

8. SCIENCE, TECHNOLOGY AND ENVIRONMENT

8.1 SCIENTIFIC RESEARCH

Outlay - ` 4.10 Cr

8.1.1 Science and Technology plays a vital role in improving productivity, conserving resources and protecting the environment. Punjab State Council for Science and Technology (PSCST) is the nodal agency for promoting environment improvement, natural resource conservation and popularization. PSCST demonstrated concept of energy efficiency in Institutional and Government buildings in the State. As a result, Pushpa Gujral Science City (PGSC) has been awarded 2nd National Energy Conservation Award.

8.1.2 PSCST prepared state level Strategy and Action Plan on Climate Change (SAPCC) as per national framework covering eight Missions given in the National Action Plan on Climate Change (NAPCC). The document has been submitted to the Ministry of Environment & Forests, Government of India for approval.

8.1.3 Three national level institutes-National Agri-food Biotechnology Institute (NABI), Bio Processing Unit (BPU) and Institute of Nano Science and Technology (INST) have been set up with the assistance of Government of India in Knowledge City, Mohali. These institutes have already started working from the transit campus at Mohali. The Indian School of Business (ISB) has also started functioning in the Knowledge City, Mohali on 70 acres land. The first session was started from July, 2012.

8.1.4 Against an expenditure of ` 11.82 Cr incurred during 11th Five Year Plan, an outlay of ` 39.44 Cr is provided for 12th Five Year Plan. An expenditure of ` 1.97 Cr and ` 1.00 Cr has been incurred during 2012-13 and 2013-14 respectively. An outlay of ` 4.10 Cr has been provided for the Annual Plan 2014-15 for the following schemes:-

Ongoing Schemes:

State Funded Schemes

SR- 01 Pushpa Gujral Science City at Kapurthala (60:40)

Outlay - ` 2.00 Cr

8.1.5 Science City has been set up at Kapurthala. The state has already completed Phase-I with the expenditure of ` 100.00 Cr (GOI share ` 70.00 Cr + GOP share ` 30.00 Cr). Ministry of Culture has approved the development of Science City (Phase-II) with the ratio of 60:40 (Gol:SS). The main works under Phase-II are construction of Virtual Experience Gallery, 5 D Theatre and Gallery based on Emerging Technology. Against an expenditure of ` 7.64 Cr incurred during 11th Five Year Plan, an outlay of ` 9.00 Cr is provided for 12th Five Year Plan. An outlay of ` 2.00 Cr has been provided for the Annual Plan 2014-15 against the outlay of ` 1.00 Cr for 2013-14.

SR-03 Bio-Technology Incubator- Agri Food Testing Laboratories (earlier-Grant in aid to Bio-Technology Incubator)

Outlay - ` 1.00 Cr

8.1.6 Punjab Biotechnology Incubator- a State Govt. Undertaking, an integral part of the Knowledge City being developed in SAS Nagar, Mohali is operational for the Testing, Certification of Agri, Food, Environmental and allied sectors since May, 2007 in a rented transit premises. CMM has approved to transfer 1 acre of land free of cost to Punjab Biotechnology Incubator (PBTI) in the Knowledge City, Sector 81, Mohali. A laboratory for testing of Rice/Basmati Rice is being set up.

8.1.7 Under this scheme, against an expenditure of ` 3.85 Cr incurred during 11th Five Year Plan, an outlay of ` 1.00 Cr is provided for the 12th Five Year Plan. An expenditure of ` 0.50 Cr was incurred during Annual Plan 2012-13. An outlay of ` 1.00 Cr has been provided for the Annual Plan 2014-15.

SR-07 Subsidy to students of government schools visiting the Science City.

Outlay - ` 1.00 Cr

8.1.8 In order to develop scientific temper among the students and to encourage them to take up careers in science & technology, Government of India and Punjab Government has jointly set up Pushpa Gujral Science City at

Kapurthala, Punjab. The Science City has been receiving a good number of students mainly from private schools.

8.1.9 To encourage the students from government schools to visit the Science City and to ensure that they are not deprived of enjoying the facilities set up in the Science City by the government, it is proposed that at least 50000 students from government schools should visit the Science City every year. The approximate cost of visit per student is ₹ 300/-. As the students can't afford this, therefore, subsidy is being given to the students of government schools.

8.1.10 An outlay of ₹ 11.50 Cr is provided for 12th Five Year Plan. An expenditure of ₹ 1.00 Cr each has been incurred during Annual Plan 2012-13 and 2013-14. An outlay of ₹ 1.00 Cr has been provided for the Annual Plan 2014-15.

New Schemes

SR-11 Assessment of level of fluoride and subsequent oxidative stress in pregnant SC women from fluoride endemic zone of Punjab and its prevention and management

Outlay - ₹ 0.05 Cr

8.1.11 The scheme has been included in Annual Plan 2014-15 exclusively for SC women population in the State. The main objectives of the scheme are to assess fluoride levels among pregnant SC women of fluoride endemic Faridkot district of Punjab, to enroll SC women with risk fluoride levels for assessment and sensitize SC women regarding causative factors and preventive measure of fluorosis through organizing awareness programmes and development resource material. An outlay of ₹ 0.05 Cr has been provided for the Annual Plan 2014-15.

SR-12 Socio-economic development of Scheduled Caste Communities through technology interventions in horticulture and related ventures

Outlay - ₹ 0.05 Cr

8.1.12 The scheme has been included in Annual Plan 2014-15 exclusively for SCs. The main objectives of the scheme are - Identification of SC communities interested to engage in horticulture & allied venture, creating mass awareness among SC communities on the technological interventions proposed for their socio-economic development, provide vocational and hands-on training to SC

beneficiaries in selected villages for entrepreneurship generation and creating the forward and backward linkages. An outlay of ` 0.05 Cr has been provided for the Annual Plan 2014-15.

8.2 INFORMATION TECHNOLOGY

8.2.1 For the encouragement of IT enabled services (ITES) industry appropriate measures would be taken for developing skills and knowhow of youth of Punjab in the desired fields or areas for suitable placement within the State itself. Mohali and Amritsar will be developed as IT and Knowledge Hubs. 1700 acre of land has already been acquired in Mohali for developing IT city and is ready for allotment. Software Technology Parks of India is establishing STPI facilities and State-of the Art incubation facility at Amritsar. The state govt. has already transferred 3 acre of land costing ` 3 Cr for establishment of this institute.

8.2.2 An outlay of ` 20.00 Cr has been provided for 12th Five Year Plan. The following schemes are being implemented by the Department:-

IT-01	Development & Implementation of IT Parks, Knowledge Park and IT Enabled Services Industry
IT-02	Creation of Departmental Infrastructure
IT-03	Development of Human Resources in the field of IT/ITES
IT-04	Promotion of IT/Knowledge Industry in the State

No outlay is provided in the Annual Plan 2014-15.

8.3 GOVERNANCE REFORMS

Outlay - ` 96.75 Cr

8.3.1 The State Government in the Department of Governance Reforms has been integrating the mandate of governance reforms and e-Governance in all the departments to form the basis for inclusive growth and development in the State. The 1st Punjab Governance Reforms Commission was set up in 2009 with a view to reduce the trust deficit and a sense of alienation that generally

prevails among the common citizens vis a vis the government functioning. The State Government in the subsequent phase of administrative reforms has set up 2nd Punjab Governance Reforms Commission in March,2012 to look at civil and criminal justice system, procedure for industrial development, regulatory framework for NRI Affairs, Health and Medical Education, Education, Technical Education, Employment and Fiscal Management.

8.3.2 The State Government has established Punjab Right to Service Commission, as per Section 12 of the PRTS Act-2011 to look after the task of effective implementation of the Act and to make suggestions to the state government for ensuring better delivery of services. 80 more services are included, taking the total to 149 services under the ambit of RTS Act. The Commission will also hear revision applications against the orders of 2nd Appellate Authority and has been empowered to take action against erring employees for not delivering the service within stipulated time.

8.3.3 The State Wide Area Network (PAWAN) has already been made functional with 194 Point of Presence (POPs), connecting 374 offices. It is envisaged to connect horizontal offices in a phased manner. For the convenience of general public, all 2112 Common Service Centres (CSC) have also been opened for extending the government services at the village level.

8.3.4 The important computerization projects are either implemented or underway of implementation having made big impact on service delivery and such projects include e-Sarkar to automate the core functioning of the state government, smart card based driving license, online registration of vehicles at dealer premises, computerization of land records and computerization of VAT information system etc

8.3.5 Against the expenditure of ` 16.11 Cr in the 11th Plan, an outlay of ` 202.61 Cr is provided for 12th Five Year Plan. An expenditure of ` 12.30 Cr and ` 17.17 Cr has been incurred during 2012-13 and 2013-14 respectively. An outlay of ` 96.75 Cr is provided for 2014-15.

8.3.6 An outlay of ` 3443.08 Cr is provided for 12th Five Year Plan for computerization under schemes of various sub-heads. Against an expenditure of ` 344.71 Cr incurred during Annual Plan 2013-14, an outlay of ` 499.38 Cr has been provided for Annual Plan 2014-15, detail of which is at Annexure 'A'.

Ongoing Schemes

State Funded Schemes

GR 01 Introduction of computerization in Punjab Government offices, semi-government offices including maintenance and up-gradation of the systems

Outlay – ` 23.00 Cr

8.3.7 Under the scheme, the Department of Governance Reforms has been/will be connecting various offices at four tiers – State, District, Sub-division, Block levels with PAWAN network for spearheading e-Governance in the entire State. The process is already underway for inter connecting 139 offices situated in Chandigarh and Mohali with PAWAN network. The offices in the district or below level would be/are being covered in a phased manner on a case-to-case basis with the allocated funds under the scheme.

8.3.8 As many departments are introducing e-Governance, temporary/ mini data centre is being augmented at network centre in MGSIPA, Chandigarh till State Data Centre (SDC) is made operational at Mohali. The implementation of State Portal, State Service Delivery Gateway (SSDG) is in progress for delivery of 32 services of 8 departments online and funds will be released for infrastructure to be created in these departments at various levels.

8.3.9 On pilot basis, e-office project is being implemented in Mansa District for improving the basic function of district administration. After success, it will be replicated in other districts in a phased manner. Wherever required, funds will be utilized for implementing e-governance projects in the government departments. The Governance Reforms Department will take necessary steps for bringing departments in a progressive manner for introduction of e-procurement to process tenders online. The funds will also be utilized for procurement of hardware/ laptop/ networking/system software etc., broadband charges, annual maintenance charges (AMC) of existing infrastructure etc. Against the expenditure of ` 4.66 Cr in the 11th plan, an outlay of ` 102.75 Cr is provided for 12th Five Year Plan. An expenditure of ` 3.14 Cr and ` 4.07 Cr has been incurred during 2012-13 and 2013-14 respectively. An outlay of ` 23.00 Cr is provided for 2014-15.

GR 03 ICT infrastructure & construction of building for e-Governance projects.

Outlay - ` 3.50 Cr

8.3.10 Under the scheme, State Data Centre (SDC) building is being constructed through PSIEC at half acre plot in Phase-VIII, Mohali. ` 4.80 Cr have already been spent on the civil work of basement, ground floor and portion of first floor. The revised cost for constructing the balance work at the said plot is Rs. 11 Cr. SDC would have 4000 Sq ft. of server and storage area with 40TB storage network. Entire funds of ` 50 Cr for the establishment and operation of the centre would be provided by GOI. State Data Centre would provide many functionalities and some of the key functionalities are Central Repository of the State, Secure Data Storage, Online Delivery of Services, Citizen Information/Services Portal, State Intranet Portal, Disaster Recovery, Remote Management and Service Integration etc. Against the expenditure of ` 4.80 Cr in the 11th Plan, an outlay of ` 19.91 Cr is provided for 12th Five Year Plan. An outlay of ` 3.50 Cr is provided for Annual Plan 2014-15 at previous year level.

GR-08 Punjab Governance Reforms Commission

Outlay - ` 1.50 Cr

8.3.11 The Punjab Government has set up the Punjab Governance Reforms Commission with the objective to provide all facilities under various government schemes to the down trodden people without any difficulty. To complete the job most appropriately, the Commission will engage the services of experts from outside. The Commission on completion of work assigned to it was wound up in July 2011. Now the State Government is in the second phase of administrative reforms.

8.3.12 2nd Punjab Governance Reforms Commission has been set up in March, 2012 to look at civil and criminal justice system, procedure for industrial development, regulatory frame work for NRI Affairs, Health and Medical Education, Education, Technical Education, Employment and Fiscal Management. The data base for the birth and death records is being automated and procedure for registration has been simplified. In the Transport Department, dealers have been empowered to issue vehicles registration certificates. Similarly, Principals of colleges have been authorized to issue driving learner licenses.

8.3.13 Against the expenditure of ` 1.41 Cr in the 11th plan, an outlay of ` 10.00 Cr is provided for 12th Five Year Plan. An expenditure of ` 1.20 Cr and ` 1.39 Cr has been incurred during 2012-13 and 2013-14 respectively. An outlay of ` 1.50 Cr has been provided for Annual Plan 2014-15.

GR-09 Grant in Aid to Punjab Right to Service Commission (2011)

Outlay - ` 1.75Cr

8.3.14 Under Punjab Right to Service Act, 2011, 80 more services have been notified in addition to existing 69 services, taking total to 149 services. As per the provision of PRTS Act 2011, Punjab Right to Service Commission has been constituted and Chief Commissioner alongwith 4 Commissioners have been appointed to look after the task of effective implementation of the Act. An outlay of ` 15.00 Cr is provided for 12th Five Year Plan. An expenditure of ` 4.03 Cr and ` 1.74 Cr has been incurred during 2012-13 and 2013-14 respectively. An outlay of ` 1.75 Cr has been provided for Annual Plan 2014-15.

GR-11/P-01 For implementation of Recommendations made by Punjab Governance Reforms Commission in respect of various departments

Outlay - ` 17.00 Cr

8.3.15 Under this scheme, funds are required for meeting the expenditure for IFMS & IWDMS project being implemented by TCS through Punjab Infotech.

8.3.16 For implementation of recommendations made by the Commission, the department has been coordinating with concerned departments for monitoring the progress of implementation. It is proposed to set up Implementation Monitoring Unit (IMU) to oversee the monitoring of implementation of recommendations made by PGRC in various departments, awareness campaign, publicity and publication. The State Government is laying emphasis on time bound implementation of recommendations on Governance Reforms.

8.3.17 Against the expenditure of ` 24.86 Cr in the 11th Plan, an outlay of ` 115.87 Cr is provided for 12th Five Year Plan. An expenditure of ` 9.52 Cr has been incurred during 2013-14. An outlay of ` 17.00 Cr has been provided for Annual Plan 2014-15.

CSS- Other Schemes

CS(GR)-18 National e- Governance Action Plan (NeGAP) (100% GoI)

GR- 02 Additional Central Assistance under National e- Governance Projects

Outlay - ` 50.00 Cr

8.3.18 Under the National e-Governance Action Plan (NeGAP), core infrastructure & various Mission Mode Projects (MMPs) are being implemented at the state level as per the guidelines given by the Department of IT, Government of India with central funding.

8.3.19 As part of National e-Governance Action Plan (NeGAP), PAWAN, SDC, e-district rollout, SSDG are being presently implemented in the State, where GoI will provide central funding over a period of 5 years from its being operational subject to utilization of its previous releases. DeitY, GoI will fund the project for the sixth year in the ratio of 80:20, where 20% will be borne by the State Government.

8.3.20 After successful completion of e-district project in two pilot districts namely Kapurthala and Shaheed Bhagat Singh (SBS) Nagar, the e-district project is being rolled out in remaining 20 districts in a phased manner. All the 2112 Common Services Centres (CSCs) have been established in villages in the ratio of one per 6 villages across the State for delivering government, private and social services with the participation of private sector in the first phase of its implementation. The approval of new proposal for establishing additional 1,50,000 CSCs across the country upto Gram Panchayat level with Punjab share as 10,000 + CSCs is in progress at the national level. The total 2,50,000 CSC network in the country will play a great role in service delivery in rural areas for convenience and proximity of general public for G2C services.

8.3.21 Application software of State Portal/ SSDG project is ready and is being launched shortly after the installation of data centre equipment and computers/ networking at the identified offices in the State.

8.3.22 Against the expenditure of ` 4.09 Cr in the 11th Five Year Plan, an outlay of ` 44.15 Cr has been provided for 12th Five Year Plan. An expenditure of ` 3.50 Cr has been incurred during 2012-13. An enhanced outlay of ` 50.00 Cr has been provided for Annual Plan 2014-15 as against the outlay of ` 11.90 Cr for 2013-14.

List of Plan Schemes relating to Computerization

(Annexure-'A')

			(Cr)
SN	Name of Sub-head/Scheme	Exp 2013-14	Approved Outlay 2014-15
1	2	3	4
	General Education		
EDS -07	Information and Communication Technology (ICT) Project.	259.64	200.00
EDS -01	Information and Communication Technology (ICT) in Punjab Schools (75:25)	-	59.99
	Sub-Total	259.64	259.99
	Power		
PP-01	Works Relating to Restructured Accelerated Power Development & Reforms Programme (R-APDRP).	81.00	150.00
	Sub-Total	81.00	150.00
	Governance Reforms		
GR 01	Introduction of Computerization in Punjab Government Offices, Semi Government Offices including Maintenance & Upgradation of the Systems.	4.07	23.00
CS(GR)-18	National e- Governance Action Plan (NeGAP) (100% GoI)	-	50.00
GR 02	Additional Central Assistance under National e-Governance projects	-	
GR 03	ICT Infrastructure and Construction of Building for e-Governance Projects	-	3.50
	Sub Total	4.07	76.50
	Secretariat Economic Services		
PM-03	Computer Cell of Punjab State Planning Board (Staff, equipment and consumable etc).	0.00	0.07
	Sub-Total	0.00	0.07
	Revenue and Rehabilitation		
RR -01	National Land Records Modernization Programme.(NLRMP)	0.00	12.82
	Sub-Total	0.00	12.82
	Grand Total	344.71	499.38

8.4 ECOLOGY AND ENVIRONMENT

Outlay - ` 4.40 Cr

8.4.1 Advanced technologies both in agricultural and non agricultural

sectors have played a crucial role in the state's development but this has also led to degradation of environmental quality thus reducing the benefits of development. To promote environmental protection, conservation of natural resources and sustainable development, the state government set up the Punjab Pollution Control Board (PPCB) in 1975 and a division of environment in the Punjab State Council for Science & Technology (PSCST) was established in 1988, which is providing technical assistance to Department of Science, Technology & Environment, Government of Punjab.

8.4.2 Under national project supported by Central Pollution Control Board (CPCB), comprehensive document on environment standards and good practices for electric arc furnaces and induction furnaces in SSI sector has been developed. Energy conservation measures have been demonstrated in pulverized coal fired re-rolling mills at Mandi Gobindgarh and Khanna. The technologies for air pollution control have been replicated in cupola furnaces, rolling mills, brick kilns and rice shellers. The Board has constituted district level Biodiversity Management Committees (BMCs) in all 22 districts of the state.

8.4.3 The Department of Science & Technology is also taking up conservation and management of three important wetlands of international significance (Ramsar sites), namely Harike Wetland, Kanjli Wetland & Ropar Wetland, as well as national wetland i.e. Nangal Wetland under restructured centrally sponsored programme.

8.4.4 Under the sub-head "Ecology & Environment", against an expenditure of ` 11.20 Cr incurred during 11th Five Year Plan, an outlay of ` 12.85 Cr is provided for 12th Five Year Plan. An expenditure of ` 0.23 lac and ` 3.00 Cr has been incurred during Annual Plan 2012-13 and 2013-14 respectively. An outlay of ` 4.40 Cr is provided for the Annual Plan 2014-15 for the following schemes:-

Ongoing Schemes

State Funded Schemes

EE-04 Restoration of Ecology of Holy Bein

Outlay - ` 3.00 Cr

8.4.5 The rivulet Holy Bein originates from village Dhanoa in Hoshiarpur district and travels along river Beas in a zigzag manner for 160 Km before ultimately joining river Beas upstream of Harike wetland. Due to discharge of

sewage, sullage from 8 towns and 45 villages falling in its catchments area, it had got heavily polluted. The Bein was infested with wild growth impeding the free flow of water causing water logging at some points and depletion of underground water in villages. The project was conceived to clean the Bein by involving voluntary community participation. This project envisages stoppage of waste water from towns and villages, release of additional water- 500 cusecs from Mukerian Hydel Channel, remodeling of Bein, bio-fencing along the banks and development of catchments area.

8.4.6 Against an expenditure of ` 1.12 Cr incurred during 11th Five Year Plan, an outlay of ` 2.00 Cr is provided for 12th Five Year Plan. An outlay of ` 3.00 Cr is provided for the Annual Plan 2014-15 at the previous year expenditure level.

CSS - Other schemes

Conservation of Natural Resources and Ecosystem (70:30)

8.4.7 Earlier, wetland projects were funded by Ministry of Environment & Forests, Govt. of India on 100% basis which has been changed to 70:30 (GoI & State share) w.e.f. 2013-14. The following schemes are included in this programme:

CS (EE) -1 Harike Wetland Project (70:30)(CS:SS)

Outlay - ` 0.50 Cr

8.4.8 Harike Wetland has the distinction of being one of the six Ramsar Sites in India designated as wetlands of international significance. It is also one of the largest wetlands in the Northern India. Located at the confluence of river Sutlej & Beas, this wetland falls in three districts of Punjab i.e. Kapurthala, Tarn Taran and Ferozepur. Spread over an area of 41sq. kms, this wetland provides a vital habitat for a number of floral and faunal components including the diversity of migratory avifauna. Ecological benefits of this wetland are widely well known. Conservation activities regularly required are afforestation, fencing & wildlife conservation, pollution control, monitoring, soil conservation, control of water hyacinth and public awareness. Against an expenditure of ` 1.79 Cr incurred during 11th Five Year Plan, an outlay of ` 2.50 Cr is provided for 12th Five Year

Plan. An outlay of ` 0.50 Cr is provided for Annual Plan 2014-15 at previous year level.

CS (EE)-II Kanjli Wetland Project (70:30)(CS:SS)

Outlay - ` 0.20 Cr

8.4.9 Kanjli wetland is also an important ecosystem in the state delivering diverse kind of values and benefits. It is the second wetland to be recognized as a wetland of national importance by the Ministry of Environment and Forests, Government of India in 1988. Kanjli wetland and the entire Holy Bein is an important ecosystem from ecological, socio economic, recreational and religious viewpoint not only for the state but for the whole country. This wetland was recognized as Ramsar Wetland of international importance in 2002. Despite tremendous ecological significance, Kanjli wetland has been suffering from various natural and anthropogenic threats like excessive weed growth (mainly water hyacinth), decreasing inflow of water, increasing pollution levels, deforestation in catchments area, excessive grazing & soil erosion etc. Conservation activities regularly required are afforestation, fencing & wildlife conservation, pollution control, monitoring, soil conservation, control of water hyacinth and public awareness. Against an expenditure of `0.41 Cr incurred during 11th Five Year Plan, an outlay of ` 1.00 Cr is provided for 12th Five Year Plan. An outlay of ` 0.20 Cr is provided for the Annual Plan 2014-15 at previous year level.

CS (EE)-III Ropar Wetland Project (70:30)(CS:SS)

Outlay - ` 0.50 Cr

8.4.10 Ropar wetland situated about 45 kms from Chandigarh is the impounded part of river Sutlej near Ropar. This pond spread over an area of about 1365 hac was largely formed due to the construction of Ropar head regulator in 1952. This Wetland supports a wide variety of fauna and floral components and is an environmentally strategic ecosystem calling for immediate conservation and management attention. It was recognized as a wetland of natural importance by the Ministry of Environment & Forests, Government of India in 1988 and subsequently, as Ramsar wetland of international importance in 2002. In spite of tremendous ecological values, Ropar wetland ecosystem is threatened on many counts, which include excessive siltation as a result of the

erosion from the adjoining nude hills. Interference to the avifauna is also matter of concern. Immediate steps, particularly, afforestation and soil conservation in the highly erosion prone catchments area in the vicinity of this wetland, social fencing and awareness of general public are required regularly. Against an expenditure of ` 1.70 Cr incurred during 11th Five Year Plan, an outlay of ` 2.50 Cr is provided for 12th Five Year Plan. An outlay of ` 0.50 Cr is provided for the Annual Plan 2014-15 at previous year level.

CS (EE) - V Nangal Wetland Project (70:30)(CS:SS)

Outlay - ` 0.20 Cr

8.4.11 Ministry of Environment & Forests, Govt. of India has included Nangal Lake under National Wetland Conservation Programme in 2008. The Lake is important for biodiversity & migratory birds. It needs to be protected from siltation and pollution. Against an expenditure of ` 0.70 Cr incurred during 11th Five Year Plan, an outlay of ` 1.00 Cr is provided for 12th Five Year Plan. An outlay of ` 0.20 Cr is provided for the Annual Plan 2014-15 at previous year level.

8.5 FORESTRY AND WILD LIFE

Outlay - ` 20.81 Cr

8.5.1 The Punjab Forest Department has been following the objectives laid down in National Forest Polity 1988 of Government of India for conservation, management and development of forests and tree cover in the state. The guiding principles of various forestry programmes of the department are achieving of environmental and ecological stability, checking erosion for soil and water conservation, afforestation for increasing of green cover and meeting the demand of the local people, utilization of waste lands for growing of trees and involvement of local people in rehabilitation of degraded forests.

8.5.2 Presently the forest and tree cover of the state is 3500sq km. i.e. 6.87% of the total geographical area. With more that 85% the forest area of the state under active agriculture, it may not be possible to achieve 33% forest cover. However, the State Forest Department has envisaged enhancing the area under forest and tree cover to 15% of the total geographical area.

8.5.3 The main commercial species in Punjab have traditionally been

shisham, kikar and eucalyptus. However, diversification to other species is being done and species like teak, tun, gmelina, neem, siris, mulberry, burma neem, ailanthas, drek, rajain, simal, bamboos, arjun bahera, amala, jamun, mango, poplar etc. suitable for yielding timber and fruits are also becoming popular.

8.5.4 Against an expenditure of ` 125.43 Cr during the 11th Five Year Plan, an outlay of ` 211.81 Cr has been provided in 12th Five Year Plan. An expenditure of ` 59.18 Cr and ` 17.97 Cr has been incurred during 2012-13 and 2013-14 respectively. An outlay of ` 20.81 Cr is provided in the Annual Plan 2014-15. Besides, the state contribution the activities of forest department are funded through the processing fee on FCA cases, user charges, contribution from Forest Corporation, Green Punjab Fund and Government of India's contribution under PUNCAMPA & Green India Mission.

8.5.5 The detail of the schemes included in the Annual Plan 2014-15 is as under:

Ongoing Schemes

State Funded Schemes

FT-05 Punjab Forestry & Watershed Development Project and Promotion of ICT and e-Governance in the State

Outlay - ` 1.00 lac

8.5.6 Under the scheme various components like plantations, farm/agro forestry, forest research, training and infrastructure activities are being undertaken. The main objective of the scheme is enhancing of green cover, amelioration of environment and ecology through plantation activities.

8.5.7 Against an expenditure of ` 35.62 Cr during the 11th Five Year Plan, an outlay of ` 75.00 Cr has been provided in 12th Five Year Plan. An expenditure of ` 32.59 Cr and ` 5.31 Cr was incurred during 2012-13 and 2013-14 respectively. A token provision of ` 1.00 lac is provided in the Annual Plan 2014-15. The activities under the programmes would be funded by the department through its own sources.

FT-06 Conservation Management and Development of Wildlife in the State

Outlay - ` 4.00 Cr

8.5.8 The main objective of this scheme is upkeep and development of 13

wildlife sanctuaries of the state as well as 5 zoological parks/mini zoos located in Chhatbir, Neelon, Ludhiana, Patial and Bathinda. The scheme also addresses the issue of man animal conflict through suitable comepsation against crop damage or damage to the property and life due to wildlife. The expenditure is mainly related to upkeep of waterholes, fire lines and deployment of watchers against poaching, upkeep and maintenance of enclosures, feed, fodder and medicines of wild animals. Besides, the monetary compensation is provided wherever there is loss of crop, property or life by wild animals.

8.5.9 Against an expenditure of ` 5.97 Cr during the 11th Five Year Plan, an outlay of ` 37.50 Cr has been provided in 12th Five Year Plan. An expenditure of ` 9.37 Cr and ` 3.19 Cr was incurred during 2012-13 and 2013-14 respectively. An outlay of ` 4.00 Cr is provided in the Annual Plan 2014-15.

FT-11 Rehabilitation of water logged and degraded areas through bio drainage, agro forestry and other plantation activities in Punjab (NABARD)(95:5)

Outlay - ` 10.00 Cr

8.5.10 In line with the objectives of Greening Punjab Mission, a project for rehabilitation of water logged and degraded areas through bio drainage, agro forestry and other plantation activities in Punjab has been approved by NABARD at a total cost of ` 90.39 Cr . The following activities would be covered under this project:-

- (i) Reclamation of waterlogged areas in Districts of Fazilka, Mukatsar and Faridkot in 100 ha area;
- (ii) Promotion of Agro-forestry in seven forest divisions through supply of 350 lakh high quality seedlings to the farmers;
- (iii) Plantations on degraded and other blank area along drains/canals/roads etc over 4500 ha area.

8.5.11 The project would be implemented in 7 Forest Divisions of Patiala, Sangrur, Mansa, Ferozepur, Faridkot, Bathinda and Amritsar.

8.5.12 An expenditure of ` 7.64 Cr and ` 8.79 Cr was incurred during 2012-13 and 2013-14 respectively. An outlay of ` 10.00 Cr is provided in the Annual Plan 2014-15.

Block Grants

BG-05(FT-04): Protection of Forests (13th Finance Commission)

Outlay – ` 2.30 Cr

8.5.13 The 13th Finance Commission has recommended preparation and implementation of scientific work plans for management of forests for the country as a whole. Under this programme, it is proposed to undertake the following activities:-

- Preparation of Working Plans/Management Plans of 6 Forest Divisions including enumeration of the strip forest areas along roads, canals etc.
- Preparation of GPS based records, maps of the forest areas of Kandi tract closed under Punjab Land Preservation Act, 1900 in 6 Forest Divisions of Mohali, Garshankar, Ropar, Hoshiarpur, Dasuya and Pathankot (approximately 1.50 lakh ha).
- Infrastructure development for preparation of GPS based maps and other records of forest boundaries in the state, plotters, computers, printers, GPS instruments etc.

8.5.14 Against an expenditure of ` 1.84 Cr during the 11th Five Year Plan, an outlay of ` 11.50 Cr has been provided in 12th Five Year Plan. An expenditure of ` 2.24 Cr and ` 43.01 lac was incurred during 2012-13 and 2013-14 respectively. An outlay of ` 2.30 Cr is provided in the Annual Plan 2014-15.

CSS – Other Schemes

Integrated Development of Wildlife Habitats

Outlay – ` 1.00 Cr

The following schemes would be covered under this programme:

FT-01 Assistance for the Development of Selected Zoos (50:50) (IDWLH)

Outlay – ` 30.00 lac

8.5.15 The objective of the scheme is to acquaint people with the wild animals and to educate them about the preservation of wildlife and its importance to mankind. For the maintenance and development of chhatbir zoo at Patiala, Tiger Safari at Ludhiana and Deer Parks at Patiala, Neelon and Bathinda, central assistance is provided to supplement the state resources.

8.5.16 Against an expenditure of ` 15.61 lac each as 50% Government of India's share and 50% state share during the 11th Plan, an outlay of ` 2.50 Cr each as 50% Government of India share and 50% state share has been provided in the 12th Five Year Plan. An outlay of ` 15.00 lac each as 50% Government of India's share and 50% state is provided in the Annual Plan 2014-15.

**FT-03 Assistance for the Development of Sanctuaries (50:50) (IDWLH)
and**

Outlay - ` 20.00 lac

CS(FT)-04 Assistance for the Development of Sanctuaries (100%) (IDWLH)

Outlay - ` 50.00 lac

8.5.17 Earlier 100% funds were provided by Government of India for development of sancturies in the state. Now the funds are provided as 100% for some components and 50% for other components. As such a sharing scheme was introduced in state plan on 50:50 sharing basis in addition to 100% Government of India's funded scheme during 2009-10.

8.5.18 The objective is to provide support to protected areas as well as protection of wildlife outside the protected areas and recovery programme for saving critically endangered wildlife habitats. Under this scheme main activities will be carried out in Harike, Abohar, Takhni and Kathlaur-Kaushaiya wildlife sanctuaries. Some of these sanctuaries are known to have rare and endangered species like River Dolphin, Turtle, Indian Otter, Migratory Ducks and other birds such as Saras Crane. Other species are Black Buck, Jungle Cat and a variety of snakes. Most of the works relating to habitat improvement, removal of weeds, development of waterholes and other improvement of wildlife habitats will be done.

8.5.19 **Under the scheme Assistance for Development of Santuaries (50:50),** against an expenditure of ` 1.86 lac as 50% Government of India's share and ` 1.86 lac as 50% state share during the 11th Plan an outlay of ` 2.50 Cr each as 50% Government of India's share and 50% state share has been provided in 12th Five Year Plan. An outlay of ` 10.00 lac each as 50% Government of India's share and 50% state share is provided in the Annual Plan 2014-15.

8.5.20 **Under the scheme Assistance for Development of Santuaries (100%),** against an expenditure of ` 58.35 lac during the 11th plan, an outlay of ` 3.75 Cr

has been provided in 12th Five Year Plan. An expenditure of ₹ 19.68 lac was incurred during 2012-13. No expenditure was incurred during 2013-14. An outlay of ₹ 50.00 lac is provided in the Annual Plan 2014-15.

National Aforestation Programme (National Mission for Green India)

Outlay - ₹ 3.50 Cr

The following schemes would be covered under this programme:

CS(FT)-05 Green India Mission(NMGI)

Outlay - ₹ 1.50 Cr

8.5.21 The National Mission for a Green India, as one of the eight Missions under the National Action Plan on Climate Change (NAPCC), recognizes that climate change phenomena will seriously affect and alter the distribution, type and quality of natural biological resources of the country and the associated livelihoods of the people. Mission for a Green India acknowledges the influences that the forestry sector has on environmental amelioration through climate mitigation, food security, water security, biodiversity conservation and livelihood security of forest dependant communities.

8.5.22 GIM puts "Greening" in the context of climate change, adaptation and mitigation. Greening is meant to enhance ecosystem services such as carbon sequestration and storage (in forests and other ecosystems), hydrological services and biodiversity, as well as other provisioning services such as fuel, fodder, small timber and non-timber forest products (NTFPs).

8.5.23 The Mission aims at responding to climate change by a combination of adaptation and mitigation measures, which would help

- Enhancing carbon sinks in sustainably managed forests and other ecosystems;
- Adaptation of vulnerable species/eco systems to the changing climate; and
- Adaptation of forest dependant communities.

8.5.24 Before restructuring the centrally sponsored schemes the funds under Green India Mission was released by Government of India directly to the implementing department. As per the decision taken by Government of India, from 2014-15, the funds would be provided to the implementing department

through state finance department. As such an outlay of ` 1.50 Cr is provided in the Annual Plan 2014-15.

FT-02 Intensification of Forest Management (75:25) (NMGI)

Outlay - ` 2.00 Cr

8.5.25 The objective of the scheme is enhancing green cover through plantation activities as well as protection of existing government forests. The funds provided under the scheme will be utilized for new plantation, creation of firelines, improved mobility & communication networks, GPS/GIS equipments and preparation of digital maps.

8.5.26 Against an expenditure of `3.37 Cr as 75% Government of India's share and `1.13 Cr as 25% state share during the 11th Plan, an outlay of ` 10.27 Cr as 75% Government of India share and ` 3.42 Cr as 25% state share has been provided in the 12th Five Year Plan. An expenditure of ` 66.86 lac as 75% Government of India's share and ` 22.28 lac as 25% state share was incurred during 2012-13. No expenditure was incurred during 2013-14. An outlay of ` 1.50 Cr as 75% Government of India share and ` 0.50 Cr as 25% state share is provided in the Annual Plan 2014-15.