects emanating from the C-DAPs vis-à-vis the State Plan.
- (xi) The SAP should rectify the anomaly in which the total proposed budget amount does not match with the sum of the proposed budgets of individual programmes/projects.

Overall conclusion

The SAP is well attempted. It states year-wise physical and financial targets for projects proposed under various programmes/*sub-sectors*, along with their objectives and the strategies involved. The SAP gives a number of examples of programmes/projects that indicate convergence of various schemes (including RKVY) both in terms of financial and physical targets; it points to following the convergence to a great extent. The SAP proposes a number of promising and innovative programmes/projects that generate hopes for rejuvenation of the agriculture sector and attaining a high rate of growth. However, the SAP needs to incorporate a lot of improvements. Firstly, it should not miss-out other important sectors (like animal husbandry and fisheries) in the proposed Plan; the present SAP is limited to the agriculture and horticulture sectors only. Secondly, the SAP should not forget to include all five years of the 11th FYP while giving financial and physical targets of each programme/project; the SAP misses years 2007-08 and 2008-09 while giving information. Thirdly, the SAP should give district-wise (spatial) allocation of funds in the budget outlay. Fourthly, the SAP should incorporate an *executive summary*, a comprehensive *methodology*, a SWOT analysis and a systematic yield-gap analysis in the Plan. Fifthly, the SAP should also attempt to give physical and financial targets at the aggregate sector-level, such as agriculture, horticulture, animal husbandry and fisheries. Sixthly, in case of all those projects which involve convergence, the SAP should mention funding contribution of all the schemes. 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.