

COMPREHENSIVE DISTRICT AGRICULTURAL PLANS - A SELECT REVIEW

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Rashtriya Krishi Vikas Yojana (RKVY) mandated that comprehensive district agricultural plan (CDAP) be prepared for all the districts by each state. Detailed guidelines for district plan preparation have been issued under the *Manual for Preparation of Comprehensive District Agriculture Plan (C-DAP)* by the Planning Commission. Several states have prepared CDAP s and the present study is an attempt to review few of the CDAP s in different states. Institute of Economic Growth (IEG) and the Agricultural Economic Research Centres (AERC) in the various states have carried out the review. Institute of Economic Growth (IEG) is the coordinating unit for the AER Centres in the north and north-eastern regions of the country. IEG also conducted periodic workshops to monitor and guide the progress of the work. The present report is an outcome of review of the CDAP s carried out by IEG in the states of Himachal Pradesh, Punjab, Tripura and Uttar Pradesh.

**REVIEW REPORT OF THE
COMPREHENSIVE DISTRICT AGRICULTURAL PLAN (C-
DAP)
– LUDHIANA DISTRICT**

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The review report has been prepared by following the *Manual for Preparation of Comprehensive District Agriculture Plan (C-DAP)* issued by the Planning Commission, GoI and the *Parameters for Review of C-DAP s* formulated by the sub-committee constituted for this purpose. An expert committee for the district has been constituted to provide their assessment of the plan. A short field visit to few villages has also been undertaken to assess the degree of participation of the officials and people at the ground level in the C-DAP preparation and their perceptions about the C-DAP exercise. The final review report has been prepared by integrating our own reading of the plan document with that of experts' assessment and the information gathered from the village visits. The report has been organized as follows. First the main review report is presented in which the technical and the constitutional aspects of the C-DAP are examined. This is followed by important observations / suggestions based on our analysis and essence of the experts' reports. This is followed by an appendix in which details of the district & village visits and detailed reports of the experts are provided.

- C.S.C. Sekhar

The expert team constituted for Ludhiana district is as follows

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C-DAP REVIEW MAIN REPORT- LUDHIANA

I) Technical Aspects of the Plan

S.No	Aspect	Status in the C-DAP
1	Introduction including methodology	No, detailed methodology of preparing the C-DAP needs to be included
2	<p>General description of the district</p> <p>i) Introduction (maps, general statistics, crops/activities in the district)</p> <p>ii) Location and geographical units</p> <p>iii) Demographic profile</p> <p>iv) Topography and agro-climatic features</p> <p>v) Landuse pattern and structure of landholdings</p> <p>vi) Irrigation and groundwater</p> <p>District income and intra-district differentials</p>	<p>Maps are not provided</p> <p>No, even the basic details such as names of the blocks are missing</p> <p>The demographic profile needs to be discussed in greater detail. The literacy profile of the population also needs some discussion to make an assessment of the skill profile of the population.</p> <p>The main drawback of the plan is that the two major regions i.e., the flood-plain region of Sutlej and the upland plain area have different endowments and face different constraints. Therefore, the profile of these two regions should have been separately discussed. Also, information at the block level needs to be provided and discussed for a sound plan. The topography, soil type and its suitability to various crops need to be discussed in greater detail.</p> <p>The data is provided in table 3 but the year of the agricultural census is missing. Also, data for previous census also need to be give for comparison</p> <p>Not enough discussion</p> <p>Not given</p>
3	Whether vision document prepared?	No, a comprehensive vision needs to be prepared for a period of 10-15 years based on a detailed analysis of the sub-district level data by interaction with ground level officials and data

S.No	Aspect	Status in the C-DAP
5	<p>Detailed analysis of agricultural sector – whether undertaken</p> <ul style="list-style-type: none"> i) Landuse ii) Soil iii) Irrigation iv) Seeds v) Inputs – Fertilizer, pesticides, power vi) Farm mechanization vii) Credit viii) Marketing and storage ix) Cropping pattern x) Yield analysis xi) Income analysis of the farmers xii) Existing gaps in <ul style="list-style-type: none"> a) Yield b) Input supply like seeds, fertilizer, irrigation, pesticides, power etc c) Credit d) Storage and marketing e) Research & extension xiii) Recommended interventions to address issues in xii) xiv) Researchable issues 	<p>No. A detailed sub-district (block) level analysis needs to be undertaken. This analysis may be carried out separately for the two main regions of the district mentioned earlier. The constraints listed on page 6 and the plan programs listed from page no 10 onwards need to flow out of such an analysis</p> <p>Analysis of the sub-district/block level data, wherever available, is needed for all the components listed below</p> <p>Carried out at the district level but needs to be done for the two main regions of the district separately and at the block level</p>

S.No	Aspect	Status in the C-DAP
6	<p>Allied Sectors</p> <ul style="list-style-type: none"> i) Horticulture ii) Sericulture iii) Dairy and animal husbandry iv) Poultry v) Fisheries development vi) Watershed development vii) Social forestry viii) Agro-based rural development potential (rural industries, sugar mills, rice mills, jelly/jam making units, food processing units) ix) Constraints and yield gaps in i) to iv) and viii x) Recommended interventions to address ix) 	<p>There is no systematic analysis of the horticulture sector. A detailed block-level analysis needs to be provided, along with identification of the high potential regions. Such an analysis should also be provided for the other relevant activities, listed below, in the district</p> <p>This section looks like it has been reproduced from some other document. For instance on page 30 (para 1), it is mentioned “..... 3% growth rate in the three districts.....”, which shows this. Again on page 31, paragraph 1, “<i>it is proposed to get 10 mini milk processing plants established in district Bhatinda</i>”. This sentence casts a doubt as to whether the entire discussion and estimates in this section are for Ludhiana or for some other district. This casual approach to preparing a district plan through ‘cut and paste’ methods should be avoided. A detailed block level analysis of the trends in the sector along with fodder production and animal health issues needs to be undertaken.</p> <p>A detailed block-level analysis needs to be provided for all the activities below</p>

S.No	Aspect	Status in the C-DAP
7	<p>Special programmes/Projects in the district</p> <p>i) Agriculture-related (i to viii of point 5)</p> <p>ii) Allied sector related (i to viii of point 6)</p> <p>iii) Rural infrastructure related</p> <p>iv) Any other</p>	<p>Only few programs of the agriculture department are mentioned. There is no discussion of the activities undertaken under these programs. There is no mention of programs of other departments or of NGO s.</p> <p>No discussion of programs of this sector</p> <p>No discussion of programs of this sector, not even of NREGA</p> <p>All the programs of all the Ministries and departments i.e., agriculture, rural development, panchayati raj, food and public distribution, water resources, forests and environment etc need to be discussed, or at least mentioned. in detail. Also, the programs of NGO s and cooperative sector also need to be listed</p>
8	<p>SWOT analysis</p> <ul style="list-style-type: none"> - 'S' Potential for development from points 5 and 6 - 'W' yield gaps and constraints outlined in points 5 and 6 - 'O' programs from point 7 - 'T' institutional and financial constraints 	<p>SWOT analysis missing. A comprehensive SWOT analysis of the district is needed.</p>
9	<p>Was the plan formulated using vision statement and SWOT analysis?</p>	<p>Neither a vision statement nor a SWOT analysis has been provided</p>
10	<p>Has the plan been divided into actionable annual projects?</p>	<p>Yes, but the projects appear <i>ad-hoc</i> in view of 9</p>
11	<p>Have delivery mechanisms and expected outcomes in terms of quantifiable targets been spelt out?</p>	<p>No</p>
12	<p>Has a mechanism for monitoring & evaluation been spelt out?</p>	<p>No</p>
13	<p>Is the functional and financial convergence been worked out to attain plan objectives</p>	<p>No</p>
S.No	Aspect	Status in the C-DAP
14	<p>Any other comments on</p> <ul style="list-style-type: none"> - data adequacy and gaps - needs and constraints of the district 	<p>Detailed sub-district analysis using block-level data needed for agriculture and allied sectors. This needs to be carried out for two</p>

	<p>missing from C-DAP</p>	<p>main regions separately in order to make appropriate plans for the two regions. A comprehensive vision document needs to be prepared and a SWOT analysis needs to be carried out. The plan should be based on the vision and the SWOT analysis.</p> <p>A gradual move to village plans is imperative as some of the pressing problems of the villages visited by us do not find even a mention in the plan (for sample village information, see appendix).</p>
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II) Constitutional Aspects

S.No	Aspect	Status in the C-DAP
1	At the district level - Are DPC s formed or not?	No*
2	If yes, is C-DAP approved by the DPC?	No
3	If not, what is the mechanism of the approval of C-DAP	
4	At the sub-district level i) are VAPU and BAPU in existence? ii) If not, what is the consultative process followed below the district level? iii) Extent of awareness about C-DAP among departments, administrators, people and politicians of the area (at village, block and district level)	No No consultation Some awareness among officials but only in one village visited by our team, there was some awareness among people about DAP exercise.

* As per the information provided by the officials contacted at the district who have replied in the negative when asked about the formation of the DPC

Important Observations / Suggestions

- i) A complete resource mapping of the district needs to be provided. Resource endowment profile should be studied at block level for the two main regions i.e. flood plain region of river Sutlej (bet area) and upland plain area. Soil mapping, water mapping and crop pattern mapping should be prepared for proper resource endowment profile of the district. SWOT analysis should be undertaken for homogenous agro-ecological regions.
- ii) Detailed information on the existing cropping pattern and shifts in it over time needs to be provided. The technical and economic viability of the existing cropping pattern may be analyzed. Also an alternate cropping pattern may also be suggested, if need be, in the plan. The existing pattern of fertilizer and pesticide use need to be discussed in detail with facts and figures.
- iii) As per the plan, 64 per cent of the farmers are small and marginal. Their problems and constraints need to be accorded priority. Also, separate action strategies for different size groups may be prepared in the plan. In this context, prospects for development of non-farm sector may be discussed in greater detail.
- iv) The report gives data on area irrigated by different sources but it does not provide any information on the availability of total water in the district. Supplementing the prevailing scenario with resource availability will be helpful.
- v) One most pressing problem of the district, which is, the steeply falling groundwater tables has not been dealt with in detail. In particular what can be done to reverse this trend either through diversification of cropping pattern, recharging of ground water, removal of electricity subsidies for irrigation pumping etc. What policy mix can help promote more sustainable use of groundwater – in the short run as well as in the long run.
- vi) Developing lease market for farm machinery may be given its due importance in the document
- vii) Although the relevant problems and constraints of the district have been highlighted, greater detail needs to be provided. Some of the important constraints related to post harvest technology/ agro processing/value addition encompassing, cold storage, refrigerated vehicles, packaging/grading, varietal development of fruits and vegetables suitable for processing and exports etc did not receive adequate attention. Labour related constraints are also missing from the plan. Due to reduced in-migration of seasonal labour from Bihar in recent years, shortage of labour for various farm operations especially paddy transplanting has become a great challenge in the district like rest of the state. Shortage of labour also poses problems for vegetable farming, which is highly labour-intensive. High wage rate in agriculture sector and seasonal farm employment due to emergence of monoculture are the other labour related issues that should have found a place in the plan document. As the shortage of labour is also linked to NREGA, these employment programs also need some discussion.
- viii) The problems and constraints of flood prone area (Bet belt) have not been adequately addressed in the plan. The status and potential of agro based industries need detailed analysis using data and developments of the past.

- ix) No vision document has been prepared. The plan is of only a short term nature (for 5 years). It looks more like collection of annual action plans rather than a comprehensive district plan. It appears that even the planning committees which have been formed at block and district levels are not involved in the plan formulation process. Although most of the action plans are in accordance with the resources and constraints/ problems, many important issues have been ignored like processing/ second stage of production, research and development, varieties improvements, labour shortage for farm sector etc.
- x) Convergence issues have not been addressed at all in the plan. As per present plan proposal, there will be a lot of duplication in efforts. Information on the existing schemes/plans of department of agriculture is very sketchy. It does not cover all the ongoing schemes such as seed replacement, seed testing laboratories, fertiliser testing laboratories etc. Moreover the efforts/ schemes of the state agriculture department should have been studied at least during last 5 years rather than only during a particular year i.e. 2006-07. The ongoing schemes related to fisheries, horticulture, micro irrigation and many more have not even been mentioned, leave alone any attempt at convergence.
- xi) Financial viability of the projects proposed in the plan needs to be discussed in the light of the present sources of funding and the potential sources from where the funds can be mobilized
- xii) Strengthening R&D efforts for vegetable and horticultural crops is important for the promotion of agro-processing in the district. The R&D efforts should also be focussed on less water-intensive crops like oilseeds and pulses. A number of practical problems for pulses like rotation management, labour shortage etc. need attention in the plan.
- xiii) Gaps between potential and realised yield of some crops mentioned in the Table 2 on page 5 of the document needs to be rechecked and corrected. The exploited yield potential (Table 2) of crops like cotton, Arhar, Gram and Sarson are quite low varying between 48 to 60 percent. Special strategies need to be devised to address these low realizations and promote cultivation of cotton, oilseeds and pulses for diversification of agriculture in the district.
- xiv) The documents more look like a subsidy distribution plan rather than comprehensive development plan for the long run development of the district. Every proposal in the plan includes a big subsidy component. Even the seed treatment and tensiometers are proposed to be subsidised at 50%. For these low cost technologies, subsidies are not as important as creating awareness among the farmers.
- xv) The document has over emphasised on the seed replacement issue suggesting it to increase from present 10 per cent to 33 per cent. The farmers should be advised to produce quality seed of the recent varieties on their own farm along with emphasis on seed treatment rather than over emphasising seed replacement. Seed priming is another area that can be promoted at the farmers' level for better germination and hence yield enhancement of the crops. Guava, ber, pear and kinnow are the major fruits in the district. Disease free healthy nursery should be the priority in case of all horticultural crops. The targets of technology adoption have to be realistic and based on the strength and resources to be used. The adoption of net houses on this large scale as proposed in the plan does not appear to be achievable in the given scenario. Development of rural industries, social forestry development and agro based rural development programmes are not included. Scope for

public private partnership approach, strengthening of Self Help Groups/ Voluntary Institution participation, market linkage programmes, improvement of logistics and transport net work, export potential/forward linkages, existing average farmers' income and future projection and scope for bio fuel production are also missing.

- xvi) Instead of establishing one more farmers' training institute with huge capital expenditure at Ludhiana, it is preferable to strengthen the existing facilities at PAU and GADVASU
- xvii) There is no mention of the methodology followed in the plan formulation process. Even the sources of data base used in the report are not given. Block level data set is completely missing. All the tables in the document need to be numbered and referred to in the document. The source of data and the year should be explicitly mentioned. Resource base data of the district is not adequate. The plan document appears to reflect the views of some of the officials and not involved the people at grass root level. The document should have been prepared by involving all the agencies in the district. In the absence of participatory plan at village and block level, one cannot be sure the plan is local need based. It is apparent that villagers for whom the plan has been prepared are not at all consulted in the whole process. To make the plan more realistic and practical addressing local issues, bottom up approach is highly desired. Hence, there should be a separate section on the methodology, data base and complete planning process followed for better understanding.
- xviii) Lastly, there are some serious errors in presentation of the plan document. There is repetition of the information and discussion on two different pages (p. no s 26 & 28). Also, information given at s.no 1 & 12 of table 1 is at variance with that given on page no 37.

The district agricultural plan needs to be revised in the light of above mentioned comments/ observations/suggestions to make it comprehensive, practical, realistic and to address the convergence issue properly.

APPENDIX

Information Gathered from Village Visits – Ludhiana District

Sl No	Questions	Findings*			
		Village Name: SHAHJAD (PHAUKHOWAL)	Village Name: MANSOORA (PHAUKHOWAL)	Village Name: LALTOKHURD (LUDHIANA-1)	Village Name: LALTOKALAN (LUDHIANA-1)
1	Which govt. plans are operative in your village?	ASHA, ANGANWADI, NREGA,SSA,NRHM	ANGANWADI, NREGA, SSA.	ANGANWADI, NREGA, ASHA, SSA.	ANGANWADI, NREGA,SSA, CMCH branch,
2	Which govt. plans relating to agriculture are operative in your village?	KVK,ATMA	KVK,ATMA	No	No
3	About which govt. plans you are aware?	NREGA,SSA	ASHA, NREGA, ANGANWADI, SSA.	ANGANWADI, NREGA, ASHA, SSA.	NREGA, Sanitation.
4	Are you aware of District Agriculture Plans?	YES	No	No	No
5	Have you or anyone in your village been consulted at any stage of DAP preparation?	No meeting.	----	---	---
6	What were your suggestions?		---	---	---
7	Has anyone discussed the DAP after it has been prepared?		----		
8	Have you ever asked the authorities about your village agriculture plan?	Yes, about seed, kitchen gardening camp.	-----	---	---
9	Have you ever got some benefit from Krishi Vigyan Kendra?	No	No	No	No
10	What is your cropping pattern?	Kh: Paddy, jowar, bajra Yield: 6 tonnes/hect Rabi:Wheat, berseen. Yield: 4 tonnes/hect	Kh: Paddy, jowar, bajra Yield: 5 tonnes/hect Rabi:Wheat, berseen. Yield: 3.7 tonnes/hect	Kh: Paddy, jowar. Rented at Rs 22,000/acre/annum. yield: Paddy- 7.5 tonnes/hect. Wheat- 3 tonnes/hect.	Kh: Paddy, jowar, bajra Yield: 6 tonnes/hect Rabi:Wheat, berseen. Yield: 4 tonnes/hect
11	Which crops do you grow and why?	Price incentive.	Price incentive.	Price incentive.	Price incentive.
12	Soil- What are problems of soil nutrients? Soil health cards, soil testing facilities etc.	Lack of Nitrogen. No soil health card issued. But they required.	No soil health card issued. But they do not require. Soil health test report on time.	No soil health card issued to marginal farmers. But large farmers (10 acres) have it.	No soil health card issued. But they do not require.

Sl No	Questions	Findings*			
		Village Name: SHAHJAD (PHAUKHOWAL)	Village Name: MANSOORA (PHAUKHOWAL)	Village Name: LALTOKHURD (LUDHIANA-1)	Village Name: LALTOKALAN (LUDHIANA-1)
13	Seed – Home grown or purchased- from govt. or private?	Purchased from private and government (Certified).	Homegrown, also Purchase from private and government (Certified).	Purchased from private and PAU.	Purchased from private and PAU.
14	Seed replacement rate?	Every Year.	Paddy Every Year, Wheat in two years.	Every Year.	Every Year.
15	Credit-From where you get credit?	Credit from Co-operative Society. No Kissan Credit Card (KCC) issued.	Credit from Co-operative Society. No Kissan Credit Card (KCC) issued.	Credit from banks. No Kissan Credit Card (KCC) issued.	Credit from Co-operative Society. No Kissan Credit Card (KCC) issued.
16	Credit facilities- Rate of interest, availability of credit and other problems	Affordable rate of interest.	Affordable rate of interest.	Rate of interest 24% per annum	Affordable rate of interest.
17	Irrigation- Source of irrigation, area irrigated, problems relating to irrigation	Tube well. very less canal	Tube well (80%). Canal (20%)	Tube well.	Tube well. Very less canal.
18	Fertilizer- use of fertilizer, availability of fertilizers?	Private society and private.	Private society and private. Shortage of DAP in winter.	Easily available from society. Shortage of DAP in winter.	Easily available from society. Shortage of DAP in winter.
19	Agricultural machinery- purchasing of machinery, repairs etc?	Machinery available easily and repairs near by town –Jonda.	Machinery available easily and repairs near by town – Jonda.	Machinery available easily and repairs near by town –Jonda.	Machinery available easily and repairs near by town –Jonda.
E	Organic farming? Food storage and other post-harvest facilities?	Yes. No Food storage.	No. No Food storage.	No. No Food storage.	No. No Food storage.
21	Vermiculture – problems relating to vermiculture?	No vermiculture.	Yes but plant not functioning.	No vermiculture.	No vermiculture.
22	Marketing- problems in marketing. Govt. buying or private trade?	No problem in marketing. They sell to FCI.	No problem in marketing.	No problem in marketing. They sell to FCI. Basmati marketing problem.	No problem in marketing. They sell to FCI.
23	Dairying-your requirements to increase milk production?	Yield: 10-12L/day. They want improvement in breed.	Yield: 8-10L/day. Milkfed society and Verka They want improvement in breed.	Due to marginal profit he sold out all his buffaloes. They want improvement in breed and higher price for milk.	Yield: 10-12L/day. They want improvement in breed.
25	Improvement in livestock?	New breed.	New breed.	New breed.	New breed.
26	Your suggestions to increase your production of crops, Dairying	New seeds and new breed.	New seeds and new breed.	New seeds and new breed.	New seeds and new breed.

Sl No	Questions	Findings*			
		Village Name: SHAHJAD (PHAUKHOWAL)	Village Name: MANSOORA (PHAUKHOWAL)	Village Name: LALTOKHURD (LUDHIANA-1)	Village Name: LALTOKALAN (LUDHIANA-1)
27	Funding - Funding to panchayat from all sources and to Agriculture related.	Nothing.	Nothing.	Nothing.	Nothing.
28	NREGA related worked done in your village and amount of this project.	60 job card holders. Rs 6 lacs have been received.	Rs 20,000 Th. have been received. But he has sent proposal of Rs 3 lacs per annum. Some plantation work has been done. <u>(He was saying since he was a congress sarapanch he was not informed any development oriented works that had been allocated to his constituency)</u>	20 job cards issued. No money received yet.	Rs 50,000 have been received. Labor does not want to work with this wage rate. Water tank.
29	Post harvest issues, storage etc.	No storage facilities.	No storage facilities. Not required also.	No storage facilities. They want it.	No storage facilities. They want it.
30	HYV seed availability	Yes	Yes	No problem.	No problem.
31	OVERALL SUGGESTION FOR AGRICULTURE		New HYV seed, New breed.	New seeds and new breed.	New seeds and new breed.

* All persons met in the villages are sitting **SARAPANCHAS**

Information Gathered from District Officials[#] – Ludhiana District

Officer 1

Sl No	Questions (AGRICULTURE)	Answers
1	Whether District Planning Committee (DPC) is formed?	No
2	Whether District Agricultural Plan (DAP) is approved by DPC?	No
3	Is there any involvement of officials in the DAP	DAP completed but no involvement of officials. But in revised DAP, officials are involved.
4	Proposed program in crop sector	
5	Constraints, Potentials, Strategies and vision for the farm sector.	
6	Soil Nutrients Management System (SNMS) in Ludhiana District.	Some villagers have adopted SNMS. No issue of soil health cards. Soil test fee is nominal. Report available before session, reaches within 3 months.
7	Adoption of Organic Farming	Started but discontinued
8	Water Resources Management	Irrigated area: 3.5 lacs hecter. Canal: 11,000 hecter, rest by tube wells mainly.
9	Quality seed supply	Every year new seeds provided. Pulses, seed. Subsidy is provided to seed.
10	ATMA & other technology extension services, farmers training	Demonstrations, trainings, exposures, mela, distribution of moong, pulse kits. But no program regarding HYV.
11	Cropping pattern	Rabi: Wheat, oilseeds-mustard, barley (less cultivation). Kharif: paddy, Jower, Bajra, Cherry, Moong.
12	Your views about Convergence of programmes	The CAO favors it.

Officer 2

Sl No	Questions (HORTICULTURE)	Answers
1	Have you been consulted during the preparation of DAP	No
2	Promotion of horticulture crops	Guava, all types of vegetables, flowers under National Horticulture Mission (NHM).
3	What have you done on RKVY	It is under consultation with officials and forums.
4	Post-harvest chains and markets	Training under NHM.
6	Your views about Convergence of programs	The HDO favors it.

[#] Details of the officials are not presented here for want of confidentiality

Officer 3

Sl No	Questions	Answers
1	Whether District Planning Committee (DPC) is formed?	No
2	Whether District Agricultural Plan (DAP) is approved by DPC?	No
3	Is there any involvement of officials in the DAP	Yes
5	Improvement of animal husbandry.	More medicine required, free vaccination for FMD, Animal Insemination, Good quality of semen required.
6	Any programs against diseases.	FMD, HS, Brucellosis, repeat breeding treatment.
8	Any training program for increasing in quality milk production?	Training for the milk producers
9	What are your Problems?	Surplus staffs have been assigned to collect data across all departments.
10	What are your constraints?	Lack of mobile vans. They require at least one van in each block (12 blocks). Weak building. Feed and fodder deficiency, modernization of chaff cutter and silage.
11	Problems regarding Dairy	Providing good quality of semen for breeding, infrastructure like cold storage required. Strengthening of vaccination institute sheep firm, and buffalo firm. Requirement of AC vans for supply, GAS CYLINDERS to store siemens.
12	Your views about Convergence of programs	Dy Director favors it.

Assessment of C- DAP of Ludhiana District

D.K. Grover

Director

**Agro – Economic Research Centre
Punjab Agricultural University, Ludhiana**

Is the resource endowment profile of the district adequate for a sound district plan?

A complete resource mapping of the district should have been included. Resource endowment profile should be studied at block level by proper mapping. Based on the resource endowment profile, the more vibrant (less efforts) and less vibrant (More efforts) regions should have been distinguished. Since the district is divided into two well defined regions i.e. flood plain region of river Sutlej (bet area) and upland plain area, having altogether different problems and solutions thereof, needs to have different plan requirements. Hence more detailed micro level planning of the district is required.

Soil mapping, water mapping and crop pattern mapping etc should have been prepared for proper resource endowment profile of the district. SWOT analysis should have been done for homogenous ecological regions to study how the strength (resource endowment) of a particular area can be converted into opportunities by tackling weaknesses through proper micro planning.

DAP has to be a comprehensive document and the entire infrastructure/assets of the district should be clearly cited, be it of the State Department of Agriculture, State Agricultural University and ICAR (KVK) including Voluntary Organizations and NGO's. It should not be restricted to State Department of Agriculture and allied sectors, rather should have been highlighted the possible involvement of FASS and KVK in up gradation process of agriculture in the district.

Have the relevant problems and constraints of the district been highlighted and discussed?

The relevant problems and constraints of the district have been highlighted but needs to be discussed in more details. Some of the constraints and problems which are also very important and not received due attention in the plan are constraints related to post harvest technology/ agro processing/value additions encompassing issues like cold storage, refrigerated vehicles, marketing intelligent wing, packaging/grading, varieties development of fruits and vegetables suitable for processing and export purpose, etc.

Labour related constraints are also missing from the plan. Due to non influx of migrant labour from Bihar in recent years, shortage of labour for various farm operations especially paddy transplanting has become a great challenge in the district like rest of the state. Shortage of labour also poses problems for vegetable farming, being labour intensive crops. High wage rate in agriculture sector and seasonal farm employment due to emergence of monoculture are the other labour related issues that should have been placed in the plan document.

The problems and constraints of flood prone area (Bet belt) have not been adequately addressed in the plan.

One full section is required on the status and potential of agro based industries, processing and value addition potentials. Present status of this component, problems faced in the past, future challenges, required efforts and suitable plan proposals are expected in this document.

Has the long-term (15 years) and short term action plan (5 years) been discussed in the plan? Are they in accordance with the resources and constraints of the district?

To bring the desired and possible future for development, Vision statement is a pre requisite for any plan formulation i.e. what kind of district agricultural economy; planners would like to see after 10-15 years. In the present District agricultural plan, no vision document is prepared for 10 or 15 years. The plan is only a short term i.e. for 5 years only. Even the short term plan is not comprehensive; it looks like an annual action plan rather than visionary plan. The vertical integration has not been taken care of while formulating plan. It seems even the planning committees formed at block and district levels are not involved in the plan formulation process. Though most of the action plans are in accordance with the resources and constraints/ problems, many important issues have been ignored like processing/ second stage of production, research and development, varieties improvements, labour shortage for farm sector etc.

Major issues missing from the plan that you may wish to see included

Convergence issues are not at all addressed in the plan. As per present plan proposal, there will be a lot of duplication in efforts. Information on the existing schemes/plans of department of agriculture is too sketchy. It does not cover all the ongoing schemes such as seed replacement, seed testing laboratories, fertiliser testing laboratories etc. Moreover the efforts/ schemes of the state agriculture department should have been studied at least during last 5 years rather than only during a particular year i.e. 2006-07. The ongoing schemes related to fisheries, horticulture, micro irrigation and many more have not been given in the document posing a serious concern for convergence.

Comprehensive machinery plan including paddy Transplanting machines to tackle labour shortage related problems should be a part of the plan.

Strengthening Research and development efforts for vegetable and horticultural crops should be there for the promotion of processing in the district. The research and development should also

be for other less water requiring crops like oilseed and pulses with the view to promote/ encourage crop diversification in the district. Promotion of pulses has rightly been discussed in the plan by incorporating summer mungbean SML 668 but a number of practical problems in terms of rotation management and labour shortage etc in this regard have been reported by the farmers.

The per cent potential exploited yield of crops such as cotton, Arhar, Gram and Sarson are quite low varying between 48 to 60 percent as shown in Table 2 of the plan document, special plan should have been prepared to address these low realization and promote cultivation of cotton, oilseeds and pulses for diversification of agriculture in the district.

Gaps between potential and realised yield of some crops mentioned in the Table 2 on page 5 of the document needs to be rechecked and corrected.

The documents more look like a subsidy distribution plan rather than comprehensive development plan suggesting strengthening R&D and varietals improvement, required in the long run. Every proposal in the plan includes a big subsidy component. Even the seed treatment and tensiometers are proposed to be subsidised at 50%. I am sure for these low cost technologies , subsidies are not as important as creating awareness among the farmers.

The document has over emphasised on the seed replacement issue suggesting it to increase from present 10 per cent to 33 per cent. The farmers should be advised to produce quality seed of the recent varieties on their own farm along with stress on seed treatment rather than over emphasising seed replacement.

Seed priming is another area that can be promoted at the farmers' level for better germination and hence yield enhancement of the crops.

Guava, ber, pear and kinnow are the major fruits in the district. Disease free healthy nursery should be the priority in case of all horticultural crops.

The targets of technology adoption have to be realistic and based on the strength and resources to be used. The adoption of net houses on this large scale as planned does not appear to be achievable in the given scenario.

Development of rural industries, social forestry development and agro based rural development programmes are not included.

Scope for public private partnership approach, strengthening of Self Help Groups/ Voluntary Institution participation, market linkage programmes, improvement of logistics and transport network, export potential/forward linkages, existing average farmers' income and future projection and scope for bio fuel production are also missing.

Some comments/suggestions on the data base and methodology used in the plan preparation

There is no mention of the methodology followed in the plan formulation process. Even the sources of data base used in the report are not given. Block level data set is completely missing. Resource base data of the district is not adequate. The plan document seems to be as views of some of the officials and not involved the people at grass root level. The document should have been prepared by involving all the agencies in the district. In the absence of participatory plan at village and block level, one cannot be sure the plan is local need based. It is apparent that villagers for whom the plan has been prepared are not at all consulted in the whole process. To make the plan more realistic and practical addressing local issues, bottom up approach is highly desired. Hence, there should be a separate section on the methodology, data base and complete planning process followed for better understanding.

The district agricultural plan needs to be revised in the light of above mentioned comments/ observations/suggestions to make it comprehensive, practical, realistic and to address the convergence issue properly.

Observations on the document “Plan for Agricultural Development : Ludhiana District”

- Dr. R.P.S. Malik

1. Adequacy of resource endowment profile for a sound district plan

The report does give some relevant data on the current availability of resources for the district (Table 1) but the data is inadequate for preparing an objective plan. For example while the report does give data on the area irrigated by different sources it does not provide any information about the availability of total water in the district. So supplementing the data describing the currently prevailing scenario with resource availability will be helpful.

2. Have the relevant problems and constraints of the district been highlighted and discussed

Yes most of the problems and constraints have been highlighted. However the increasing problem of non availability of local labor for performing various agricultural operations and shortfall in availability of migratory labor to do these jobs has not been adequately addressed

3. Has the long term (15 years) and short term (5 years) action plan been discussed in the plan? Are they in accordance with the resources and constraints of the district?

The report discusses all the action plans for five years only and does not provide any indication about long term strategies. It is difficult to say if the suggested action plans is in accordance with the financial resources available for the district. The report only estimates the financial resources required to undertake the suggested action plan.

4. Major issues missing from the plan that you may wish to be included

4.1 .One of the most pressing problem of the district viz steeply falling groundwater tables has not been dealt with in the seriousness that it deserves. In particular what can be done to reverse this trend either through diversification of cropping pattern, recharging of ground water, removal of electricity subsidies for irrigation pumping etc. What policy mix can help promote more sustainable use of groundwater – in the short run as well as in the long run.

4. 2 The entire focus of the strategy for development focuses on provision of subsidies in one form or the other and on one scheme/ intervention or the other. If the entire agricultural development in one of the most progressive districts of the country is to be led by subsidy alone what will happen to the not so advanced regions of the country. One would expect some innovative farmer/ market led innovations to promote agricultural development rather than following the traditional route of promoting development through provision of subsidies.

4.3 .In the long run diversification of income base of the farming households is both desirable and required more so for marginal and small farmers. In this context some discussion/ plans for development of non farm sector within rural areas as a source of livelihood diversification is desirable.

4.4 The development plan, like a typical government document lists several interventions which need to be addressed. Given the overall financial constraints it is well known that all that is required to be done can not be done. It would be more appropriate if the authors could priorities some of the more promising interventions which have a relatively larger impact on agricultural development as compared to others so that if the required financial resources are not available the plan can attempt to make the maximum impact within the available resources.

4.5 At several places the report repeats “this needs to be done” but without qualifying how this can be done, who will do it, what financial resources are required and what are the likely benefits of doing this. Some more elaboration on this aspect would have been helpful.

4.6 The report states (page 5) that there is a wide gap between crop yields currently obtaining and the potential yields that can be obtained or once attained but does not suggest what steps needs to be taken to bridge this gap. Similarly the report states that there is a scope for pushing the growth of fruits and vegetables but does not state what the constraints to doing this are and what action needs to be taken to achieve this.

5. Some comments/suggestions on the database and methodology used in plan preparation

The report does not seem to have adopted any sound methodology for preparing the plan. The report no where states what the specific end objectives for preparation of the plan are– is the objective to achieve a desired rate of growth of agricultural economy in the district, promote more sustainable use of resources, increase farmer incomes etc.

**REVIEW REPORT OF THE
COMPREHENSIVE DISTRICT AGRICULTURAL PLAN
(C-DAP)
– KINNAUR DISTRICT**

**C.S.C. SEKHAR
S.S.YADAV
SANTOSH KUMAR DASH**



सत्यमेव परमो धर्मः

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The review report has been prepared by following the *Manual for Preparation of Comprehensive District Agriculture Plan (C-DAP)* issued by the Planning Commission, GoI and the *Parameters for Review of C-DAP s* formulated by the sub-committee constituted for this purpose. An expert committee for the district has been constituted to provide their assessment of the plan. The draft review report has been prepared by integrating our own reading of the plan document with that of experts' assessment. A field visit could not be undertaken due to paucity of time but is proposed to be undertaken shortly. Field-level assessment about the functioning of DPC s and about the awareness of C-DAP exercise among people and PRI functionaries will be reported after a field visit to the villages in the district.

The report has been organized as follows. First the main review report is presented in which the technical and the constitutional aspects of the C-DAP are examined. This is followed by important observations / suggestions based on our analysis and essence of the experts' reports. This is followed by an appendix in which detailed reports of the experts are provided.

- C.S.C. Sekhar

The expert team constituted for Kinnaur district is as follows

- 1) Dr P.S Dahiya
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C-DAP REVIEW REPORT - KINNAUR

I) Technical Aspects of the Plan

S.No	Aspect	Status in the C-DAP
1	Introduction including methodology	Informative introduction with detailed methodology in chapter 2
2	<p>General description of the district</p> <p style="padding-left: 40px;">vii) Introduction (maps, general statistics, crops/activities in the district)</p> <p style="padding-left: 40px;">viii) Location and geographical units</p> <p style="padding-left: 40px;">ix) Demographic profile</p> <p style="padding-left: 40px;">x) Topography and agro-climatic features</p> <p style="padding-left: 40px;">xi) Landuse pattern and structure of landholdings</p> <p style="padding-left: 40px;">xii) Irrigation and groundwater</p> <p style="padding-left: 40px;">xiii) District income and intra-district differentials</p>	<p>Maps are not provided but all the relevant details including general statistics, major crops/activities are provided</p> <p>Detailed description is provided</p> <p>Detailed trends in demographic profile are given</p> <p>Very detailed description is provided in chapter 1</p> <p>Block-level details of present landuse pattern (2005-06) and district level changes from 1990 onwards are provided (table 3.12). Detailed analysis of the structure of landholdings is also provide in chapter 3</p> <p>Pattern o irrigation needs detailed analysis</p> <p>These details are missing. Intra-district differentials are particularly important and need detailed analysis</p>
3	Whether vision document prepared?	There is no mention of a separate vision document but the C-DAP provides a detailed account of the potential and action plan for the district
4	If yes, does it follow the pattern laid down in fig 2.1, page 10 (C-DAP manual). Specifically, does it give reasons for backwardness, development issues and medium term perspective of the plan	-

S.No	Aspect	Status in the C-DAP
5	<p>Detailed analysis of agricultural sector – whether undertaken</p> <p>xv) Landuse</p> <p>xvi) Soil</p> <p>xvii) Irrigation</p> <p>xviii) Seeds</p> <p>xix) Inputs – Fertilizer, pesticides, power</p> <p>xx) Farm mechanization</p> <p>xxi) Credit</p> <p>xxii) Marketing and storage</p> <p>xxiii) Cropping pattern</p> <p>xxiv) Yield analysis</p> <p>xxv) Income analysis of the farmers</p>	<p>Yes, most of the aspects are covered.</p> <p>The changes in landuse pattern at the district level are discussed in chapter 3. Detailed block level analysis would be useful if data is available</p> <p>Some information is provided in chapter3, page 10</p> <p>This aspect needs much more attention and detailed analysis in the plan</p> <p>Data on seeds and fertilizer is given in chapter 4 (table 4.14). But a detailed analysis of the problems relating to these aspects is missing. Some data on use of fungicides/insecticides is given in table 3.19. Some data on electrification is given in table 3.41 but the important aspects like duration and stability of power supply to agriculture are not discussed.</p> <p>Detailed analysis is needed</p> <p>Some basic information on credit is given in table 3.38. But in-depth analysis highlighting the problems & constraints is needed</p> <p>Some basic information is given in tables 3.39 and 4.35. But problems relating to marketing, grading and storage need to be analyzed in detail</p> <p>Comprehensive</p> <p>Comprehensive</p> <p>Missing. Needs to be undertaken</p>

	<p>xxvi) Existing gaps in</p> <p>a) Yield</p> <p>b) Input supply like seeds, fertilizer, irrigation, pesticides, power etc</p> <p>c) Credit</p> <p>d) Storage and marketing</p> <p>e) Research & extension</p> <p>xxvii) Recommended interventions to address issues in xii)</p> <p>xxviii) Researchable issues</p>	<p>Worked out well (table 4.15). But the table would be more useful if the gap is presented in % terms to give an idea about the extent of improvement needed. This can be done by including one more column ‘% Improvement Needed’ = $(G/A)*100$</p> <p>Gaps worked out for seeds, manure and fertilizer in 4.14. Status of existing irrigation schemes is presented in tables 4.6 & 4.7 , followed by new schemes proposed in table 4.8. But gaps and problems with the existing schemes is neither presented nor discussed</p> <p>Credit related issues and problems did not receive adequate attention in the plan</p> <p>Production and disposal of agri products (table 4.19) and existing facilities and needed requirements for marketing (4.35) are presented well. The problems relating to marketing & storage need to be discussed in greater detail.</p> <p>Discussed in the appropriate places.</p>
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S.No	Aspect	Status in the C-DAP
6	<p>Allied Sectors</p> <p>xi) Horticulture</p> <p>xii) Sericulture</p> <p>xiii) Dairy and animal husbandry</p> <p>xiv) Poultry</p> <p>xv) Fisheries development</p> <p>xvi) Watershed development</p> <p>xvii) Social forestry</p> <p>xviii) Agro-based rural development potential (rural industries, sugar mills, rice mills, jelly/jam making units, food processing units)</p> <p>xix) Constraints and yield gaps in i) to iv) and viii</p> <p>xx) Recommended interventions to address ix)</p>	<p>The status and trends in vegetable & fruit production in the district are well-presented in tables 3.24 to 3.28</p> <p>-</p> <p>The status of this sector is analyzed well in section 3.47 and the relevant data is presented in tables 3.31 to 3.36</p> <p>Details of this sector are provided in section 3.4.7 and table 3.31. But block-wise data is needed for grassroot planning for the district</p> <p>Some information is given in table 4.30 and new programmes are proposed in table 4.32. But at least a brief analysis of the sector is also needed</p> <p>-</p> <p>No analysis. No programmes suggested</p> <p>There is a very useful table (table 4.48) detailing the agro-related industries proposed in the district. However, financial estimates for the same are not given. It is important that detailed project reports (DPRs) for these proposed activities need to be prepared alongwith feasibility reports, targets etc. Detailed financial estimates based on DPRs need to be provided</p> <p>The constraints and the recommended interventions are generally presented alongwith the tables mentioned above at appropriate places.</p>

S.No	Aspect	Status in the C-DAP
7	Special programmes/Projects in the district <ul style="list-style-type: none"> v) Agriculture-related (i to viii of point 5) vi) Allied sector related (i to viii of point 6) vii) Rural infrastructure related viii) Any other 	Existing block-level schemes under i) to iv) below have been listed in table 4.4. But it is not clear whether this list is exhaustive. Also, the details of activities undertaken in these existing schemes need to be provided to work out functional and financial convergence with the new programmes/schemes proposed under table 4.5
8	SWOT analysis <ul style="list-style-type: none"> - 'S' Potential for development from points 5 and 6 - 'W' yield gaps and constraints outlined in points 5 and 6 - 'O' programs from point 7 - 'T' institutional and financial constraints 	Although the potential, constraints and future prospects of the district are discussed well at various places in different sections, it is advisable to present a systematic SWOT analysis at one place in the plan document while revising the document in future.
9	Was the plan formulated using vision statement and SWOT analysis?	There is no systematic vision statement or any mention of a vision document (see point 3 above). It is advisable to prepare a systematic vision document for the district, as laid down in the Manual for C-DAP preparation. A vision statement based on the comprehensive vision document should guide the preparation of C-DAP s in future.
10	Has the plan been divided into actionable annual projects?	Yes
11	Have delivery mechanisms and expected outcomes in terms of quantifiable targets been spelt out?	Only for some projects
12	Has a mechanism for monitoring & evaluation been spelt out?	No
13	Is the functional and financial convergence been worked out to attain plan objectives	No. See point 7 above
14	Any other comments on <ul style="list-style-type: none"> - data adequacy and gaps - needs and constraints of the district missing from C-DAP 	The report is very well-prepared document with the available data. But, for a more meaningful and grassroots level plan exercise, authorities should make block-level data available to planners.

II) Constitutional Aspects

S.No	Aspect	Status in the C-DAP
1	At the district level - Are DPC s formed or not?	Not clear from the document
2	If yes, is C-DAP approved by the DPC?	Not clear from the document
3	If not, what is the mechanism of the approval of C-DAP	
4	At the sub-district level iv) Are VAPU and BAPU in existence? v) If not, what is the consultative process followed below the district level? vi) Extent of awareness about C-DAP among departments, administrators, people and politicians of the area (at village, block and district level)	No Data collected from sample panchayats was blown up for the block level using appropriate statistical tools. The problems and suggestions were prioritized based on responses from grassroot functionaries. The financial estimates were prepared in consultation with officials of the line departments (see section 2.3, chapter 2) Not clear from the plan document

Important Observations and Suggestions

- i) Overall, it is a good C-DAP with available data given the time limitation. Detailed analysis of historical data and developments in the district using block level information. There are few gaps though, in chapters 3 and 4, mainly in chapter 4.

Chapter 3

- ii) The data source is missing from a number of tables. All the tables should contain the data source listed at the bottom to enable an assessment of the authenticity of the data.
- iii) A district map showing the boundary and adjoining districts of H.P. and Uttarakhand should be included in the DAP. Description of the district, its location and position has not been supplemented with relevant maps. Similarly, description of soils is not accompanied by different maps like land capability, soil classes etc. Relevant Maps must be included & soil capability and classes should be described in detail.
- iv) The number of schools at block level has been reported in Table 3.11 (p.18). However, the district also has the following Institutes for strengthening trained manpower resources through research and extension activities. It has not been reported in the DAP at all.
- Mountain Agricultural Research & Extension Centre, Sangla, Distt. Kinnaur.
 - CSK Himachal Pradesh Krishi Vishwavidyalaya Research Sub-Station, Leo, Distt. Kinnaur.
 - Dr. Y.S. Parmar University of Horticulture and Forestry Regional Horticulture Research Station, Sharbo, Distt. Kinnaur.
 - Govt. Sheep Breeding Farms, Karchham, Distt. Kinnaur.
 - Kinnaur district also has one Govt. College and one I.T.I. at Rekong Peo.
- v) Other information relating to hospitals is also not included. For instance, the district has 1 Regional Hospital, 4 Block Hospitals, 50 PHCs & Sub Centres, 1 Ayurvedic Hospital and 41 Ayurvedic Centres, which are not reported.
- vi) Some of the crucial thrust programmes in the district are missed out. The H.P. Govt. has Tribal Area Sub Plan for focused development of the Cold Dry Zone covering Kinnaur, Lahaul-Spiti & Pangti Tehsil of Chamba Distt. The DAP should have appropriately covered the policy thrust & institutional support relating to Kinnaur as part of Tribal Area Sub Plan of H.P. State but this aspect is not covered in the DAP at all. Very inadequate information on the policy & institutional aspects is covered under item 3.6 (Desert Development).
- vii) The problems and constraints have not been reported at the grass root level (village/panchayat level basis). Because of the topographical variations in Kinnaur, it is vital to undertake village level analysis of constraints and problems.

- viii) Secondly, it is also not at all clear whether these problems and constraints have been identified on the basis of survey of 12 village panchayats or on the basis of data collected from the officials of the line departments only.
- ix) Even in the village level surveys, only panchayat Pradhans including 2 or 3 progressive farmers and the officers of the line department were involved. There are over 80 percent small and marginal farmers, who form the disadvantaged group and they were not involved in these surveys for preparation of DAP. The other stakeholders such as agricultural labour, factory workers etc. were also not covered by the survey. The yield gaps, problems and constraints are doggedly dragging these small land holders restraining them from exploiting the yield potential.
- x) Income analysis of various categories of farmers should have been given for assessing the impact of agricultural development activities on farmer's income.
- xi) The problems and constraints have not been prioritized for a feasible DAP.
- xii) The Potential linked credit Plan (PLP) of NABARD and Strategic Research & Extension Plans (SREP) of ATMA could have been made use of. These documents are a good source for identifying the problems and constraints for farm sector and non-farm sector for inclusive growth.

Chapter 4

- xiii) It would improve the plan, if details of the proposed projects are provided in an appendix. For example, in table 4.2, how are the interventions identified? By following the methodology outlined on page 7, para 1 OR by interacting with people (and their representatives) OR both? Similarly, what is the procedure for preparing the FE s in table 4.3? The source of unit costs for different interventions for estimation of financial outlays on yearly basis has not been reported. Are they based on DPR s prepared (for interventions proposed in 4.2)? As per the RKVY guidelines, all the projects/schemes proposed in a C-DAP need to be carried out in a project mode (which includes preparation DPR s with details of implementing agencies, specific time lines etc). These comments are applicable to all the tables similar to 4.2 (4.8, 4.16, 4.17, 4.21, 4.28, 4.31, 4.33, 4.35, 4.38) & 4.3 (4.11, 4.12, 4.18, 4.22, 4.29, 4.32, 4.34, 4.36) in chapter 4.
- xiv) Projections for critical inputs requirement like “Quality certified seed”, “fertilizers”, insecticides”, on yearly basis for exploiting the potential should have been given in the DAP. It must include an efficient delivery system, particularly for the disadvantaged groups
- xv) The other missing components in chapter 4 are the following.

- a) For promotion of scientific agriculture and precision farming, soil and water testing labs should be set up at block level in the district.
- b) Sheep and goats play an important role in village economy as source of meat for the non-veg. population and wool for the shawl industry in Kinnaur but the five year plan does not propose any specific interventions for improvement/exploitation of the potential as well as for the shawl industry.
- c) The five year plan has no specific interventions for small and marginal farmers (80% of the total farmers) and agricultural labour (31% of the total workers).
- d) The plan does not provide any strategy for maximization of returns to the farmers from different crops and other enterprises.
- e) Medicinal and aromatic plants available in the natural conditions of the district have large potential for development. Special projects may be devised for promotion of this sector.
- f) DAP has not touched upon Integrated pest management (IPM) at all.
- g) No convergence of state schemes, centrally sponsored schemes (CSS), special allocation of Finance Commissions and other schemes like NABARD schemes, etc. has been attempted under DAP while working out the sectoral outlays (p.iv).
- h) SHGs are playing an important role in rural economy but the five year plan (DAP) makes no reference to interventions / innovations in this regard.
- i) The forest area is only 6% of total geographical area in the district . A large proportion of area - 52% of total geographical area - is under pastures and culturable waste. The DAP has neither discussed the relevant issues like social forestry etc. with the Forest Deptt. officials nor has it proposed any intervention in this regard
- j) Monitoring & delivery mechanism must be clearly spelt out for all the proposed activities.

Few comments on the specific tables are as follows

Table No	Comment
4.3	How have the estimates been worked out? Why are the estimates not included in the final DAP?
4.16	Have detailed DPR s for each intervention been prepared?
4.33	How are the requirements worked out? Is 'E' existing and 'R' requirement?
4.38	How is the prioritization done?
4.42	In some cases only 'Existing' is given. Does it imply that there is no further 'requirement' or 'potential'?

Database and Methodology

- xvi) The data sources need to be explicitly mentioned
- xvii) The dates of sample survey for the panchayats should have been given as an annexure since reference period of survey is important.
- xviii) The questionnaires used for the sample surveys and data collection should be attached with the DAP as annexures to assess the type of information gathered
- xix) In general, the data indicated in the appendices of the *C-DAP Manual* of the Planning Commission, as far as relevant to the district, should be provided for a sound plan preparation.

APPENDIX

Assessment Report on the Comprehensive District Agriculture Plan (C-DAP), Kinnaur District, Himachal Pradesh, prepared for the Department of Agriculture by the Consulting Agency CSK Himachal Pradesh Agriculture University, Palampur, H.P.

1. **Introduction :** The Constitution 73rd and 74th Amendments mandated local planning at the village panchayat, intermediate panchayats and district panchayat levels as well as in urban local governments and their consolidation into a district plan in each district. Article 243ZD of the Constitution mandates the formation of a District Plan Committee (DPC) in each district of the country for preparation of the district plan. 73rd amendment of the Constitution came into force on 24th April, 1993. District Agriculture Plan (DAP) is an essential component of the District Plan. In the wake of economic reforms under way since 1991, the Indian economy has maintained high growth trajectory but woefully agriculture has lagged behind by not attaining the targeted growth rate of 4% during the liberalized economic era. Concerned over the slow growth and low investment by the states in agriculture, the National Development Council (NDC) resolved on 29 May, 2007 to rejuvenate agriculture under special additional central assistance scheme (Rashtriya Krishi Vikas Yojana (RKVY)) / National Agricultural Development Programme (NADP) with an outlay of Rs. 25000 crore. The NADP aims at achieving 4% annual growth rate in agriculture during 11th five year plan (2007-2012).

The Planning Commission Manual on “Comprehensive – District Agriculture Plan (C-DAP)” (March 2008) lays down very lucidly the procedure, methodology, vision & strategy and format for preparation of the District Agriculture Plan. The District Agriculture Plan (DAP) and State Agriculture Plan (SAP) should be based on (i) agro-climatic conditions (ii) availability of technology (iii) national requirement (iv) the local needs for crop, feed and fodder, animal husbandry, dairying, fisheries – to be reflected in the plan (v) DAP to reduce yield gaps and maximize returns to farmers and (vi) convergence with State Schemes, Central sponsored Schemes (NREGS, SGSY, BRGF etc.), NABARD Schemes, Finance Commission special allocations etc.

2. **Agriculture in H.P. State :-** Agriculture provides direct employment to 71 percent of the total population in the state. It contributes about 30% of the State

Domestic Product (SDP) and only 18-20 % of the cultivable area is irrigated and the rest is rainfed. Wheat, maize, paddy, offseason vegetables, potato and apple are the principal agricultural and horticultural crops. The State is divided into the following agro-climatic zones :-

AGRO-CLIMATIC ZONES IN HIMACHAL PRADESH				
Sr.No.	Zone	Altitude (M) above Mean sea level	Percent of total geographical area of State covered by the Zone	Percent of the total cultivated area of State covered by the Zone
1	Shivalik Hill Zone	350 to 650 meters	35	40
2	Mid Hill Zone	651 to 1800 meters	32	37
3	High Hill Zone	1801 to 2200 meters	35	21
4	Cold Dry Zone	Above 2201 meters	8	2

Kinnaur district, Lahaul-spiti district and Pangi tehsil of Chamba district constitute the Cold Dry Zone of the state. District Kinnaur came into being on 1st May, 1960.

3. **Is the resource endowment profile of the district adequate for a sound district plan ? :-** The resource endowment profile of the district has been presented under Chapter III of the DAP and this needs to be examined in terms of (i) natural resources (ii) land resources & soils (iii) human resources (iv) trained manpower (v) research & extension (vi) infrastructure-roads, electricity, ICT etc.

The important comments are as under :-

- (a) **Natural resources :-** The fig. 3.1 (p.8) – the district MAP showing the boundary and adjoining districts of H.P. and Uttrakhand has not been included in the DAP. The district is part of cold dry zone with temperature varying from -6.5⁰C during winter to 26⁰C in summer season. The altitude varies from 2350 meters to 6816 meters above mean sea level. The average monthly and annual rainfall data are adequately reported in Table 3.1 and Table 3.2.
- (b) **Land resources for agriculture, soils and cropping pattern :-** These are presented under item 3.4 Agricultural Status pp. 20-31 of the DAP. In Kinnaur district only 1.34% (2005-06) (Table 3.16 p.22) of the

geographical area is available for crop cultivation against 11.94% for the State. The cultivated land is only 9355 ha and forest land is also only 6.03% of the total geographical area. 80% farmers fall in small & marginal category against 86% for the state (Table 3.18). The average holding size in Kinnaur district is 1.38 ha as against 1.07 ha for H.P. Over 67% of cultivated area in the district has irrigational facility (p. 21). The district has soil testing lab, besides a mobile soil testing facility.

According to the text (p.24) the area under fruits and vegetables in the total cropped area of the district was as high as 15% and 55% respectively but in the Table 3.21, a reverse picture is presented (p.24). The sources of Tables (data) have, by and large, not been reported.

- (c) **Human resources (pp. 13-20)** :- These are covered under item 3.3 Demographic features. Population, its density, main workers, marginal workers, literacy rate, cultivators, agricultural workers etc. with breakup at block level are adequately given in DAP. Human resources of line department for agriculture development are given in Table 4.39 p.71.
- (d) **Trained Manpower** :- Information on this aspect is not covered. The number of schools on Block basis have been reported in Table 3.11 (p.18). Besides this, the district also has the following Institutes for strengthening trained manpower resources through research and extension activities. It has not been reported in the DAP at all.
- Mountain Agricultural Research & Extension Centre, Sangla, Distt. Kinnaur.
 - CSK Himachal Pradesh Krishi Vishwavidalaya Research Sub-Station, Leo, Distt. Kinnaur.
 - Dr. Y.S. Parmar University of Horticulture and Forestry Regional Horticulture Research Station, Sharbo, Distt. Kinnaur.
 - Govt. Sheep Breeding Farms, Karchham, Distt. Kinnaur.
 - Kinnaur district also has one Govt. College and one I.T.I. at Rekong Peo.
- (e) **Infrastructure** :- The information and data on general infrastructure are given on pages 31 to 34 covering banking, cooperation, roads,

communication, transport, power etc. As against the reported figures of 18 bank branches (p.31), the total number of bank branches are 31, with 19 branches of public sector banks, one land development bank branch and 10 branches of Coop Bank in Kinnaur Distt. (Info. on website for Kinnaur). However, the DAP reports 33 bank branches (p.33). The rest of information and data are adequately covered except that the number of Regional Hospital (1), Block Hospitals (4) PHCs & Sub Centres (50), Ayurvedic Hospital (1) and Ayurvedic Centres (41) are not reported.

(f) **Policy & Institutional Support** :- The policy and institutional support are very critical for development and same holds good for agriculture. Very inadequate information on this aspect is covered under item 3.6 Desert Development 10.34. In fact, the H.P. Govt. has Tribal Area Sub Plan for focused development of the Cold Dry Zone covering Kinnaur, Lahaul-Spiti & Pangi Tehsil of Chamba Distt. The DAP should have appropriately covered the policy thrust & institutional support relating to Kinnaur as part of Tribal Area Sub Plan of H.P. State but this aspect is not covered in the DAP at all. The number of enterprises and other persons engaged in the enterprises & factories is well reported (p.35). It is felt that the resource endowment profile for Kinnaur district is adequate for preparing a comprehensive and sound district agricultural plan.

4. **Problems and constraints of the district** :- The productivity level of crops in Kinnaur district is low as compared to Himachal Pradesh notwithstanding the fact that the agro-climatic conditions are different. Secondly for purpose of comprehensive and realistic plan for tapping the diverse farm sector and allied sector, the problems and constraints have to be identified specifically and discussed cohesively.

The consulting agency did not undertake the preparation of Panchayat Agriculture Plan for each Panchayat and the Block Agriculture Plan (BDP) for each Block. Under item 2.4 limitations, they conducted survey in 12 Panchayats (4 from each Block) out of the total 65 Panchayats. Strangely, the consultants have not reported the problems and constraints based even on these 12 sampled Panchayats. The questionnaires used for surveys of sampled Panchayats and

officials of line Departments have not been attached with DAP as an Annexure. However, the following Blockwise problems and interventions have been presented in Table 4.2 (p.39), Table 4.16 (p.53), Table 4.17 (p.54), Table 4.21 (p.57), Table 4.28 (p.63), Table 4.30 (p.65) and Table 4.43 (p.74).

Comments :-

- (i) The problems and constraints have not been reported on grass root level (village/panchayat level basis). Because of the topographical variations in Kinnaur it is vital to undertake village level analysis of constraints and problems.
- (ii) Secondly, it is also not at all clear whether these problems and constraints have been identified on the basis of survey of 12 village panchayats or on the basis of data collected from the officials of the line departments only.
- (iii) Even for the village level surveys, only panchayat Pradhans including 2.3 progressive farmers and the officers of the line department were involved. There are over 80 percent small and marginal farmers, who form the disadvantaged group and they were not involved in these surveys for preparation of DAP. The other stakeholders such as agriculture labour, factory workers etc. were also not covered by the survey. The yield gap problems and constraints are doggedly dragging these small land holders restraining them from exploiting the yield potential.
- (iv) The problems and constraints have not been discussed and prioritized fully for any feasible action plan for implimentation of the DAP.
- (v) The NABARD prepares Potential linked credit Plan (PLP) for each district. These documents are a good source for identifying the problems and constraints for farm sector and non-farm sector for inclusive growth. The consultants have not referred to PLP for Kinnaur.

5. **Preparation of long term (15 years) and short term action plan (5 years plan) in accordance with resources and constraints of the district :-** The District Agriculture Plan (DAP) is not an aggregation of the existing schemes but aims at moving towards projecting the requirements for development of agriculture and allied sectors, based on resource endowments, local aspirations and needs, available technology, national goals and so on. Vision (15 year long

term plan) and strategy (5 year long plan) are sine qua non of the Rashtriya Krishi Vikas Yojana. The Agriculture Vision Document must undertake SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis keeping in view people's aspirations potential of production, strategies for improvement, available technology, research & extension interventions, reasons for backwardness and emerging challenges. This must be done while appreciating the use of non-conventional energy, inputs and output market needs, food processing and agro processing needs and so on. The DAP for Kinnaur district does not have any vision statement (long term plan) at all. However, 5 year action plan in the form of existing position and potential in different sectors i.e. (i) crop production (ii) infrastructure (iii) natural resource conservation and management (iv) organic farming (v) agro-tourism (vi) fruit production (vii) livestock, poultry and fisheries (viii) human resources and (ix) research and extension have been presented under Chapter IV-Accelerating Agricultural Growth and Strategies and Plan Estimates (pp. 37-78) with yearly allocation given under DAP at a glance : Sector outlays and yearly allocation (Rs. in lakh) (p.iv)

Comments :- (i) Vision Statement (15 year long term plan) has not been given in DAP at all. (ii) The five year action plan is presented in the form of Tables under Chapter IV – Accelerating Agricultural Growth Strategies and Plan Estimates. In one case, Prioritization of Schemes / works has been given in Table 4.38 (without source ?) p.70. It has not been discussed at all. The source of unit costs for different interventions for estimation of financial outlays on yearly basis have not been reported. However rates for improvement needed to increase the productivity of land” (Table 4.10 p.48) have been reported, that too without any source. Incidentally, one of the sources (reliable) for unit cost is the Potential Linked Credit Plan (PLP) of the NABARD and so on. (iii) Sheep and goats play an important role in village economy as source of meat for the non-veg. population and wool for the shawl industry in Kinnaur but the five year plan does not propose any specific intervention for improvement/exploitation of the potential as well as for the shawl industry. (iv) The five year plan has no specific interventions for small and marginal farmers (80% of the total farmers

and agriculture labour (31% of the total workers). (v) The plan does not provide any strategy for maximization for returns to the farmers from different crops and other enterprises. (vi) Integrated pest management (IPM) is the national imperative but DAP has not touched upon it all. (vii) No convergence of state schemes, central sponsored schemes, NABARD schemes, special allocation of Finance Commissions etc. has been attempted under DAP while working out the sectoral outlays (p.iv). (viii) SHGs are playing an important role in rural economy but the five year plan (DAP) makes no reference for intervention / innovation in this regard.

6. **Comments / suggestions on the database and methodology used for DAP :-**
The Planning Commission (March 2008) has emphasised on preparation of Panchayat Agriculture Plan for each village panchayat, aggregation of these plans at Block level and then at district level. Instead of following this approach (census approach) the DAP has been prepared on the basis of sample survey (12 panchayat, out of 65) following the participatory rural appraisal (PRA) method. One questionnaire for sample panchayats and one questionnaire for Block level officials were administered (specimen copy of questionnaires not attached with DAP). It is stated (p.6) that, “the officers of the line departments, namely, agriculture, horticulture and animal husbandry and panchayat pradhans including two-three progressive farmers participated in the data collection process. Five important problems and interventions were considered for preparing plan estimates. The interventions have been categorized into (i) research (ii) extension and (iii) development. **My comments are as under :-** (i) Under the law of land, the crop estimates (area, production, yield) as prepared by the Directorate of Land Records of the State concerned are taken as the official statistics. For principal crops, these crop estimates are based on crop cutting experiments (based on scientific methodologies for crop estimation). The DAP has not used these data sources instead the data from Agriculture Deptt., Horticulture Deptt. etc. have been used. It is a flawed approach to that extent. (ii) Generally data sources for the Tables in DAP have not been given, which reduces their credibility and authenticity. (iii) The Planning Commission has stipulated data collection at village level but the DAP has been prepared under

the glib pretext of “time limitation”. This way, this version of DAP, Kinnaur Distt. (June 2008) strikes down at the basic premise of ascertaining “aspirations, needs, constraints etc.” of the disadvantaged groups like small and marginal farmers, agriculture labour, SHGs, Allied sectors etc.”. Representatives of all stakeholders should have participated in this plan preparation. (iv) The priorities, problems, constraints, potentials etc. have been reported as per officials of line Deptts. & progressive farmers only. The potentials for crops are indicated in several ways : (a) yield gap for improved agriculture would be: yield obtained at progressive farm less yield obtained at a marginal farm/ small farm. (b) Better estimate in this respect is yield at experimental farm (state university farm) less yield obtained at marginal farm / small farm. (c) Yield obtained at State Govt. Farm – yield at marginal farm / small farm. These data should have been collected in order to work out the different “potential scenarios” for working out the strategies and financial outlays. But the DAP follows probably one scenario (may be based on (a) above). (v) The two questionnaires used for the sample surveys and PRA for data collection should have been attached with the DAP as an Annexure. (vi) Since the details about the types of data collected are not known explicitly, it is difficult to comment on the analytical tools used for DAP.

7. **Major issues and other points missing from the plan and need for their inclusion? :- My suggestions and points are as follows :-** (i) Names of the officials of line departments, experts, pardhans etc. who constituted the Distt. Agriculture Planning Unit should have been given in an Annexure. (ii) The dates of sample survey for the Panchayats should have been given as an Annexure as reference period of survey is important. For collection of data at village panchayat level, large number of technical personnel (retired) could be deployed to overcome the time constraints. (iii) Credit plan of the district (NABARD) has not been incorporated (integrated) into the DAP. (iv) Abbreviations such as JICA report (p.27) used in the DAP have not been given under a list of abbreviations in the DAP. (v) The forest area is only 6% of total geographical area in the district . Quite a large area (52% of total geographical area is under pasture and culturable waste. The Distt. Agriculture Planning Unit

neither discussed the ‘relevant’ issues (like social forestry etc.) with the Forest Deptt. officials nor it has proposed any intervention in this regard. (vi) Executive Summary for DAP has not been given at all. (vii) No foreword, no list of Tables in DAP has been given. (viii) Projections for critical inputs requirement like “Quality certified seed”, “fertilizers”, insecticides”, on yearly basis for exploiting the potential should have been given in the DAP. It must include an efficient delivery system, particularly for the disadvantaged groups. (ix) Each district has ATMA (Agriculture Technology Management Agency) which prepares SREPS (Strategic Research and Extension Plan). This has not been used for the preparation of DAP, for Kinnaur district. (x) For promotion of scientific agriculture and precision farming, soil and water testing labs should be set up at each Block level in the District. (xi) The DAP prepared for Kinnaur district follows **“traditional strengthening of agriculture development”** approach and not the new **“rejuvenation of agriculture growth”** approach buttressed by social justice as one of its planks.

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Assessment of C-DAP of Kinnaur District in Himachal Pradesh

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Kinnaur, the northeastern frontier district of Himachal Pradesh and a border district of India lies in Western Himalayas on both banks of the river Satluj and situated in tribal region of Himachal Pradesh. The district is sparsely populated and located in remotest parts of the State, suffers from poor communication and other infrastructure facilities. There is a little scope of cultivation of field crops and the farmers generally get one crop in a year. Agriculture including horticulture along with animal husbandry constitutes the main occupation of the people of the district. Majority of the working population of district is directly dependent on agricultural pursuits. Here the crops grown take longer time to mature due to low temperature. Being economically backward, people are incapable of making necessary investment on fertilizer, improved seed and other inputs to increase agricultural production. The end result is that productivity of land is very low. The hill slopes are steep and shallow soil is very often washed away by rains and snow. Soil erosion is therefore a menace to be reckoned with. Due to all these factors, the production of crops is very low. The District Agricultural Plan prepared for Kinnaur district has been divided in VI chapters as per C-DAP manual.

Is the resource endowment profile of the district adequate for sound district plan?

Resource profile of the district has been appropriately described in the report by analyzing the land use pattern, soil type, water resources, forest, flora and fauna, wild

life sanctuaries, livestock, fishery, human resources etc. The land use pattern has been analyzed by comparing the various categories of land use at district, state and at block level. Distribution of land holdings in all the three blocks have been presented in the report. Average size of land holding in the district is 1.38 hectares which is higher than the state average of 1.07 hectares. Changes in the number, area and size of land holdings have been analyzed. Block wise crop diversification, area under major crops in the district has been presented. Yield of different foodgrain crops at state and district level has been examined in the report. Area and production of vegetable and fruit crops in the district has been given.

Changes in livestock population, composition, breed of livestock, type of fish found, fish production in the district have been presented. Changes in livestock population, composition, breeds over census periods have been analyzed. Production of milk, milk yield of milch animals, meat, wool, eggs, extent of farm mechanization have been presented.

Population details includes the aspects like decadal growth, immigration of population, S.C and ST population, sex ratio, literacy etc. Interesting features of population in Kinnaur reveals that entire population is rural living in 234 inhabited villages with average size of family 4.78 persons. Population density is 12 persons per sq km and literacy rate is 75 percent. Educational institutions are also given. Workers and non workers and occupational distribution of workers are presented in the report.

Water resources such as river and *khad* (tributaries), lakes, springs and spring heads, snow fields/ glaciers and ice caves, ground water conditions and exploitation, water harvesting have been discussed in detail. Detail irrigation status has been given in the report.

The district has rich natural heritage, historical temples, scenic places and mountain grandeurs hence there is ample scope to develop agro tourism.

Rural enterprises are given in the report. The details regarding agro-processing are given. Input use and gaps in horticultural crops, livestock have been presented. Reasons for such gaps and suitable interventions have been presented. Research/extension gaps and researchable issues have been discussed.

General infrastructure such as number of bank branches, cooperative societies, roads length, number of post offices, fair price shops, rural electrification, drinking water facilities have been given in the report. Desert development programme in the district has been discussed.

Poverty level in the district reveals that 21 percent population is below poverty line which is lesser than that of state average of 24 percent. The district does not have any industrial unit worth the name except household industries like woolen products. The detail like number of enterprises, persons working, numbers of registered small scale industrial units have been given. Income analysis of various categories of farmers should have been given for assessing the impact of agricultural development activities on farmer's income.

Agriculture status has been presented in the report. Agriculture is the main activities of 67 percent population. Major grain crops grown are barley, opla, phafra. The very cold climate is responsible for low yield, low cropping intensity. Farming is dependent on irrigation and main sources are Kuhl (water channels) drawn from the streams fed by glaciers. Due to high profit, farmers have shifted towards off season vegetables like peas, cabbage, beans, seed potato and pulses. Temperate fruits like apple, walnut, almond, apricot, *chilgoza* etc of Kinnaur are at par with the best produced any where in the world. This calls for higher prioritization for horticulture sector as compared to agriculture sector which should be on the third rank of prioritization after animal husbandry. Block wise land use pattern has been presented. The net sown area accounted for 1.34 percent of total geographical area of the district, 51 percent area is under pastures. Block wise crop diversification, area under major crops grown have been given.

Cropping system and cropping pattern has been presented by analyzing the cropping system on irrigated and unirrigated land in the district. Mono cropping system was followed due to snow fall from November to March. Cropping pattern in all the three blocks has been examined and presented in the report. Small millets accounted for 48 percent of area under cereal crops. Maize, wheat and barley are the major crops of cereals, *Rajmash* is main pulses crop. Among vegetables peas is the important crop grown. Gaps in seed and fertilizers used in different crops have been examined. The use of these inputs is higher in almost all crops in all blocks.

Agro climatic conditions in the district are best suited for production of temperate fruits like apple, almond, walnut, apricot etc which have great demand in the national and international markets. Existing status of horticulture have been given. Detail horticultural schemes have been presented.

After agriculture and horticulture, animal husbandry forms the third major activity of the Kinnaur's economy. Block wise livestock population and development schemes have been given. Status and potential for cultured fisheries have been given. Poultry, rabbitary, sericulture and mushroom activities did not find significant place in this district. However, medicinal and aromatic plants available in the natural conditions have large potential for development. The scope of development of bee keeping is also presented. Production and disposal of farm products for marketing has been presented. Agricultural infrastructure like regulated markets, institutions and human resources required for the development of agriculture, horticulture, animal husbandry and fishery have been given.

Yield rates of different foodgrains have been examined. Area production of vegetable crops, fruit crops has been given.

Based on present physical, institutional and human resources of the district, a detail SWOT analysis based on block as well as Panchayat level information for improving agriculture and allied sectors has been presented. Issues emerging out of SWOT analysis and sectoral growth drivers have been discussed in the report.

Map of district Kinnaur showing selected Panchayats and Ground water user map has been given. While describing the district, its location and position have not been supplemented with relevant maps. Similarly, while describing soils, the different maps like land capability, soil classes etc have not been given and properly described. Relevant Maps must be included & Soil capability and classes should be described in details.

Have the relevant problems and constraints of the district been highlighted and discussed?

Development of agriculture sector – Problems and interventions regarding land development has been highlighted. Land sliding due to steep slopes, forest degradation, overgrazing of pastures and monkey menace are the common problems for land development. The physical estimates of farmers' land to be improved by leveling, raising contour bunding &

terracing, reclamation through check dam etc are given in the report. Details regarding soil type and degradation of soil etc have been given.

Yield gaps in different crops examined by taking the difference in average yield and yield obtained by the progressive farmers and at experimental farms. Gaps in existing and required farm machinery, market yards have been analyzed. Reasons for such gaps have been discussed.

The details regarding number of schemes, villages, population and area covered, beneficiaries, total budget and additional funds required have been presented.

Varietal and technological problems and interventions for various field and plantation crops, livestock diseases, feed and fodder and cultured fisheries in the blocks have been discussed. Research / extension gaps through yield gaps have been discussed. Interventions in bridging these gaps have been given. Researchable issues have been discussed.

Has the long-term (15 years) and short term action plan (5years) been discussed in the plan? Are they in accordance with the resources and constraints of the district?

Annual budget allocation among major components of agricultural sectors has been proposed under the DAP. Each component has been further divided into sub components/interventions. Details regarding number of villages covered, beneficiaries, potential area and funds required in various new schemes for agricultural sectors in all the 3 blocks have been presented in the C-DAP. However, Scheme wise annual physical targets are missing.

Expected growth in different sectors has been estimated. Projected sectoral growth in different sub-sectors based upon existing and potential production has been estimated. However, delivery mechanism is missing.

The plan has been largely formulated using the outcomes of vision statement and SWOT analysis. Sectoral outlays and yearly allocations have been divided into various schemes pertaining to interventions for improving the sustainability of crop production systems,

infrastructural development, natural resource conservation, etc. New schemes for different blocks have been spelt out. These schemes pertain to agriculture & rural development and irrigation development. The schemes for agriculture, horticulture and animal husbandry have been prioritized for each of the blocks.

The plan has not been divided into actionable annual projects. However, the prioritization of schemes has been presented. Prioritization of activities is an important aspect of development. Activities/parameters that have relatively greater potential and are able to generate results in a relatively short period should be given priority. Subsequent activities should be placed accordingly. The sensitivity of particular activities/programme should have been analyzed.

Major issues missing from the plan that you may wish to see included

Flexibility in planning is also important. The plan should be adaptable to needs that arise in implementation. Monitoring is essential for smooth functioning of planned programmes. Appropriate and suitable performance indicators should have been developed for monitoring. The performance of each selected indicator should be evaluated each year and plan modified accordingly. There is no mention about the Monitoring & Evaluation of this plan. Monitoring & Evaluation aspect should have been included along with financial requirements.

Sheep and goats rearing is the major activity in large parts of the district. Due to snowfall during winter shepherds move to low hills alongwith their flock in search of pastures and they faced various problems during migration. These problems pertain to non availability of medical facilities for human and animals, facility of PDS, conflicts with local population over grazing and utilization of scarce natural resources, security of human and animals etc. These aspects should have been highlighted in the plan. Agricultural credit and risk management issues should have been discussed in the report.

Scope for public private partnership approach (such as agro tourism, input supply, marketing, processing etc), strengthening of self help groups, voluntary institutions

participation, market linkage programmes, improvement of logistics and transport network, export potentiality/forward linkage are missing in the report.

Some comments/suggestions on the data base and methodology used in the plan preparation

Methodology has been presented in chapter introduction. Under this Chapter, background, data & methods & limitations have been covered. Data has been collected at Panchayat level and not at Village level. The plan should have been based on the actual data available with various government agencies. Hence, there should be a separate section on methodology, data base, and planning process followed for clear understanding.

There is no mention about the Objectives of the preparation of this plan. However, the authors have mentioned about the limitations of preparation of this DAP. The introduction must include the Objectives of preparation of the plan so that entire emphasis while formulating the plan should have been given keeping in view the objectives.

The data on land use, cropping pattern etc used for planning is based on field surveys, whereas comprehensive data on these aspects is available with revenue department. There is significant variation in two types of data. The published comprehensive data could have been used for planning. The report has not clearly spelt out the basis and methods adopted for calculation of projections, cost estimates etc. The physical targets are more important from development perspective and should have been invariably added in addition to financial allocations. The authors should have also included the references, if referred to.

**REVIEW REPORT OF THE
COMPREHENSIVE DISTRICT AGRICULTURAL PLAN (C-
DAP)
– MEERUT DISTRICT**

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The review report has been prepared by following the *Manual for Preparation of Comprehensive District Agriculture Plan (C-DAP)* issued by the Planning Commission, GoI and the *Parameters for Review of C-DAP s* formulated by the sub-committee constituted for this purpose. An expert committee for the district has been constituted to provide their assessment of the plan. A short field visit to few villages has also been undertaken to assess the degree of participation of the officials and people at the ground level in the C-DAP preparation and their perceptions about the C-DAP exercise. The final review report has been prepared by integrating our own reading of the plan document with that of experts' assessment and the information gathered from the village visits. The report has been organized as follows. First the main review report is presented in which the technical and the constitutional aspects of the C-DAP are examined. This is followed by the essence of the experts' reports. This is followed by an appendix in which details of the village visits and detailed reports of the experts are provided.

The expert team constituted for Meerut district is as follows

1. Dr. J.P. Singh
(former) Deputy Director
Agricultural economics Research Centre
University of Delhi
Delhi – 110 007

2. Shri Shrikant Pandey
Agricultural Officer (rtd)
163 B/2K
Soha Batiya Bagh
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C-DAP REVIEW MAIN REPORT - MEERUT

I) Technical Aspects of the Plan

S.No	Aspect	Status in the C-DAP
1	Introduction including methodology	Methodology is presented but it is not clear that the same has actually been followed. The PRA analysis details are not presented anywhere in the report
2	<p>General description of the district</p> <p style="padding-left: 40px;">xiv) Introduction (maps, general statistics, crops/activities in the district)</p> <p style="padding-left: 40px;">xv) Location and geographical units</p> <p style="padding-left: 40px;">xvi) Demographic profile</p> <p style="padding-left: 40px;">xvii) Topography and agro-climatic features</p> <p style="padding-left: 40px;">xviii) Landuse pattern and structure of landholdings</p> <p style="padding-left: 40px;">xix) Irrigation and groundwater</p> <p style="padding-left: 40px;">xx) District income and intra-district differentials</p>	<p>Provided but details of the blocks are needed</p> <p>Provided</p> <p>Provided district-level details but block-level details are also needed. Also, literacy details are needed to make an assessment of skill profile of the district</p> <p>Provided</p> <p>District-level details are provided but block level details are needed</p> <p>District-level details are provided but block level details are needed</p> <p>Not worked out</p>
3	Whether vision document prepared?	A vision statement is given but no vision document, spanning 10-15 years, has been prepared
4	If yes, does it follow the pattern laid down in fig 2.1, page 10 (C-DAP manual). Specifically, does it give reasons for backwardness, development issues and medium term perspective of the plan	Reasons for backwardness are given but they are not based any systematic analysis.

S.No	Aspect	Status in the C-DAP
5	<p>Detailed analysis of agricultural sector – whether undertaken</p> <ul style="list-style-type: none"> xxix) Landuse xxx) Soil xxxii) Irrigation xxxiii) Seeds xxxiiii) Inputs – Fertilizer, pesticides, power xxxv) Farm mechanization xxxvi) Credit xxxvii) Marketing and storage xxxviii) Cropping pattern xxxix) Yield analysis xxxix) Income analysis of the farmers xl) Existing gaps in <ul style="list-style-type: none"> a) Yield b) Input supply like seeds, fertilizer, irrigation, pesticides, power etc c) Credit d) Storage and marketing e) Research & extension xli) Recommended interventions to address issues in xii) xlii) Researchable issues 	<p>Sub-district level analysis of the agriculture sector is completely missing. Detailed block-level analysis of these issues need to be undertaken and the programs proposed in the plan should flow out of such an analysis</p>
S.No	Aspect	Status in the C-DAP
6	<p>Allied Sectors</p> <ul style="list-style-type: none"> xxi) Horticulture 	<p>Programs for horticulture in the plan but no</p>

	<p>xxii) Sericulture</p> <p>xxiii) Dairy and animal husbandry</p> <p>xxiv) Poultry</p> <p>xxv) Fisheries development</p> <p>xxvi) Watershed development</p> <p>xxvii) Social forestry</p> <p>xxviii) Agro-based rural development potential (rural industries, sugar mills, rice mills, jelly/jam making units, food processing units</p> <p>xxix) Constraints and yield gaps in i) to iv) and viii</p> <p>xxx) Recommended interventions to address ix)</p>	<p>detailed analysis of area, production and yield trends at the block level for horticulture crops</p> <p>Programs for dairy sector but no systematic analysis of dairy production trends and discussion of constraints</p> <p>No systematic analysis of the fisheries sector but programs included in the plan</p> <p>No analysis of the potential for agro-based rural industries</p>
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S.No	Aspect	Status in the C-DAP
7	Special programmes/Projects in the district ix) Agriculture-related (i to viii of point 5) x) Allied sector related (i to viii of point 6) xi) Rural infrastructure related xii) Any other	No mention of any existing programs/schemes in the main plan. There are a few programs listed in the appendix at the end without integrating them with the programs proposed in the plan
8	SWOT analysis - 'S' Potential for development from points 5 and 6 - 'W' yield gapes and constraints outlined in points 5 and 6 - 'O' programs from point 7 - 'T' institutional and financial constraints	No integrated SWOT analysis of the district taking into consideration agriculture and allied sectors in totality.
9	Was the plan formulated using vision statement and SWOT analysis?	Vision statement looks <i>ad-hoc</i> and SWOT analysis is missing
10	Has the plan been divided into actionable annual projects?	Yes, but given the absence of a comprehensive vision document and SWOT analysis, this is of limited relevance.
11	Have delivery mechanisms and expected outcomes in terms of quantifiable targets been spelt out?	No proper delivery mechanism and feasible delivery targets have been spelt out
12	Has a mechanism for monitoring & evaluation been spelt out?	No
13	Is the functional and financial convergence been worked out to attain plan objectives	Few convergence models have been worked out in the appendix

S.No	Aspect	Status in the C-DAP
14	Any other comments on <ul style="list-style-type: none"> - data adequacy and gaps - needs and constraints of the district missing from C-DAP 	<ol style="list-style-type: none"> 1. A detailed analysis of cropwise trends in production and yield at the block level is needed 2. Similar analysis for each of the sub-components listed under 5 and 6 needed 3. A comprehensive vision document needs to be prepared based on the above analysis, supplemented by inputs from interactions with ground level officials, people and their representatives. 4. An integrated SWOT analysis of the district needs to be carried out 5. The plan should emerge by mapping the vision statement onto the SWOT analysis 6. Delivery mechanism and feasible targets need to be fixed 7. Monitoring mechanism needs to be spelt out 8. Functional and financial convergence needs to be worked out in order to dovetail the existing programs with the newly proposed programs in the plan to serve the district's priorities 9. The progression towards village level plans needs to be expedited. This assumes importance in view of the fact that some of the important problems of the villages at a distance of barely 60 Kms from Meerut visited by us do not find even a mention in the plan (detailed village information is given in Appendix).

II) Constitutional Aspects

S.No	Aspect	Status in the C-DAP
1	At the district level - Are DPC s formed or not?	Yes, although this needs to be mentioned explicitly in the document
2	If yes, is C-DAP approved by the DPC?	Yes
3	If not, what is the mechanism of the approval of C-DAP	-
4	At the sub-district level vii) are VAPU and BAPU in existence? viii) If not, what is the consultative process followed below the district level? ix) Extent of awareness about C-DAP among departments, administrators, people and politicians of the area (at village, block and district level)	No In the introductory chapter of the plan, PRA surveys at the Nyay Panchayat level and block level are mentioned. But in our field visits* none of the respondents have claimed awareness of C-DAP exercise although quite a few were aware of ATMA and its initiatives Satisfactory among the district level officials. No awareness among people or the PR functionaries in the villages.

* Our visits were limited to Hastinapur block and its villages

Essence of Experts' Comments

- 1) A more rigorous data collection from the field is needed. The primary data supposedly collected through Participatory Rural Appraisal method at Nyay Panchayat and block level have not been presented anywhere in the report. Thus, it is difficult to assess the plan with respect to grass-root realities.

- 2) At the state level, one point data have been presented on most of the aspects, But, the profile does not include many important aspects of agriculture. Even the cropping pattern and changes in it overtime, and growth rate of agriculture and its sub-sectors are not presented. Nor is there any information on irrigation potential of major and medium irrigation. The information on problems of marketing of agricultural produce, prices received by farmers vis-à-vis MSP, quantity of food grains procured and trend in prices of agriculture inputs are not discussed. The problems faced by sugar industry, the most important industry in the state and sugarcane growing farmers and reasons for declining sugarcane area in the state do not find a mention.

- 3) At the district level, block wise data on area under paddy and wheat have been provided, but not for other crops. information on fertility status of soil, average yield of milk per cow (cross bred and indigenous) and buffalo, status of food processing industry, profitability of different crops, marketing problems and facilities, area under green fodder, profitability of organic versus non organic farming, integrated nutrient management and integrated pest management, economic returns in horticulture, animal husbandry and dairying, fisheries and piggery farming are not presented. The information on these aspects was necessary for justification of proposed programmes for their development. For example, unless one knows that there is sulphur deficiency in the soil, why should a programme for its removal be undertaken. In the absence of above mentioned information, a proper understanding of the problems in agriculture of Meerut district remains incomplete and assessment of the proposed programmes for different sub- sectors becomes very difficult.

- 4) It may be said that the constraints to and potential for the development of individual sub-sectors of agriculture have not been assessed on the basis of rigorous analysis of available information at the grass root level, but are based on general perceptions. The preparation of plans and proposed programmers for development of sub-sectors appear to be based on

assumed norms obtained from elsewhere. Even a simple thing like yield gap has not been defined.

- 5) A very mechanical exercise has been done to make provision for liberal subsidies for different components in all the sub-sectors of agriculture. From the point of view of planning, income distribution aspect needs to be kept in mind. As far as possible, a programme should benefit marginal and small farmers and weaker section of the society. Marketing is the weakest link in agricultural development in Uttar Pradesh. Therefore improvement in marketing facilities for the produce of all the sub- sectors of agriculture sector is greatly needed. Last but not the least, there is a dire need to strengthen, build up and improve the governance system in Uttar Pradesh.
- 6) Overall, it may be said that the resource endowment profile of the district is not complete for preparation of a sound district plan. The plan is also not able to highlight and discuss the relevant problems and constraints of the district. Only short- term action plan has been prepared and discussed, not the long-term plan.

APPENDIX

Information Gathered from Village Visits

S.No	Question	Response		
		Village 1	Village 2	Village 3
1	Which government programs are operative in your village?	Anganwadi, NREGA, KVK activities	Anganwadi, NREGA	Anganwadi, NREGA
2	Which government programs <u>relating to agriculture</u> are operative in your village?	ATMA, KVK	KVK	KVK
3	Are you aware of the C-DAP s	No	No	No
4	Have you or anyone in your village been consulted at any stage of C-DAP preparation?	No	No	No
5	If yes, what were your suggestions and were they incorporated?	-	-	-
5	Has any official discussed the C-DAP after it has been prepared?	No	No	No
6	Have you ever asked authorities about a village agriculture plan?	No	No	No

S.No	Question	Response		
7	What is your cropping pattern	Kharif – sugarcane, paddy, green fodder Rabi – wheat, rapeseed & mustard	Kharif – sugarcane, paddy Rabi – wheat, rapeseed & mustard	Kharif – sugarcane, paddy Rabi – wheat, rapeseed & mustard, Urad
9	Soil – problems and suggestions	Problems: No soil health cards issued. Soil test report reaches very late, sometimes after one and half years Suggestions: Soil health cards to be issued and timely reports be made available	Problems: No soil health cards issued. Soil test report reaches very late. Suggestions: Soil health cards to be issued and timely reports be made available	Problems: No soil health cards issued. Suggestions: Soil health cards to be issued and regular soil tests be done
10	Seeds – problems and suggestions	Problems: Mostly available with KVK but seed quality is poor. HYV seeds are not available. Timely availability of appropriate variety of seeds is vital Suggestions: Timely availability of appropriate variety seed	Problems: Quality seed and timely availability Suggestions: Ensuring timely availability of appropriate variety of seed	Problem: Timely availability and quality seed Suggestions: Ensuring timely availability of appropriate variety of seed

S.No	Question	Response		
11	Irrigation – problems and suggestions	<p>Problems: For tubewells, major problems is that power is available only for 4-5 hrs a day and the voltage is very low. For canals, silting is a major problem. Also, the RCC lining of canals has blocked seepage and hindered groundwater recharge.</p> <p>Suggestions: Assured power supply with enough voltage. Desilting of canals, using NREGA labour if needed. Canal lining with bricks on the sides and leaving it kucha at the bottom.</p>	<p>Similar problems and suggestions as village 1. Some cleaning work was undertaken under Ram Ganga Pariyojna. Similar work should be carried out under NREGA</p>	<p>Problems: Power supply, silting of the canal and non-availability of water to tail-end users</p> <p>Suggestions: Desilting and cleaning of canal, regular power supply and ensuring equity in canal water use</p>
	Fertilizer – problems and suggestions	No major problem	No major problem. But suggestion that the subsidy be given directly to farmer which is now perceived by farmers to be going mainly to industry	No major problem

S.No	Question	Response		
	Farm machinery – problems and suggestions	<p>Problems: Government approved contractor charges higher price and quality is sub-standard</p> <p>Suggestions: Subsidy should be given directly to the farmer and allow him to purchase from the market</p>	-	Mainly from the market. No major problems encountered.
	Credit – problems and suggestions	No major problems. KCC s are issued to most farmers	KCC s are issued to most farmers. Main credit sources are cooperative societies, district cooperative banks. But differential rate of interest and corruption are some problems facing credit supply	KCC s are issued to most farmers. No major problems.
	Marketing – problems and suggestions	<p>Problems: Main problem is that the FCI officials do not purchase wheat at MSP but offer a price lower by about Rs 30/- per qtl.. For paddy, the daily mandi price variation is a lot.</p> <p>Suggestions: MSP should be enforced and farmers should be given MSP. Internet connectivity should be provided to the village to know the prevailing mandi price in advance</p>	<p>Problem: FCI offered price is much below the MSP.</p> <p>Suggestion: Enforcement of MSP</p>	Problems: In case of wheat, same problems with lower MSP as in other two villages. Suggestions: MSP implementation

S.No	Question	Response		
	Organic farming – problems and suggestions	<p>Problems: Vermi composting is very expensive i.e. Rs 20,000 per hectare per year as compared to Rs 4,000/- per year for inorganic fertilizers.</p> <p>Also, dedicated labour is required</p> <p>Suggestions: A subsidy of 80% needs to be provided to promote vermin composting. Also, a village level compost plant needs to be set up to reap scale economies of labour use</p>	-	Not attempted
	Dairying – problems and suggestions	<p>Problems: Non-availability of veterinary doctors in the village and long distances to travel for artificial insemination. Also no facility for checking milk quality in the village</p> <p>Suggestions: Availability veterinary doctors and AI facilities in the vicinity.</p>	<p>Problems: Non-availability of veterinary doctors in the village and long distances AI facilities. No facility for milk quality checking in the village</p> <p>Suggestions: Availability veterinary doctors and AI facilities in the vicinity.</p>	Similar problems as other two villages

S.No	Question	Response		
	Floriculture – problems and suggestions	-	-	<p>Problems: Due to poor transportation, floriculture, which has potential in the village, is not being taken up. There is no storage facility for floriculture</p> <p>Suggestions: Improvement of pucca road network and cold storage facilities at the village level</p>
	Specific pressing problems and suggestions	Erratic power supply, non-implementation of MSP etc.	<p>Problems: Wild animals from nearby jungles destroy mustard crop. Paddy and wheat also suffer from this. This led to about 50%-75% loss in the crop yields.</p> <p>Very adverse teacher pupil ratio of 1:300 in the village school</p> <p>Road infrastructure is very poor leading to marketing problems</p> <p>Suggestions: Waiver from ‘Wildlife Protection Act’, which can allow some measures against wild animals. Also iron fencing around the forest is needed</p> <p>More teachers and</p>	<p>Wild animals from nearby jungles</p> <p>Poor roads and storage facilities</p> <p>Erratic power supply</p>

			pucca roads in the village urgently needed.	
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**Experts' Detailed Comments on the
Comprehensive District Agricultural Plan
(C-DAP)
- Meerut District**

The main purpose of preparing a District Agricultural Plan (DAP) is to take planning to the lowest administrative unit and base its preparation on the grass root realities of resource endowment, constraints to and potential for agricultural development. The Plan under review will have to be looked into from these angles. The Plan for Meerut district has been divided into 8 chapters. All the relevant sub-sectors of agriculture sector have been included for planning purposes.

The introductory chapter presents a brief account of Rastriya Krishi Vikas Yojana (RKVY) and its basic features. The methodology for preparing DAP, as presented in the chapter , appears to be alright. However, a more rigorous data collection from the field would have been better. But, even the primary data collected through Participatory Rural Appraisal method at Nyay Panchyat and block level have not been presented anywhere in the report. Thus, it is difficult to assess the plan with respect to grass-root realities.

The agricultural profile of Uttar Pradesh, presented in chapter two, is quite exhaustive, but general. Generally, one point data have been presented on most of the aspects, But, the profile does not include many important aspects of agriculture. Even the cropping pattern and changes in it overtime, and growth rate of agriculture and its sub-sectors are not presented. Nor is there any information on irrigation potential of major and medium irrigation. There are reports that canal irrigation works are not being maintained properly in the state and area irrigated under them has declined over the period of time. The information on availability of electricity for agriculture is missing. Today, its availability is a most important factor for agriculture development. Tube well irrigation is largely dependent on it. The state tube wells are not working properly due to poor maintenance, while private tube wells/pump sets work at a much lower capacity due to extremely poor availability of electricity. The information on problems of marketing of agricultural produce, prices received by farmers vis-à-vis MSP, quantity of food grains procured and trend in prices of agriculture inputs are not discussed. The problems faced by sugar industry, the most important industry in the state and sugarcane growing farmers and reasons for declining sugarcane area in the state do not find a mention. The information on road infrastructure, marketing infrastructure, agricultural machinery, credit facilities, micro finance, problems relating to availability of quality seeds and chemical fertilizers etc. are also missing. The working of agricultural research and extension system has not been highlighted. The

district profile, presented in chapter three, has followed almost similar pattern, barring some exceptions.

In the case of the profile of Meerut district, block wise data on area under paddy and wheat have been provided, but not for other crops. Data on productivity and production of important crops are presented. One point data on the area under horticultural crops are presented. Data on consumption of fertilizers are also presented. But, information on fertility status of soil, average yield of milk per cow (cross bred and indigenous) and buffaloe, status of food processing industry, profitability of different crops, marketing problems and facilities, area under green fodder, profitability of organic versus non organic farming, integrated nutrient management and integrated pest management, economic returns in horticulture, animal husbandry and dairying, fisheries and piggery farming are not presented. The information on these aspects were necessary for justification of proposed programmes for their development. For example, unless one knows that there is sulphur deficiency in the soil, why should a programme for its removal be undertaken. Most of these information could have been obtained from the Agricultural University of the region and ICAR research centers. Published research papers could have also been used. In the absence of above mentioned information, a proper understanding of the problems in agriculture of Meerut district remains incomplete and assessment of the proposed programmes for different sub- sectors becomes very difficult.

Keeping the above factors in view, it may be said that the constraints to and potential for the development of individual sub-sectors of agriculture have not been assessed on the basis of rigorous analysis of available information at the grass root level, but are based on general perceptions. The preparation of plans and proposed programmers for development of sub-sectors appear to be based on assumed norms obtained from somewhere , may be from the state plan, an indication to which is available in the foreword where it is mentioned that one hundred and thirteen programs have been identified for farm sector under RKVY for Uttar Pradesh. The basis for working out these norms are no where mentioned. Even a simple thing like yield gap has no where been defined. Since the proposed major programmes for raising production in different sub-sectors of agriculture in Meerut district are not based on the analysis of facts for the district, they can fit to any district in the state with the adjustment for the

variation in area and the number of blocks. It may, however, be mentioned that all proposed programmes under different sub-sectors are important for agricultural development of the district, but some of them may not be the best ones as they have not emerged from the ground reality of the district. All the proposed programmes have large share of subsidy. There are no logical ground to justify subsidy on each one of them. Since a large number of programmes have been proposed under different sub-sectors, it is not possible to comment on every one of them. Therefore, only broad comments are made here.

A very mechanical exercise has been done to make provision for liberal subsidies for different components in all the sub-sectors of agriculture. In many cases, it is unnecessary for popularizing a programme. It must be kept in mind that unless a programme creates its own genuine demand, it cannot be successful in long run simply by pushing through the supply side mechanism. Our past experience can be a guide to this. The Japanese method of rice cultivation in the Fifties and the Intensive Agriculture District Programme and Intensive Agriculture Area Programme in the Sixties were not successful because they were simply based on intensive use of inputs without having commensurate returns. But, when the High Yielding Varieties Programme (HYVP) was started, it spread like wild fire because returns were much higher compared to the cost. Thus, the demand factor for sustainability of a programme is very important. Secondly, from the point of view of planning, income distribution aspect needs to be kept in mind. As far as possible, a programme should benefit marginal and small farmers and weaker section of the society. If it benefits only large farmers, then the subsidy part under the programme should be minimum. The provision of subsidy for commercial dairy farms and commercial poultry farms, which may largely be availed by large farmers, should not be high. Thirdly, if certain aspects of agriculture is already popular with farmers, there is no need to provide subsidy for them. The proposal for popularisation of green fodder will come in this category. The cultivation of green fodder crops has been quite popular in western Uttar Pradesh of which Meerut is an important district. However, supply of good quality seeds at reasonable prices may be made available. Fourthly, leakages in subsidies provided for current inputs is much higher than those provided for infrastructure development. Therefore, the latter should get preference in provision of subsidies over the former. Fifthly, it must be realized that marketing is the weakest link in agricultural development. Therefore improvement in marketing facilities for the produce of all the sub- sectors of agriculture sector is greatly needed. Finally, there is a dire need to strengthen, build up and improve

the governance system in Uttar Pradesh. Unless this is done, it will be difficult to make a programme successful.

There is no doubt that the proposed programmes for different sub-sectors need to be encouraged and implemented, but simply not through the provision of subsidies, but on the basis of their genuine utility and implementability in the long run. The farmers need to be convinced about the benefit of a programme and the way it needs to be implemented. The provision of subsidy should be the last resort in implementation of a programme and it should reach to the genuine person. However, there are areas where subsidies become necessary, particularly for popularizing a new programme. Some programmes do not need subsidy, but need market for their produce. The cultivation of medicinal and aromatic plants would come in this category. A programme for horticulture development may not be adopted unless farmers are convinced that it is more profitable than crop production. A subsidy on demonstration may be quite justified, if done properly. In the case of soil management and land use projects, the renovation and strengthening of soil and fertilizer testing laboratories should get enough support, but the other projects under the head should be treated at a different footing. Similarly, in the case of organic farming, farmers should be properly educated about its advantages, but instead of pushing it through on the basis of subsidies, arrangements should be made regarding certification and marketing of its products. This would provide a greater incentive in the long run than financial support for a couple of years. For the crops that are grown in Meerut district, is it necessary to propose precision farming technique at the cost of Rs. 40,000 per hectare? Similar proposal for other sub-sectors have been made, which may have to be examined. All the proposals for the development of post harvest facilities and making infrastructure should be welcome. Similarly infrastructure development for animal husbandry and dairy, fisheries and piggery should get encouragement.

In the last, it may be said that the resource endowment profile of the district is not complete for preparation of a sound district plan. The report is also not able to highlight and discuss the relevant problems and constraints of the district. Only short-term action plan has been prepared and discussed, not the long-term plan. The major issues missing from the plan and comments on data base and methodology used have been given earlier.

**REVIEW REPORT OF THE
COMPREHENSIVE DISTRICT AGRICULTURAL PLAN (C-
DAP)
– NORTH TRIPURA DISTRICT**



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The review report has been prepared by following the *Manual for Preparation of Comprehensive District Agriculture Plan (C-DAP)* issued by the Planning Commission, GoI and the *Parameters for Review of C-DAP s* formulated by the sub-committee constituted for this purpose. A field visit to few villages has also been undertaken to assess the degree of participation of the officials and people at the ground level in the C-DAP preparation and their perceptions about the C-DAP exercise. The final review report has been prepared by integrating our own reading of the plan document with the information gathered from the village visits. The report has been organized as follows. First the main review report is presented in which the technical and the constitutional aspects of the C-DAP are examined. This is followed by important observations / suggestions based on our analysis.

- G. Ananda Vadivelu

C-DAP Review Report North Tripura District (2008-12)

The Report is divided into three sections. In the first section, we review the CDAP Report of North Tripura district, in the second section, we present the insights from the field visit. In the third section, we present our recommendations.

1. Review of the Planning process and the CDAP Report for North Tripura District

The field visit involving with a variety of stakeholders reveals that there has been a satisfactory process of participation of a variety of people leading up to the preparation of the District Agriculture Plan. The machinery of the Agriculture Department and various line departments is good and very energetic in implementing various projects. However, possibly due to the paucity of the time, the effort involved in the village level, in terms of the consultative process could not lead to a very structured report, possibly due to time constraints and lack of support from certain qualified people to support the Department staff in the preparation of the report. However, scope exists for the improvement of the report with the support of certain experts who could be engaged for the revision of the district agriculture plans and the drafting of the State Agriculture plan.

The report, therefore has largely been a data collation exercise. There has been no serious attempt made to critically look at the data from the view point of critically inferring the implications in terms of the development strategy ahead. There is need for a coherent chapterisation schema to be developed and a template needs to be prepared.

Some other comments are: (a) The report has grammatical errors; (b) The report does not have page numbers (c) There is no mention of the author/agency that has prepared this report. (d) There are no table numbers (e) The source of the data is not mentioned. (e) No time period is mentioned; for example in the table on area production and productivity of different crops (average of five years) - The time period of the five years is not mentioned. (f) There is no contents page

Sl. No	Aspect	Status in the C-DAP
1	Introduction including methodology	<p>The introduction is largely a data collation exercise and does not provide a picture of the overall problems existing in the agricultural scenario in the district.</p> <p>There is no mention of the methodology, but one can infer from the report that it is largely only a data collation exercise.</p>
2	<p>General description of the district</p> <p>(i) Introduction (maps, general statistics, crops/activities in the district)</p> <p>(ii) Location and geographical units</p> <p>(iii) Demographic profile</p> <p>(iv) Topography and agro-climatic features</p> <p>(v) Landuse pattern and structure of landholdings</p> <p>(vi) Irrigation and groundwater</p> <p>(vii) District income and intra-district differentials</p>	<p>Detailed information and maps are available, but no discussion on crops is available in this section of the report, but available in a later section (4.5-major crops and varieties in the district)</p> <p>Information and the pie-chart are available.</p> <p>Information and charts are available.</p> <p>Brief information and chart is available</p> <p>Brief information and chart is available</p> <p>Brief information and chart is available. Detailed discussion and analysis of the potentialities of development of irrigation with groundwater sources vis-à-vis other options needs to be critically analysed.</p> <p>No data or discussion on this issue</p>
3	Whether vision document prepared?	No
4	If yes, does it follow the pattern laid down in fig 2.1, page 10 (C-DAP manual), Specifically, does it give reasons for backwardness, development issues and medium term perspective of the plan	NA
5	Detailed analysis of agricultural sector-whether undertaken	

Sl. No	Aspect	Status in the C-DAP
	<p>(i) Landuse</p> <p>(ii) Soil</p> <p>(iii) Irrigation</p> <p>(iv) Seeds</p> <p>(v) Inputs-Fertiliser, pesticides, power</p> <p>(vi) Farm mechanization</p> <p>(vii) Credit</p> <p>(viii) Marketing and storage</p> <p>(ix) Cropping pattern</p>	<p>Detailed information on land capability has been provided. Brief information on landholding pattern is provided, but there is no information on land use pattern. There is a need for great analysis of the land use data in the context of developing a future plan of action, particularly pertaining to increasing the irrigated area in the state and identifying particular land-use categories where there should be a greater effort to increase crop productivity.</p> <p>There is detailed discussion of Soils and Maps have been provided.</p> <p>The data on area brought under irrigation through surface and groundwater sources is provided, along with information on the ongoing lift irrigation schemes, but there is no discussion on the ultimate irrigation potential from these sources.</p> <p>Detail information has been provided.</p> <p>Block wise data on utilisation of fertilizers is provided, but there is need for a detailed discussion in the context of the shortage of fertilizers and the implications in terms of crop production and crop productivity.</p> <p>Pesticides- There is no discussion.</p> <p>Brief information on the implements for mechanization distributed between 2006-07 to 2008-09 has been provided.</p> <p>Information is not available.</p> <p>Information is not available.</p> <p>Very brief information on major crops and varieties are provided in section 4.5, but there is no data or discussion pertaining to the cropping pattern. A detailed discussion on this has to take place, particularly in the context of the predominant crop being rice and the need for diversification. This issue was also brought</p>

Sl. No	Aspect	Status in the C-DAP
6	<p>up by the Tripura Chief Minister in his address to the Panchayat Chairman and Members on 11th September 2009.</p> <p>(x) Yield analysis</p> <p>(xi) Income analysis of the farmers</p> <p>(xii) Existing gaps in</p> <p style="padding-left: 20px;">a. Yield</p> <p style="padding-left: 20px;">b. Input supply like seeds, fertilizer, irrigation, pesticides, power, etc.</p> <p style="padding-left: 20px;">c. Credit</p> <p style="padding-left: 20px;">d. Storage and marketing</p> <p style="padding-left: 20px;">e. Research and extension</p> <p>(xiii) Recommended interventions to address issues in xii</p> <p>(xiv) Researchable issues</p> <p>Allied Sectors</p> <p style="padding-left: 20px;">i) Horticulture</p> <p style="padding-left: 20px;">ii) Sericulture</p> <p style="padding-left: 20px;">iii) Dairy and animal husbandry</p> <p style="padding-left: 20px;">iv) Poultry</p> <p style="padding-left: 20px;">v) Fisheries development</p>	<p>No discussion available.</p> <p>Discussion available in section 5.7 and the Agri. Credit requirement for the 11th five year plan has been identified.</p> <p>No discussion available.</p> <p>No discussion available.</p> <p>Not applicable as no information or discussion of issues in points in (iii)</p> <p>No discussion available.</p> <p>Detailed information on area under horticulture and ongoing programmes under technology mission is provided.</p> <p>No discussion</p> <p>Information is provided.</p> <p>No discussion</p> <p>Brief information provided. More discussion</p>

Sl. No	Aspect	Status in the C-DAP
	<ul style="list-style-type: none"> <li data-bbox="268 421 534 488">vi) Watershed development <li data-bbox="268 645 555 678">vii) Social forestry <li data-bbox="268 712 671 925">viii) Agro-based rural development potential (rural industries, sugar mills, rice mills, jelly/jam making units, food processing units. <li data-bbox="268 969 671 1037">ix) Constraints and yield gaps in i) to iv) and viii <li data-bbox="268 1081 671 1182">x) Recommended interventions to address ix) 	<p data-bbox="699 275 1315 376">on the potentialities for further development, processing and marketing needs to be discussed.</p> <p data-bbox="699 421 1315 566">Information on only the schemes under which the projects are implemented. No analysis of the past experience and strategies for the future.</p> <p data-bbox="699 633 1010 667">No discussion available.</p> <p data-bbox="699 712 1315 891">There is only mention of fruit and vegetable processing, floriculture and mushroom cultivation in Section 5.2, but there is no discussion on the current status and future strategies pertaining to this.</p> <p data-bbox="699 969 1010 1003">No discussion available.</p> <p data-bbox="699 1081 1010 1115">No discussion available.</p>
7	<p data-bbox="220 1227 671 1294">Special Programmes/Projects in the district</p> <ul style="list-style-type: none"> <li data-bbox="268 1339 611 1406">i) Agriculture-related (i to vii of point 5) <li data-bbox="268 1451 671 1518">ii) Allied sector related (i to vii of point 6) <li data-bbox="268 1518 671 1585">iii) Rural Infrastructure related <li data-bbox="268 1630 499 1664">iv) Any other 	<p data-bbox="699 1417 1315 1485">Needs to be revised after a coherent analysis of the collected data and problems are identified</p>
8	<p data-bbox="220 1675 427 1709">SWOT analysis</p> <ul style="list-style-type: none"> <li data-bbox="268 1742 671 1843">- 'S' Potential for development from points 5 and 6 <li data-bbox="268 1854 671 1955">- 'W' yield gaps and constraints outlined in points 5 and 6 <li data-bbox="268 1966 663 2000">- 'O' programs from point 7 <li data-bbox="268 2011 671 2033">- 'T' institutional and 	<p data-bbox="699 1675 1315 1742">Needs to be revised after careful inference of the collated data and inferences are drawn.</p>

Sl. No	Aspect	Status in the C-DAP
	financial constraints	
9	Was the plan formulated using vision statement and SWOT analysis?	Not clear
10	Has the plan been divided into actionable annual projects?	Yes
11	Have delivery mechanisms and expected outcomes in terms of quantifiable targets been spelt out?	Yes
12	Has a mechanism for monitoring and evaluation been spelt out?	No
13	Is the functional and financial convergence has been worked out to attain plan objectives	Not clear
14	Any other comments on -data adequacy and gaps - needs and constraints of the district missing from C-DAP	There is a need for a careful and patient analysis of the data that has been collated so far and succinctly draw out inferences in terms of the problems being faced in the region. The development plan should flow from the identification of the critical problems being faced in the district.

II) Constitutional Aspects

Sl. No	Aspect	Status in the C-DAP
1	At the district level- Are DPCs formed or not?	Yes
2	If yes, is C-DAP approved by the DPC?	Yes
3	If not, what is the mechanism of the approval of the C-DAP	
4	At the sub-district level (i) are VAPU and BAPU in existence? (ii) If not, what is the consultative process followed below the district level?	NO No village and block level units were constituted, There was only the consultative process of holding gramsabhas at the village level. This were compiled to form the Block Agriculture plan and a

Sl. No	Aspect	Status in the C-DAP
	(iii) Extent of awareness about C-DAP among departments, administrators, people and politicians of the village (at village, block and district level)	<p>collocation of these lead to the district plan. Further these plans were ratified by the Panchayat Samithi and the Standing Committee of the Zilla Parishad. We were given documentary proof of the resolutions pertaining to Panesagar block of North Tripura district</p> <p>Awareness and participation in CDAP is high among government officials, and the average farmer also knows about meeting held for developing the CDAP.</p> <p><i>We present evidence on this in the next section.</i></p>

2. Perceptions from the field visit

The field visit was undertaken from 9th to 10th September, 2009 by a two member team from the Institute of Economic Growth, Delhi. The visit involved an interaction with the Director of Agriculture in Agaratala, Officials from Line Department at the district and sub-district level, farmers, women SHG members and other key informants (ZP members, etc). Three Villages in Kamatala block (Ragna, Pratek Roy, and Jaipura) and Three villages in Panesagar block (Radhapur, Ramnagar, Deocherra) were visited.

Discussion with the Director of Agriculture, Tripura

According to Dr. S.N. Sen, Director of Agriculture, Tripura (since 21/9/2007), the prime constraint on development is the availability of land for agriculture as more than n 60% of area is under forests¹. There is border fencing on three sides of the state. Brick kilns have come up; there has been boon in

¹ Under the forest act, he states that there has been a pioneering approach of allocating forest land to tribals- 96,000 ha allocated. But various constrains are imposed on the Soil and Water Conservation practices that these farmers can adopt on these lands.

infrastructure development and therefore in the last 25 years, 30,000 ha of agricultural land have been lost. The main panacea he states is the increasing agricultural productivity.

For increasing agricultural productivity, the following steps have been taken.

(a) System of Rice Intensification (SRI)- The plan is to extent 70,000 ha under SRI and so far 38,000 ha have been completed. The labour operation for SRI is also being undertaken through NREGA and the farmers expressed the view that productivity has increased due to SRI.

(b) Integrated Crop Management practices

© Short and Medium duration varieties of rice to accommodate second kharif

The Cropping intensity at present was 165%.

Preparation of the CDAP Plan

For the preparation of the CDAP Plan, the Director of Agriculture stated that he went to the sub-division at the district level, spoke to SHGs, Panchayat members². A 'wish list' was prepared at the village level and VLWCs were involved and all line departments were involved in the preparation of the plan. When queried on whether the department would be interested in revising the district plans, he stated that " We have no time to revise district plans as we are concentrating in preparing the state agriculture plan".

Convergence

Regarding convergence, it was stated that this task was being undertaken by the State level Nodal agency and a CEO has been adopted. To improve convergence there have been intensive meetings between departments and RKVY and the Chief Secretary is also apparently involved. When we queried the officials at the sub-district level on how they ensure convergence on the planning and implementation of projects at the village level, that this task of bringing about convergence is carried out by the Panchayat Samithi at the district level.

Village visit and discussion with line department officials

Awareness about CDAP at the village level

² He stated that there was 'lot of involvement' by Panchayat members.

The interaction with farmers revealed that the farmers generally were aware about the CDAP and the meetings held in the village leading upto the preparation of the village action plans. There was also good awareness about the various Government programmes that were being implemented in the village. However, the awareness in one village in Panisagar block was low. There was a positive impression about the role of the Panchayat in the agriculture development work being undertaken in the village. The farmers also expressed positive opinion about the benefits from SRI and labour created under NREGS. They were interested in more labour being generated under NREGS.

Perception on the ongoing government programmes and role of the Panchayat

There is very good awareness of the government programmes (IAY, NREGA, SSA, ASHA, ATMA) that are being implemented in the village and there is a positive feeling of the impact of these projects. There is a positive impression about the role of the Panchayat in undertaking development work. In many villages the farmers could identify a few of the Panchayat members.

Food Processing

We interacted with SHG members of a well-functioning women's SHG (Ganga Self Help Group, Ramnagar) which had put in great efforts in initiating and sustaining a food processing unit (producing juice, jams, pickles, etc). The SHG members expressed the view that further support was required to procure a juice processing machine. Four Such food processing units are functioning in Panesagar block.

Opinion of Key Informant- Zilla Parishad Member and former Vice President of ZP

The Government is targeting to achieve food self-sufficiency by 2020. Productivity has increased, but deficiency is still there. While earlier there was a deficiency of 28,000 tonnes in food grains, the deficiency now is 7,000 tonnes. The area under irrigation is less, only 40%. The following needs to be done.

- (a) Increase area under irrigation through groundwater extraction
- (b) New ponds should be constructed.
- © For land preparation and weeding, funds should be available under NREGS
- (d) There is problem of perishability of horticultural crops and Cold Storage facilities are required. To cater to the produce of 30 to 35 villages, an investment of 1.5 crores is required and there are 182 villages in North Tripura district.

- (e) At least 50% of the fertilizer requirement should be supplied by the government at a subsidised rate
- (f) To overcome the problem of shortage of fertilizers, a fertilizer factory is required
- (g) More budgetary support is required for the agricultural sector.

Discussion with line department officials

Discussion was held with line department official from various departments (Agriculture, Horticulture, Animal Husbandry, Fisheries). The agriculture Superintendent of Panesagar block explained that there was an elaborate process leading to the preparation of the Block Agriculture Plan. The circle village level worker conducted the gram Sabha organized with specific agenda of discussing RKYVP. The needs of the villages were ascertained. The sector officer was also present and it was mandatory that he attend all the meetings (The official was responsible for 10-12 villages). The Agriculture Superintendent also used to attend some of the village meeting and generally used to go a couple of hours after the meeting when the plans were being finalized at the village and apparently, he visited 27 villages. The draft Block Agriculture Plan was prepared after compiling all the village plans. There has been no initiative to start Village Action Plan Units (VAPU) or Block Action Plan Units (BAPU). The consultative process through the Grama Sabha lead to the village action plan being developed while a consolidation of such reports lead to the preparation of the Block Action Plan. The preparation of the Block Agriculture Plan was a very intensive exercise in Panesagar Block³ which includes compilation of significant secondary data.

When queried on whether, they would be interested in revising the district agriculture plans, the officials stated that they were not interested in again going to the village to discuss these issues as the villagers would not be interested in further discussing this and budgetary support was required to start the implementation work. Regarding the mechanism to ensure convergence, among line departments it was stated that this was being done by the Panchayat Samithi.

3. Recommendations

³ The Panesagar Block Agriculture Plan consists of 218 pages

The main goal of future intervention strategies should be to ensure food self-sufficiency so that the dependence on other states for food grains is reduced and eliminated as soon as possible.

(a) Need to diversify cropping pattern and move away from the predominant rice domination of the cropping pattern

(b) Possibilities of increased use of groundwater resources should be explored, but with caution regarding the dangers of over-exploitation and fluoride problem, which might occur. Possibilities for micro irrigation needs to be explored and possible agencies who could help the state government are – IDE, Jain Irrigation, etc.

© Support needs to be extended to upscale the activities of SHGs involved in food processing and more such initiatives need to be started. The marketing and possibilities profitability of such initiatives need to be assessed.

(d) There is need for strengthening the animal husbandry sector and the expertise of organizations such as BAIF could be explored. The need for support in veterinary services was a requirement, farmers stated.

(e) The Central and state government need to explore the funding possibilities for initiating cold storage facility in the state. The economic viability of such cold storage facilities needs to be studied.

(f) There is lack of convergence between the activities of the forest and agriculture department. Since more than 60% of the land is under forests and there is an organic link between the forests and the agricultural activities undertaken in the region, there needs to be formal mechanisms to develop convergence in the context of examining the options for water harvesting and other activities. The state level nodal agency need's to examine this issue and suitable directives could be initiated with the Panchayat samithi's. But crucially the officials of both the forest and agriculture department should have discussions on whether synergies are required and if so, how they could be developed and what are the concrete steps that need to be taken.

(g) The Central and State Government needs to seriously examine the possibility of starting a Fertilizer factory in the state.

(h) The State Level Nodal Agency needs to play a very strong and pro-active role in examining this issues and developing practical steps for aiding the planning process and ensure convergence at various levels.

Recommendation Pertaining to the North Tripura District Agricultural Plan and the preparation of the State Agriculture Plan

We recommend that the Agriculture Department should utilise the services of an Agricultural Economist based in Tripura university (http://www.tripurauniversity.in/web-profile_updated_Economics.htm) to critically examine the district reports prepared in the state in the light of the comments that we have offered for the North Tripura district report. Another option would be to enlist the services of Dr. Malabika Dasgupta who is based in Kolkotta. She has contributed significantly by examining issues related to shifting cultivation and other issues in Tripura.

(http://www.caluniv.ac.in/academic/centre_urban_economic_studies.htm)

The chosen Consultant could also examine the possibilities of improving the report, within reasonable time constraints and also facilitate the preparation of the state level agriculture plan, which is being drafted. The Consultant also has to examine the literature on the agrarian development in the region based on the contribution by research/extension work by Agricultural University in the region/Tripura University and others who have examined issues. Additionally, the Planning Cell of the Agriculture Department could recruit an Agriculture Economist who would play a long-term role for developing the plans for the state as a whole. Since there is very good official machinery in place, which is energetic for implementing various projects, this energies could be effectively used by the Consultant/s to involve participatory plans in discussion with line department officials at the district and sub-district levels.

We suggest that after the completion of the process regarding the revising of the district plans are completed, the necessary funds from RKVY could be provided. For suitable programmes/projects, an upfront contribution of 10% (either cash or kind or both) could be collected to create a greater ownership feeling among the people.

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