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Agricultural Development through Kannadian Canal - Link Project in Tirunelveli district of Tamilnadu

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Alleviation of rural poverty has been a major objective of the government social sector programmes. This is being emphasized in successive five year plans. Ministry of Rural development therefore launched various programmes of bringing about rapid and sustainable development as well as social economic transformation in rural India. The variability of rainfall leading to rainfall deficiency and water shortage causes droughts. In India the erratic nature of the monsoon with long dry spells and high temperature is responsible for creating such drought conditions. The Drought Prone Area Programme (DPAP) is an integrated watershed development programme with the prime objective of promoting the overall economic development of watershed community by optimally utilizing natural resources. Works in 299 watersheds taken up during 1999-2000 are in progress. The State share outlay under "Assistance to DRDA under DPAP" will be in the order of Rs.1100.00 lakhs during 2003-04. An amount of Rs.369.78 lakhs has been provided under the head Community Waste Land Development Programme for the year 2003-04.

The proposed paper deals with the Drought Prone area Programme in India, particularly in Tirunelveli district of Tamilnadu, Origin, funding agency, implementing agency, details of drought prone area programme scheme, Eligibility criteria, Cost, Funding Pattern and duration of the project, Physical Performance of the DPAP, **Geography of Tirunelveli,** Kannadian Canal - Link Project details and performance of the scheme, conclusion respectively. Drought Prone Area in Indian Case;

The variability of rainfall leading to rainfall deficiency and water shortage causes droughts. In India the erratic nature of the monsoon with long dry spells and high temperature is responsible for creating such drought conditions. On an average, one in every five years is a drought year. However, its intensity varies from year to year. It is generally more frequent in areas of low (below 60 cm) and variable (variability above 40 per cent) rainfall where irrigation facilities are not well developed. In India there are following three well defined tracts which come under drought prone areas:

(a) Desert and Semi-desert Region-this is a rectangular area whose one side is formed by a line joining Ahmadabad to Kanpur and another from Kanpur to Jalandhar. The area includes Rajasthan, Gujarat, and western Madhya Pradesh, south-western

Uttar Pradesh, Punjab and Haryana covering about 0.6 million sq. km. of the country's territory. The rainfall in this region is less than 7.5 cm and at places less than 4 cm. The severity of droughts is greater in those areas where irrigational facilities are not well developed. The Indira Gandhi Canal Project and the Sardar Sarovar Project (on the Narmada River) will prove beneficial to this area in minimizing the effects of the droughts.

(b) Rain shadow Areas of the Western Ghats-This is the region situated on the leeward side of the Sahyadris in about 300 km wide belt stretching from Jalgaon (Maharashtra) to Chitoor (Andhra Pradesh) and occupying an area of about 0.37 million sq. km.

(c) Other Areas-these are in the form of scattered pockets in different parts of the country covering about 1 lakh sq. km of area. These include (i) Kalahandi region of Orissa, (ii) Purulia district of West Bengal, (iii) Mirzapur plateau, (iv) Palamau region, (v) Coimbatore area, and (vi) Tirunelveli district, south of Vaigai River.

The Irrigation Commission (1972) has identified two types of drought areas in the country:

(a) Drought Prone Areas-in these areas the rainfall is 25% variable from the normal. Following four areas have been included in this group-(i) Gujarat, Rajasthan; adjoin areas of Punjab, Haryana, western Uttar Pradesh, and western Madhya Pradesh;

(ii) Central Maharashtra, inner Karnataka, Rayalseema, southern Telangana and some parts of Tamil Nadu;

(iii) north-eastern Bihar, south-eastern Uttar Pradesh; and (iv) Purulia district of West Bengal.

Details of Drought Prone Area Programme Scheme

Particulars	Description
Name of the Scheme	Drought Prone Area Programme Scheme
Sponsored by	Both: Central & State Government
Funding Pattern	75% Central Government and 25% State Government
Ministry/Department	Rural development
Description	: The main features of this scheme are: Area development programmes to be implemented exclusively on watershed basis, programme activities to be confined to the identified watershed of about 500 hectares and to be executed on a project basis spanning a period of four to five years, watershed project to be, as far as possible, co-terminus with village boundary, direct participation of the people in planning and development of watershed areas and maintenance of assets in the post project period. Panchayati Raj Institutions have the right to monitor and review the programme at district, block and village levels.
Beneficiaries	Community,
Benefits	
Eligibility criteria	Families living in drought prone area.
How to Avail	Deputy Commissioner/District Rural Development Agency Office of the concerned district is to be approached for the scheme.

Validity of the Scheme

Introduced On	01 / 04 / 1973
Valid Up to	31 / 03 / 2013

Objective of the Study

The proposed paper is consisting the following main objective are as;

1. To know the details of Drought Prone Area Programme, progress and Implementation procedure In India.

2. To analysis the DPAP in Tirunelveli District in Tamilnadu and kannadian canal project details.

3. To study the working progress and the allocation of fund in the programme in Tirunelveli district

Methodology of the Study

The proposed research study has prepared by the researcher only the secondary sources like the government annual reports, Ministry of Rural Development, District Rural development Agency, Tirunelveli, and Joint Director of statistics in Tirunelveli district respectively.

About the DRDA

District Rural Development Agency (DRDA) has traditionally been the principal organ at the District level to oversee the implementation of the anti-poverty programmes of the Ministry of Rural Development. Created originally for implementation of Integrated Rural Development Programme (IRDP), the DRDAs were subsequently entrusted with a number of programmes, both of the Central and State Governments. Since inception, the administrative costs of the DRDA (District Rural Development Agency) were met by setting aside a part of the allocations for each programme. Of late, the number of programmes had increased and several programmes have been restructured with a view to making them more effective. While an indicative staffing structure was provided to the DRDAs, experience showed that there was no uniformity in the staffing structure. It is in this context that a new centrally sponsored scheme - DRDA Administration- has been introduced from 1st April, 1999 based on the recommendations of an inter-ministerial committee known as Shankar Committee. The new scheme replaces the earlier practice of allocating percentage of programme funds to the administrative costs.

Objective

The objective of the scheme of DRDA (District Rural Development Agency) Administration is to strengthen the DRDAs and to make them more professional and effective. Under the scheme, DRDA is visualized as specialized agency capable of managing anti-poverty programmes of the Ministry on the one hand and effectively relate these to the overall efforts of poverty eradication in the district on the other.

Funding

The funding pattern of the programme will be in the ratio of 75:25 between the Centre and the States.

Strategy

The DRDA will continue to watch over and ensure effective utilization of the funds intended for anti-poverty programmes. It will need to develop distinctive capabilities for poverty eradication. It will perform tasks which are different from Panchayati Raj Institutions and line departments. The DRDAs would deal only with the anti-poverty programmes of the Ministry of Rural Development. If DRDAs are to be entrusted with programmes of other Ministries or those of the State Governments, it must be ensured that these have a definite anti-poverty focus. In respect of such States where DRDA does not have a separate identity and separate accounts.

About the DPAP

Objective

The basic objective of the programme is to minimise the adverse effects of drought on production of crops and livestock and productivity of land, water and human resources ultimately leading to drought proofing of the affected areas. The programme also aims to promote overall economic development and improving the socio-economic conditions of the resource poor and disadvantaged sections inhabiting the programme areas.

Coverage

Up to 1994-95, DPAP was in operation in 627 blocks of 96 districts in 13 States.

Prof. C.H. Hanumanntha Rao Committee recommended:

- Exclusion of 245 existing blocks;
- Including of 384 new blocks; and
- Transfer of 64 blocks from DPAP to DDP.

The Government did not agreed for exclusion of existing DDP blocks. However, inclusion of new blocks and transfer of blocks from DPAP to DDP was agreed to. Thus, from 1995-96 total blocks covered under DPAP became 947. These 947 blocks were in 164 districts in 13 States. Subsequently, with the re-organization of States, Districts and Blocks, the programme is now covered in 972 blocks of 183 districts in 16 States. These States are Andhra Pradesh,

Bihar, Chattisgarh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttaranchal and West Bengal. The identified dry sub humid area under the programme is about 7.46 lakh sqkms (74.6 million has.).

Cost, Funding Pattern and duration of the project

The prevailing cost for a prescribed watershed project of 500 ha. is Rs. 30.00 lakh i.e. Rs. 6,000 per hectare. Central and State Government in the ratio of 75 : 25 share the cost. 80% (85% under Hariyali) of the cost is devoted towards watershed development activities and rest 20% (15% under Hariyali) for community organization, training and administrative jobs. The central share is released in 7 installments (5 insts. under Hariyali) by following a prescribed procedure. The project is to be completed over a period of five years.

[From inception till March 1999, the programme allocation was being shared on 50:50 basis between the Centre and the State Governments. This was revised to 75:25 with effect from the projects sanctioned from 1.4.1999 onwards In respect of ongoing projects that were sanctioned prior to April 1999, the old funding pattern continues. Prior to 1.4.2001, the cost of treatment ranged between Rs. 3,000 to Rs. 5,000 per hectare. Effective from 1.4.2001, a uniform rate of treatment @ Rs.6000 per hectare has been prescribed.]

Physical Performance of the DPAP

Since the adoption of watershed approach in the year 1995-96 till 2005-2006, 24363 projects have been sanctioned to treat 121.82 lakh hectares of drought prone area. The year-wise details of projects sanctioned from 1995-96 to 2005-06 are at Annexure 2. The project period of 6089 projects sanctioned from 1995-96 to 1998-99 has however been over; of these 4325 projects are deemed complete and funding stopped to 1764 projects. Among 18274 projects sanctioned from 1999-2000 to 2005-06, 1392 projects are deemed complete and 16882 projects are ongoing as on 31.3.2006. Thus, a total of 5717 projects are deemed complete, funding has been stopped to 1764 projects and 16882 projects are ongoing.

The Union Government sanction block wise new projects every year to programme districts taking in to consideration primarily the DPAP coverage, performance of the on-going projects, capacity to absorb new projects and annual budget outlay etc. During the year 2005-06, 3000 new watershed projects have been sanctioned under DPAP to treat an area of

15 lakh hectares at a total cost of Rs. 900.00 crore over a period of five years. The Central share is Rs. 675 crore out of which the amount of first installment i.e Rs. 101.25 crore has been released. These projects are being implemented in accordance with the provisions contained in the Guidelines for Hariyali.

Treatment of Area

The estimated area treated under DPAP is given below:- Under Sect oral approach: From inception till 31.3.1995 - 57.14 lakh ha. Under Watershed approach:

Year	Area treated In lakh hectares
1995-96	5.95
1996-97	5.50
1997-98	4.54
1998-99	3.65
1999-2000	3.66
2000-2001	7.50
2001-2002	5.44
2002-2003	6.56
2003-2004	7.35
2004-2005	7.49
2005-2006	8.10
Total	65.74

Financial performance

A. The total amount committed for these 24363 projects (sanctioned from 1995-96-2005-06) is Rs. 6469.20 crores of which Rs. 4772.46 crores is the central share. From 1995-96 to 2005-2006, an amount of Rs. 2095.33 crore has been released. The year-wise details of funds released to the programme States since 1995-96 to 2005-2006 are at Annexure 3. The Budget outlay for 2006-07 is Rs.360 crore against which Rs.11.84 crore has been utilized upto 17.5.2006.

B. A review indicating the progress made in implementation of 24363 DPAP Projects sanctioned

from 1995-96 till 2005-06, in terms of amount that should have been claimed by the programme States and amount actually claimed (as on31.03.2006) indicates that financial performance of this programme for all the States is about 73.81%.

Profile of Tirunelveli

Tirunelveli district is surrounded by the State of Kerala, Thoothukudi and Kanniyakumari and Gulf of Mannar and the districts of Virudhunagar. Tirunelveli District covers the 6,823sq.km.area.

Rivers in Tirunelveli District:

Main Rivers is Tamiraparani. Other rivers in this district area : Pachaiyar, Korayar, Chittar, Aluthakanniar, Kottamalaiyaru,Kothaiyaru , Rajasingiyaru, Aintharuviar, Jambunathi, Ramanathi, Gadananathi, Manimuthar, Nambiyar, Karunaiyar , Hanumannathi, Karuppanathi, Gundar, Mottaiyar, Vedamaliyaru, Mundhal Odai

Latitude of Tirunelveli city : 08 deg 8’ and 09 deg 23’

Longitude of Tirunelveli city : 77 deg 09’ and 77 deg 54’

About Tirunelveli

On September 1, 1790 (Tirunelveli Day), Tirunelveli District was formed by the East India Company (British). In 1990 parts of Tirunelveli district was segregated and made as Ramanathapuram and Virudhunagar districts.The district is known for its paddy fields. The name 'Tiru-Nel-Veli' owes to a Hindu mythological story where Lord Shiva protected the paddy ('nel') by creating a fence ('veli').

Mineral Resources in Tirunelveli District

Limestone : It is available at several places in this district but manily near Ramayanpatti, Talaiyuthu and Padmaneri.

Sulphides : It is available at Pattankadu and Munradaippu

Ilmenite - Garnet Sands : limenite sands are noticed near Vijayapatti and Kuttankuli.

Revenue divisions in Tirunelveli District

In Tirunelveli district there are 3 Revenue divisions, Tirunelveli, Cheranmahadevi, Tenkasi

Taluks in Tirunelveli District

In Tirunelveli district there are 11 Taluks Ambasamudram, Nanguneri, Radhapuram, Alangulam, Veerakeralampudur, Sivagiri, Tenkasi, Tirunelveli, Palayamkottai, Sankarankovil, Shenkottai

Cheranmahadevi is a wonderful village in Tirunelveli district, Tamilnadu - India; it is also spelt as Seranmahadevi, Cheranmadevi or Cherai. The Village has numerous temples, hence called as the Temple City and is located on the right side of the river Thamirabarani. This website or blog is about Cheranmahadevi and u will find interesting stuffs about this village here.

Progress of DPAP in kannadian cannal

The change of guard in the State should not spoil the plan to link Tamiraparani, Karumeniyar and Nambiyar to take surplus water to dry regions of Tirunelveli and Tuticorin districts, feel farmers in this region.

Work on this ambitious programme, designed by the State government on a massive outlay of Rs.369 crore to take the excess water of the perennial river Tamiraparani to the rain-shadow regions of Nanguneri and Radhapuram taluks in Tirunelveli district and Sattankulam taluk in Tuticorin district, began on February 21, 2009.

After it was estimated that 13,758 million cubic feet (mcft) of water was wasted during every rainy season, a plan to excavate a flood carrier canal from the existing Kannadian Channel at Vellankuzhi near Cheranmahadevi in Tirunelveli district to the drought-prone areas of Nanguneri, Thisaiyanvilai, Radhapuram and Sattankulam by interlinking Tamiraparani, Karumeniyar and Nambiyar rivers was designed a couple of years ago. As per the plan, connecting channels would be dug between the flood carrier channel originating from the Tamiraparani and Karumeniyar (5,350 metre), the Nambiyar (6,700 metre) and the Manimuthar (2,500 metre). Two check-dams at Melodai and Keezhodai on the Sattankulam-Nazareth stretch would be constructed.

From Kannadiyan Channel, the Tamiraparani's surplus water of only 2,765 mcft would be taken to irrigation tanks. Once this project, to be executed in 72 packages, is completed, the surplus water of the Tamiraparani will irrigate 5,059 hectares (12,500 acre), quench the thirst of several lakhs of population and dramatically improve the groundwater table and provide succour to crops in this rain-shadow region.

To sustain the momentum of the work, the State government, after releasing Rs. 50 crore for preliminary works, allocated Rs. 126 crore in the 2010-2011 Budget presented in the TamilNadu Assembly.

"It was Ms. Jayalalithaa who made a clarion call when she was in power between 2001 and 2006 for linking all rivers in the State to judiciously utilize the wasted floodwaters for useful purposes such as improving the groundwater table and irrigation. We appeal to the State government to allot adequate funds to sustain the momentum of this project," said M. Dominic, a farmer from Seelathikulam, said.

Kannadian Canal - Link Project

The hefty allocation of Rs.126 crore in the State Budget to maintain the tempo of the ongoing work on linking Tamirabharani –Karumaeniyar - Nambiyar Rivers has triggered wild jubilation among the farmers and the public of Nanguneri and Radhapuram taluks in the district, the prime beneficiary regions.

The project, designed by the State Government on a massive outlay of Rs. 369 crore to take the excess water of the perennial river to the rain shadow regions of Nanguneri and Radhapuram taluks in Tirunelveli district and Sattankulam taluk in Tuticorin district, commenced on February 21, 2009 as Chief Minister M. Karunanidhi laid the foundation stone for this ambitious scheme through teleconferencing even as he had been admitted to Sri Ramachandra Medical College Hospital.

While laying foundation stone for this first of its kind project in Tamil Nadu, Mr. arunanidhi, while recalling his address in the National Integration Council meeting held at New Delhi in 2007, then said interlinking of rivers flowing within the State could be the appropriate and effective solution to the growing demand for irrigation water, as connecting inter-State rivers might consume more time owing to disputes and difference of opinions.

Subsequently, special attention is being given to complete the project without flaws and within the stipulated period. After it was estimated that 13,758 million cubic feet (mcft) was

wasted during every rainy season, it was decided to excavate a flood carrier canal from the existing Kannadian Channel at Vellankuzhi near Cheranmahadevi in Tirunelveli district to the drought prone area of Nanguneri, Thisaiyanvilai, Radhapuram and Sattankulam by interlinking Tamirabharani, Karumeniyar and Nambiyar rivers.

From Kannadiyan Channel, the Tamirabharani's surplus water of only 2,765 mcft would be taken to the irrigation tanks at Suviseshapuram, Pattancherry, ijayaachchampaadu, Singachaavadi, Subramaniyapuram, Puthukkualm, Kalkulam, Nanthankulam, Yerumaikulam, Avichchaankulam, Aayankulampadugai, Aanaikudipadugai, Ilaikulam, Kadakulam, Puththantharuvai and M.L. Thaeri.

Connecting channels

Connecting channels would be dug between the flood carrier channel and the Karumaeniyar (5,350metre), theNambiyar (6,700metre) andtheManimuthar (2,500metre).Two check-dams at Maelodai and Keezhodai onthe Sattankulam- Nazareth stretch would be constructed.

Once this Rs. 369 crore-project, to be executed in 72 packages, is completed, the surplus water of the Tamirabharani will irrigate 5,059 hectares (12,500 acre), quench the thirst of several lakhs of population and dramatically improve the groundwater table and provide succour to the crops of this rain shadow region.

In the first package, contract for excavating the channel for 20 km has been awarded to a few companies which are working round-the-clock as they have to complete it before 30 months from the date of commencement.

Now, the allocation of Rs. 126 crore to sustain the pace of the project has triggered jubilation among the farmers. It is expected River-linking work to be over by 2014

Conclusion

The government of India has taken tremendous efforts for reducing the poverty measures especially the rural development programmes.The Drought Prone area programme is very familiar on various states in India like tamilmadu.In Tirunelveli district has been applying the above programme through the DRDA.After implementing the DPAP the irrigation capacity has increased and the poverty of the people has declined through agricultural and allied activities.

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