

## **CHAPTER - 8**

### **SCIENCE TECHNOLOGY & ENVIRONMENT**

The Department of Environment has been assigned responsibility of improving the overall Environmental Quality in Delhi. The Department is actively engaged in overall environmental assessment, monitoring, protection and awareness rising among the people of Delhi. Multi-dimensional approach is being adopted by the Department for promotion, conservation and preservation of Environment. The activities of Department of Environment are:

- Motivating citizens of Delhi to keep surroundings clean and green.
- Promoting an ethos of conservation of water by minimizing the use of water and wastage of water.
- Motivating the citizens to imbibe habits and life styles supportive of minimum waste generation, source separation of waste, disposing off the waste at the nearest storage point.
- Composting horticulture waste, to use it as manure for kitchen gardens, nurseries, parks etc.
- Creating awareness among public and sanitary workers to stop the indiscriminate burning of waste/leaves that causes air pollution.
- Sensitizing the citizens to minimize the use of plastic bags. Not to throw them in public places as they choke drains and sewers. Being non-biodegradable they cause water logging and provide breeding ground for mosquitoes. Also, to encourage the use of eco-friendly alternatives like jute, cloth and recycled paper bags, etc.
- Organizing Tree plantation programmes in schools, residential areas, parks, industrial areas etc.
- Creating awareness for celebrating festivals like Dusshera, Diwali, Holi in an eco friendly manner.
- Educating the citizens about reuse of waste material by promoting the concept of the three R's i.e. Reduce, Reuse and Recycle.
- Coordinating with the various Departments/Agencies to combat climate change issues such as energy conservation, water conservation by recycling of water, rain water harvesting, green building concept, use of renewable energy, installation of CFL, promotion of battery operated vehicle.

Revised Outlay & Expenditure of Annual Plan 2014-15, Approved outlay & Revised outlay of Annual plan 2015-16 and outlay for Annual plan 2016-17 for Science, Technology & Environment Sector are as under:-

[₹ in crore]

Department / Agency	Annual Plan 2014-15		Annual Plan 2015-16		Annual Plan 2016-17
	Revised Outlay	Expenditure	Approved Outlay	Revised Outlay	
Environment Department	14.50	9.10	12.20	9.85	11.00
Forest Department	23.75	22.06	26.00	25.75	32.00
IT Department	17.00	10.92	63.00	10.40	36.00
<b>Total</b>	<b>55.25</b>	<b>42.08</b>	<b>101.20</b>	<b>46.00</b>	<b>79.00</b>

## 1. Integrated Waste Management and other related activities

Annual Plan outlay 2016-17	:	₹ 60.00 Lakh
Revenue	:	₹ 10.00 Lakh
Capital	:	₹ 50.00 Lakh

### Aims and Objectives of the Scheme:

- The policy intervention and land identification for setting up of disposal facility for management of different kinds of waste namely Hazardous, Bio-Medical, Electronic, Plastic, Fly ash, Construction & Demolition waste and Mercury waste etc. as per respective rules and regulations.
- A new aspect of decentralized green waste management with special emphasis on kitchen waste and horticulture waste has been added as a part of this scheme in order to reduce the pressure on Municipal Solid Waste (MSW) Landfills.

### Major Components of the scheme:

- Site identification for establishment of waste disposal facilities
- Possession of Land for the hazardous waste Integrated Waste Disposal Facility
- Development of site and construction of boundary wall etc
- Hiring of consultancy services for EIA & for the development of the facilities for different kinds of waste disposal
- Promote Decentralized Green Waste Management through fiscal incentives
- Introduction, co-ordination of Buy Back Policy For recyclable Bottles/ containers
- Training and awareness programme on management of different wastes to all target groups.

## 2. Climate Change & Other Activities

Annual Plan outlay 2016-17	:	₹ 10.00 Lakh
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### **Aims and Objectives of the Scheme:**

Promotion and facilitation of environment friendly projects for reduction in the emissions of Greenhouse Gases and addressing climate change related issues.

### **Major Components of the scheme:**

- To prepare the State Action Plan for Combating Climate Change involving all the departments as per NAPCC format.
- Capacity building among the existing manpower for the purpose.
- Engaging experts / specialized consultants (on contract basis) as the focal points to coordinate CDM projects for earning carbon credits.
- Conducting various training programmes for all the stakeholders.
- National / International visit to understand / evaluate CDM project implementation better.
- Providing required resources in terms of Human Resource (on contract basis) & physical resources in terms of office accessories etc.
- Awareness creation for clean development mechanisms, maximum use of conventional source of energy and thereby GHG reduction.
- Organizing National/ International Conference/Synopsis on the subject.

Promotion and facilitation of Environment friendly projects for reduction in the emissions of Greenhouse Gases, and addressing climate change related issues. Workshop/Seminar on climate change with concerned departments/local bodies/agencies to be conducted

### **Achievement**

Delhi State Action Plan on Climate Change (SAPCC) beyond 2012 is being prepared on the lines of National Action Plan on Climate Change (NAPCC)

### **3. Strengthening of Technical set-up in the Department of Environment**

Annual Plan outlay 2016-17 : ₹ 27.00 Lakh

### **Aims and Objectives of the Scheme:**

- To provide infrastructure facility, manpower etc. in the Department to handle the increasing workload on pollution issues with respect to coordinate pollution control measures undertaken by various Departments in NCT of Delhi to control pollution.
- Policy formulation for overall environmental protection in Delhi. To implement the Govt. policies and various schemes for conservation of environment and control of pollution.

- To cope up with various new environmental frontiers that has emerged in recent years.
- To implement the Govt. policies, Hon'ble Court directions and various schemes for conservation of Environment and control of pollution in Delhi.

#### **4. Involvement of Weaker Sections of Society in improvement and up-gradation of the Environment**

Annual Plan outlay 2016-17	:	₹ 11.00 Lakh
General	:	₹ 10.00 Lakh
SCSP	:	₹ 1.00 Lakh

#### **Aims and Objectives of the Scheme are:**

This scheme will be implemented in association with schools, NGO's & RWA. This will include following points:

- To involve the weaker section population towards environment improvement programmes.
- To provide training as well as social security, hygienic facilities and safe waste handling to rag pickers etc.

Under this scheme, expenditure to be incurred on the items for safety equipments, fiscal incentives, and free distribution of environment related materials to weaker section etc.

#### **5. Public Environmental Awareness and Other Activities**

Annual Plan outlay 2016-17	:	₹ 160.00 Lakh
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#### **Aims and Objectives of the Scheme:**

To create public environmental awareness by educating public in general & different segments of the city such as school students, residential associations, women groups etc. through various means

- To carry out awareness campaigns namely "Greening Delhi", "Say Yes to Eco-Friendly Bags", "Save Yamuna", "Anti Fire Crackers", "Waste Minimization", "Play Holi with Safe and Natural Colours" etc.
- Organizing environment related mass awareness programmes
- Organizing sponsoring and participation in environment related exhibition, Melas, workshops etc
- To enhance environmental awareness among public by using publicity media such as newspaper, outdoor, TV, theatre shows, radio mobile SMS, social media etc

- Observing various National and International Environment related Days such as World Environment Day

#### **Activities to be undertaken under the scheme:**

- Raising of environmental awareness level among the citizens of Delhi through various environmental campaigns by way of various publicity medias.
- Organizing and sponsoring workshops/ exhibitions/seminars on various environmental issues and on various National and International Environment Days.

#### **Achievement**

- Department of Environment conducted various public environment awareness campaigns for the general public of Delhi.
- No. of Conferences and Workshops Conducted on environmental issues.
- Paper Recycling Unit of Delhi Secretariat also generate huge amount of public awareness and time to time is visited by the students and also seen by many National & International delegates.
- Celebrated Ozone Day on September 16, 2015.
- Celebrated Earth Day on April 22, 2015.

#### **Targets 2016-17:**

- Workshops on various environment issues will be organized every month in which various stakeholders, experts will be invited for brain storming session so as to implement various initiatives.
- Public environment awareness campaigns for the general public of Delhi.
- Celebration of various important days i.e. Ozone Day, Earth Day etc.

#### **Items of Expenditure**

Environmental awareness materials such as calendars, posters, brochures, pamphlets for distribution.

#### **6. Eco-Clubs in Schools and Colleges:**

Annual Plan outlay 2016-17 : ₹ 400.00 Lakh

#### **Aims and Objectives of the Scheme:**

To create environmental awareness among the school & college students for environmental improvement and to inculcate the culture of eco-friendliness and environmental conservation among them.

### **Activities to be undertaken under the scheme:**

- Conduction of various Environment Campaigns involving various schools & Colleges.
- Appreciation awards to Best Eco-club schools and colleges
- Various Competitions at State/ School / College level to be conducted including poster competition, quizzes, etc. and organizing Annual Eco-Meet and Vacation Programme for students

Presently Environment Department, GNCTD provides grant to the Eco-Clubs of an annual amount of ₹ 20,000/- per school/ college under the plan scheme “Eco-Clubs in Schools/ Colleges”. Upto the year 2011-12, yearly grant of ₹ 10,000/- was given to each eco-club in schools/ colleges which has been enhanced to ₹ 20,000/- p.a. from the year 2012-13. Also Additional grant of ₹ 2500/- is given to only schools from Ministry of Environment & Forest, GOI as NGC (National Green Corps). The scheme was started with 100 schools during 1998-99 and now more than 2000 Eco clubs are established in Delhi Govt. schools/ Aided/ Public/ Private schools, NDMC school, KV/JNV and colleges of Delhi. The schools having class XI onwards are enrolled as Eco-Clubs. The various activities of the Eco-Clubs basically about the Environment awareness and to preserve, conserve and protect the Environment etc

Present status of schools/ Colleges having Eco-Clubs in Delhi:

i)	No. of Private schools having Eco-Clubs	825
ii)	No. of Govt. schools having Eco-Clubs	1055
iii)	No. of Kendriya Vidyalaya having Eco-Clubs	46
iv)	No. of colleges having Eco-Clubs	150
	<b>Total No. of schools/ colleges having Eco-clubs</b>	<b>2076</b>

### **Achievement**

1784 schools have been given a total grant of ₹ 3.56 Crores @ ₹ 20, 000/- to each school/ college.

### **Targets 2016-17**

- To increase the activities of environment awareness including construction of compost pits, tree census, biodiversity index in various schools and colleges, apart from inviting innovative ideas in environment protection through participation of children of school.
- 100 eco-clubs (50 Govt. schools and 50 private schools) will be shortlisted for taking up various action oriented environmental activities like development of nurseries, creating compost pit and ensuring zero garbage and plastic free zones within the school complex.

**7. Environment Data Generation, Survey, Research Project and Other Activities**

Annual Plan outlay 2016-17 : ₹ 30.00 Lakh

**Aims and Objectives of the Scheme**

- To conduct need based environment surveys and data generation on continuous basis on Quantum of pollutants generated from sources such as industries, vehicles, thermal power stations and effect of hazardous, toxic waste, ambient air water sources (Surface & subsurface) and land.
- To update the environmental status through need-based surveys on various aspect of pollution, in order to assess the impact of pollution on human health and the overall environmental up gradation in Delhi.

**Major Components**

- Data creation in respect of Vehicular Pollution, Air Pollution, Water Pollution, Noise Pollution, Land Degradation and other anthropogenic source of pollution.
- Assessment of impact of Pollution on environment.
- Research & Development studies on various environmental issues related to Delhi.

**Achievement**

- “Quantification of mitigation interventions of Delhi City as a whole” by ICLEI completed.
- “A Study of physico-chemical characteristics of smog in Delhi” by JNU completed and release of Last installment ₹ 1,02,237/- is under process.
- “Comprehensive study on Air Pollution and Green House Gases (GHGs) in Delhi” through IIT Kanpur and report has been submitted to Government of NCT of Delhi. IIT Kanpur has suggested a number of control measures and implementable solutions.
- A Study of the Urban Heat Island Formation and its Relationship with Aerosols in Delhi completed by the JNU. Third & Final installment released in 2015-16.
- Development of a Pilot Project of small capacity bio-diesel reactors for waste oil received from restaurants / hotels / Industry” by DTU.

**8. Assistance to NGO’s in the Promotion Conservation & Preservation of Environment**

Annual Plan outlay 2016-17	:	₹ 22.00 Lakh
General	:	₹ 20.00 Lakh
SCSP	:	₹ 2.00 Lakh

**Aims and Objectives of the Scheme:**

- To promote & assist various non-governmental organizations in the conservation, preservation of environment and pollution control activities.
- To implement various programmes of environment department through NGO's.

**9. Science Technology Awareness Programme**

Annual Plan outlay 2016-17 : ₹ 10.00 Lakh

**Aims and Objectives of the Scheme:**

- To propagate science and technology issue among students.
- To create Scientific Temperament among the students.
- To conduct need based scientific survey and research.
- Involve youth on scientific projects.

**Target**

The objective of the scheme is to sensitize the students / public on various scientific issues. Under the Scheme, a programme of training Eco-Club teachers on GLOBE (Global Learning and Observations to Benefit the Environment).

**10. Delhi Parks and Gardens Society**

Annual Plan outlay 2016-17 : ₹ 360.00 Lakh  
General : ₹ 335.00 Lakh (₹10 Lakh for Capital Assets)  
SCSP : ₹ 20.00 Lakh

**Aims and Objectives of the Scheme:**

- To maintain the parks and garden of Delhi under Delhi Government.
- To involve NGOs, Corporate in maintaining developing the parks of Delhi under Delhi Government.
- To involve NGOs, Corporate in maintaining developing the parks under PPP.

**Achievements 2015-16**

Financial Year	No. of RWAs/ NGOs	No. of Parks	Covering Area (in Acres)
2015-16	304	1426	411.05



### **Performance During 2015-16**

- Implemented the Joint Park Management Scheme of DPGS under Department of Environment, Govt. of NCT of Delhi, in new areas measuring almost 411.05 Acres with the participation of 304 RWA/NGO, covering 1426 Nos. of parks.
- Carried out monitoring of parks under various civic agencies like MCD, NDMC, DDA, CPWD for inventroization and categorization of status leased on its development status, i.e., well maintained, satisfactory and poor parks and Effectively coordinated greenery maintenance amongst greening agencies in NCT Delhi.
- DPGS is taking up greening projects in poorly maintained parks, semi vacant spaces and also in open spaces, including the DTC Millennium Bus Depot on Ring Road, Delhi.
- The Society is motivating RWA's/NGO's in the greening activities, by organizing meetings, distribution of plants to RWAs' for plantation in parks, technical advices and coordinating with other agencies. During the period under reference 1.56 Lakh plants raised & maintained in DPGS Nursery, were distributed to RWAs'/NGOs', greening agencies, corporation etc. and got the same planted.
- Play area within the Colony parks are being identified with the help and support of RWAs'/NGOs', so that the park area and the play area can be developed independent of each other. RWAs are being advised to motivate their children to play with soft balls.
- DPGS is providing advice to other agencies in the greening activities. Thereby motivating greening by various agencies in Delhi.
- DPGS have already established a Nursery and is providing plants to RWAs'/NGOs' and other agencies under guidance and direction of DPGS.
- DPGS successfully mapped the latitude and longitude of 1011 Water Bodies on Google earth website and shortly this will also placed on DPGS website. However district wise details of the water bodies are available in the website.
- During this year total 1,65,846 plants were got planted in RWA/ Institutions the Green Cover of Delhi.
- DPGS has also started providing plants to the participants/public in the "Car Free Day" on every 22<sup>nd</sup> Day of the months for promotion of greenery and reduction of pollution in Delhi.

### **Targets 2016-17**

- The financial assistance will be extended to 325 RWAs for maintaining around 1350 parks spread over in around 400 acre area.

- RWAs will also be motivated to improve the status of playing facilities in around 1350 parks.
- All 76 flyovers to be beautified by greening.

## **11. Pollution Control and Environment Management**

Annual Plan outlay 2016-17 : ₹ 10.00 Lakh

### **Aims and Objectives of the Scheme:**

- To promote monitoring and control of the level of air, water and noise pollution.
- To promote emission less and environment friendly technologies.
- To rejuvenate the River Yamuna and local water bodies.
- To organize mass awareness campaigns.

### **Major Components of the scheme:**

- Setting up of ambient air, noise and water quality monitoring stations and mobile vans.
- Setting up of stringent emission norms for controlling levels of critical pollutants in environment.
- Policy prescription for Reduced Vehicular Dependency through Restraint Measures
- Promotion of City-wide Safe Cycling Network development
- Promotion of public transport /MRTS.
- Promoting adoption of emission less and environment friendly technologies through provision of fiscal incentives.
- Levying of fee on sale of diesel in the city and creation of Air Ambience Fund to promote clean technologies.
- Groundwater Regulation and Management in all districts of Delhi
- Formulation of policies towards prevention and control of air, water and noise pollution under existing Acts and Rules.
- Organization of workshop / conference / exhibition for spreading awareness on pollution control and environmental management among masses
- Introducing the concept of zero wastewater discharge and promote decentralized wastewater treatment system.
- Policy to discourage purchase and use of high end Diesel SUVs in Delhi.
- Policy prescription for

- a) Mechanical cleaning / washing\* (\* washing may invite Controversy) of roads with treated water to reduce re-suspension of dust.
- b) Mandatory covering of construction material / sites to control fugitive dust emissions from construction sites.
- c) Removal of un-authorized encroachments to provide equitable road space for all users.
- d) Mandatory green strip with Tree Plantation on both sides of motorable roads including planted central verge

### **Achievements**

- Clean Air Agenda has been prepared to improve Ambient Air Quality of Delhi
- Battery Operated Rickshaw to promote less polluting Vehicles is under Consideration.
- Water conservation recycle & reuse the proposal for installation of Rain Water Harvesting System are under consideration.
- Conducted the workshop on Air/Noise Pollution Control issues with respect to fire crackers awareness.
- Conducted the workshop on Dust Control Measures to Control Air Pollution

### **Physical Targets**

- To promote monitoring and control of the level of air, water and noise pollution
- To promote emission less and environment friendly technologies
- To rejuvenate the River Yamuna and local water bodies
- To organize mass awareness campaigns
- Feasibility study for adoption of innovative pollution control measures.

## **DEPARTMENT OF FORESTS & WILDLIFE**

In March 1987, a separate Department of Forests & Wildlife and Environment was created from the Control of Development Department. The Department of Forests & Wildlife, Govt. of NCT of Delhi has been mandated with the responsibility of Protection, Development and Preservation of Forests in Delhi. It is also responsible for Protection and Conservation of Wildlife Habitats, Enforcement of the Indian Forest Act 1927, the Wildlife (Protection) Act 1972, and Forests (Conservation) Act 1980, Preservation of Trees Act 1994 and Rules made there under and a listing of people's participation in making Delhi Green.

There are three Divisions in Forests Department namely North Forest Division, South Forest Division and West Forest Division. The Forests Department has a mission to make all endeavors to increase the forest and tree cover in NCT of Delhi as envisaged in the National Forests Policy, 1988 through government, non-

government and other land owning agencies in Delhi and protection of forests, wildlife including their habitats and preservation of trees.

The National Forest Policy, 1988 provides that a minimum of 1/3rd of the total land area of the country should be under forest or tree cover. Taking the above in view, the Govt. of NCT of Delhi is making all endeavors to meet the national goal as set by the Central Govt. and is constantly adding to the green cover of the State which is reflected in the change in forest and tree cover given as follows:

#### **FOREST AND TREE COVER AREA OF DELHI 1993-2015**

(Sq. Km)				
<b>S. No.</b>	<b>Year</b>	<b>Forest and Tree Cover</b>	<b>Absolute Increase In Area</b>	<b>% of Total Area</b>
1.	1993	22	--	1.48
2.	1995	26	4	1.75
3.	1997	26	--	1.75
4.	1999	88	62	5.93
5.	2001	151	63	10.2
6.	2003	268	117	18.07
7.	2005	283	15	19.09
8.	2009	299.58	16.58	20.20
9	2011	296.20	-3.38	19.97
10	2013	297.81	1.61	20.08
11	2015	299.77	1.96	20.22

**Source: Forest Survey of India, Ministry of Environment and Forests, GOI**

Government of NCT of Delhi has taken initiatives to increase forests and tree cover area to keep the environment green in Delhi. As a result of the initiatives taken by Government of NCT of Delhi, forest and tree cover area has been increasing steadily since 1993. The forest and tree cover area increased to 299.77 sq km in 2015 increasing thereby the share of forests in the total area to 20.22 per cent. The growth of forests and tree cover has particularly been monumental post 1999. Of the total 299.77 sq km of forest & tree area in NCT of Delhi, nearly 274 sq km has been added during the period 1999 to 2015.

There are following Plan schemes implemented by the Department of Forest & Wildlife

#### **1. Strengthening of Administration Management, Infrastructure, Training of Personnel and Publicity Measures for Forest & Forestry**

Annual Plan outlay 2016-17 : ₹ 340.00 Lakh

### **Aims and Objectives of the Scheme:**

- In order to enable the department to effectively cater to mandate assigned, the Department is required to be strengthened in terms of Manpower & Infrastructure.
- To strengthen administration of the forests department in NCT of Delhi.
- To ensure better forest management of Ridge areas and City Forests.
- To create awareness among people about importance of ridge and forests in general through various means of publicity.
- Training of staff to enhance skill and efficiency.

### **2. Development of Forest including Consolidations**

Annual Plan outlay 2016-17	:	₹ 1150.00 Lakh
Revenue	:	₹ 350.00 Lakh
Capital	:	₹ 800.00 Lakh

### **Aims and Objectives of the Scheme:**

- As per the National Forests Policy 1988, 33% of the geographical area should be under Forests cover. The stipulated extent of forest cover is required to maintain the environmental equilibrium in the country. Besides, forest cover has been a proven sink for various kinds of pollutants. The NCT of Delhi has only 20.22% of its geographical area under forest and tree cover which has to be further augmented to achieve more area under greenery in Delhi.
- The forest land in Delhi has been notified in year 1994 under section 4 of the Indian Forest Act, 1927. The final notification is to be issued under section 20 of the Indian Forests Act, 1927 and other areas handed over to the Forests Department needs to be protected.
- Afforestation, enrichment and maintenance of existing forest areas under the management of forest department

During 2014-15, solar lights have been installed in remote forest establishment of all the Forest Division.

### **Achievement 2015-16:**

- **Tree plantation:** 11 lakh (approx) saplings planted and 4.6 lakh saplings were distributed for plantation on vacant lands.
- **Tree census** is being done by all greening agencies for assessment of tree plantation status outside the forest area.
- **Online tree cutting permission** under DPTA, 1994 software has been developed by NIC. It is proposed for commissioning to ease out business facility in Delhi.

### **Targets 2016-17:**

- Development of Forests through plantation around 5 lakh indigenous tree saplings.
- Tree plantation target of 12.50 lakh. Other than this, 5 lakh saplings will be distributed free of cost to encourage plantation on vacant lands.
- Maintenance and development of existing Nurseries, Existing City Forests, development of new city forests.
- Consolidation of forest land & mapping, development of water bodies in forest areas, construction of Boundary Wall & providing fencing of forest area, construction of Watch Tower for protection,
- Construction of rain water harvesting structures, maintenance of forest road and inspection paths and opening of city forest for public use.
- As per direction of Hon'ble High Court in WPC -1346 and NGT in OA-58/2013 for consolidation of the ridge forest land through survey and demarcation of Southern Ridge Area and construction of boundary wall around forest area.

### **3. Development of Wildlife Sanctuary & Strengthening of Wildlife Section**

Annual Plan 2016-17	:	₹ 1300 Lakh
Revenue	:	₹ 200 Lakh
Capital	:	₹ 1100 Lakh

### **Aims and Objectives of the Scheme:**

- Development of infrastructure for further protection and development of wildlife including their habitat in Delhi as also conservation of biodiversity in accordance with Wildlife Protection Act 1972. An Area of 1751 Ha in Asola-Bhatti has been notified under Wildlife Protection Act 1972.
- Intervention in management for improvement of soil/ water regime, biodiversity through afforestation of species native to ridge etc. in Asola Bhatti Wildlife Sanctuary besides creation of awareness among masses.
- Revision of Management Plan of Asola Bhatti Wildlife Sanctuary in consultation with Wildlife Institute of India, Dehradun along with study on release of monkeys to the sanctuary and impact there on flora and fauna of the sanctuary.
- Enforcement of provisions of the Wildlife (Protection) Act, 1972 in NCT of Delhi.

### **Achievement 2015-16:**

- Containment of Encroachment: Masonry wall around Sanjay colony in Asola Bhatti WLS is being constructed by ETF to contain expansion of Encroachment. So far, 2200 rmt has been constructed and work is in progress for remaining 1800 rmt.

#### **Targets 2016-17:**

- Development of **Eco-Tourism** facilities/opening of nature's trail in Asola Bhatti Sanctuary for visitors and wildlife enthusiasts.
- **Eco huts** will be constructed for study of Wildlife behavior during nights.
- A **Bird Rescue Center** is to be developed by the department at Rajokri with interpretation center, to provide wildlife and its habitat awareness schedule to young children.
- Preparation of Management plan for Asola Bhatti Wildlife Sanctuary.
- Eco restoration of habitat through Eco-Task Force in the Sanctuary areas by plantation and maintenance of old plantation, fencing, repair and construction/reconstruction of boundary wall, strengthening and augmentation of interpretation center at Asola Wildlife Sanctuary, training of officials, salary and project cost of 132 Eco Task Force and Conservation Education Centre of BNHS at Tughlakabad duly approved by cabinet.
- Setting up of a wild life Museum for preserving the specimens received from various education institutions to promote conservation education.

#### **4. Creation & Maintenance of Urban Forestry**

Annual Plan 2016-17 : ₹ 100 Lakh

#### **Aims and Objectives of the Scheme:**

The scheme aims at taking all measures necessary for maintenance of existing greens and their improvement through soliciting private /govt. participation for making city livable place. Under this scheme, Department has proposed free distribution of saplings, raising of urban plantation road side/ roundabout & maintenance, organization of melas, celebration of Van Mahotsav, Environment Day, World Ozone Day, Earth Day, World Forestry Day, Bhagidari, Health Melas, free distribution of seedlings at various location and other ceremonial functions, Development of Nature Trail & Maintenance, creation of visitor's amenities, Management of Van Vigyan Kendra at Hauz Rani.

#### **Targets 2016-17:**

- **Creation and maintenance of Urban Forest:** Development of 10 City Forests with modern amenities to encourage eco tourism and awareness creation for environment/ modern nursery establishment etc. All these forests will have solar energy lighting system on jogging/pedestrian tracks. These city forests will be developed on zero based concept through green composting bio-digesters for public toilets etc.

#### **5. Monitoring of Greening Activities in Delhi**

Annual Plan 2016-17 : ₹ 310 Lakh

### **Aims and Objectives of the Scheme:**

- The scheme aims at increasing the forest and tree cover including protection of existing forest and taking measures for improvement of the soil/moisture regime, quality as green lung for the metro.
- Enforcement of IFA, 1927 and DPTA, 1994 and Wildlife Protection Act, 1972.
- The scheme also aims at monitoring / evaluation of the gains made in greening and other activities through independent agency.

### **Targets 2016-17:**

- Development of Mobile Squad for controlling the tree offences.
- TSM Survey: Survey of Forest Land by using TSM (Total Station Method) Technology

## **DEPARTMENT OF INFORMATION TECHNOLOGY**

### **1. Direction and Administration**

Annual Plan Outlay 2016-17 : ₹ 90 Lakh

The Department of Information Technology (DIT) was set up in 1998. The objective of this department is to administer the implementation of e-Governance for the overall benefit of the general public by setting up the necessary resources, administrative/ financial/legal and technical framework, implementing mechanisms under Government of NCT Delhi.

Department of Information Technology is also cadre controlling authority of Information Technology Cadre. The Cadre Controlling Unit of the department performs all the required activities pertaining to the career progression of the employees within the cadre who are posted in various departments of GNCT Delhi.

### **2. Delhi Metro e-Network (LAN/WAN)**

Annual Plan Outlay 2016-17 : ₹ 50 Lakh

All the major departments have been connected through Leased Line and Tri-B DG plan of MTNL.

- **Local Area network (LAN)**- Around 1000 computer systems have been brought on the LAN in the Delhi Secretariat. On the existing LAN, Departments located at Secretariat uses various centralized applications like file monitoring system, letter monitoring system, Bio-metric based attendance system, Pay package, e-Office etc. also allows departments to update the departmental



websites. A state of Art server room has also been set up with leased line connecting the Secretariat server to the NIC Headquarter from which access to internet is given. Wi-Fi facility to the departmental users and guests visiting Ministers/ officers will be provided. During 2014-15 Department of IT connected 101 location to Delhi Secretariat through 158 links of 100/34/10/4/2 Mbps links.

- **Delhi State Wide Area Network (DSWAN):-**All major Departments have been connected with the Delhi Secretariat with 2-100 mbps lease line. Departments are upgrading the existing 2mbps leased lines to higher bandwidth as per the requirement.
- **Delhi e-Governance Model:** - It envisions e-Governance through Common Umbrella software CSS and department specific software DSS. DeGM tries to include area uncovered under NeGP State concentration area.
- Department is also establishing WiFi in Delhi Secretariat to provide seamless internet connectivity to the mobile users.

Government of India has framed NeGP in 2006 with the vision “make all Government services accessible to common man through common service delivery outlet and ensure efficiency, transparency and reliability of such services at affordable cost to realize the basic needs of the common man and intension of SMART (Simple, moral, accountable, responsive and transparent) Government. Delhi e-Governance model is mandated for including all uncovered areas along with areas in purview of NeGP and state interest.

### **Targets for 2016-17**

- i. Providing seamless DSWAN connectivity to all Departments connected in DSWAN.
- ii. To add more departments to DSWAN connectivity.

### **3. Training of Employees of Delhi Government in use of I.T. Hardware and Software**

Annual Plan Outlay 2016-17 : ₹15 Lakh

The promotion of Information and communication technology requires continuous training for enhancing skill of employees in the emerging technology areas. It includes providing basic computer training for non-technical employees and specialized trainings to IT Cadre officials of Govt. of Delhi. It is therefore necessary that the Government employees including employees of Government of Delhi, Corporations and Autonomous Bodies would be trained regularly on usage of tools for day-to-day operation.

Department propose for the following:-

1. Basic e-Governance training, computer and automation trainings.

2. Sponsoring of IT Cadre officers to specialize institution providing training in new emerging technologies Data Base Management System, Network Security, Application Software Development Tools etc.

Information Technology Department initiated training programme from dated 22/4/2003. During 2015-16, 160 employees were trained. About 6363 employees have been trained since the implementation of the scheme.

#### 4. **Promotion of I.T Application**

Annual Plan Outlay 2016-17 : ₹10 Lakh

- **State e-Governance Award:** - Recognizing the need to acknowledge the vision and efforts made by various departments of Delhi Government in field of e-Governance, DIT, GNCTD intends to start the State e-Governance Award which may be done yearly for best e-Governance implementation in Departments, Local Bodies, Autonomous Bodies, GNCTD.
- **Exhibitions:-** Department intends to participate in workshops, seminars, conferences exhibitions organized by various institutions across the country for keeping pace with the latest trends, practices and global/national episodes.
- Department also intends to create public awareness on various e-governance related activities through print media as well as by creating audio/video visuals of projects which are beneficial to citizens.
- **IT Knowledge Center at Department of Information Technology:** Department has been involved in Management, administrative technical related work as various e-governance project /Proposals /matters are being taken up by DIT, GNCTD. The Objective is to have a collection of various books CDs, Soft Books, manuals relating to various e governance projects in India and abroad.

#### 5. **e- Governance Projects and Process Re-engineering Support**

Annual Plan Outlay 2016-17 : ₹ 235 Lakh

**e-SLA:** The e-SLA was implemented w.e.f. 15<sup>th</sup> Sept'2011. Recently, Delhi Legislative Assembly has passed changes in "Delhi-Right of Citizen to Time Bound Delivery of Services-2011" to make it compulsory for the competent officer to automatically pay compensation to the citizen, in case of delay in delivery of services. The project is aimed at providing the various Govt. Services to Citizens of Delhi in a time bound manner. Department has integrated 361 services under e-SLA belonging to 37 Department. The citizen can track the status of his/her application on e-SLA website.

**E-Procurement:** The scheme was implemented on February, 2008 and DGS&D was the implementing agency. From May 2011 the project is being handled by DIT, GNCTD through Delhi e Governance Society and NIC. The

project was started to improve the then existing tendering process in various department of GNCT of Delhi and to make transparent and efficient. Around 115227 tenders processed and 5369 vendors registered till March'2016. The main objectives are to reduce tendering process costs (direct and overhead), better management of tendering process, increase transparency of decision making, reduce potential for disputes and increase vendor participation.

**e-Office:** Council of Ministers, GNCTD has approved the implementation of e-office in all the Department / Local/ Autonomous bodies of GNCTD in order to bring transparency, accountability, to increase efficiency and save time and reduce the use of paper/ stationery. e-Office has been launched in various departments of GNCTD. Up to March'2016 nearly 23 departments of GNCTD has fully implemented e-Office and about 50 departments of GNCTD has also initiated working in e-office.

**Jeevan Project:** The project was commenced on 26<sup>th</sup> Feb'2009 and has been discontinued w.e.f. 25-12-2014.

#### **6. Development and Maintenance of Delhi Government Portal (Facility Management for Delhi Secretariat & Maintenance of Delhi Govt. Websites)**

Annual Plan Outlay 2016-17 : ₹ 100 Lakh

**Content Management Systems (CMS):** Content Management Systems is information Integration for single unified web site of all Departments. New departmental websites are being added to existing system on request from the user departments. Up to March'2016 about 172 libraries/ department sites are designed and hosted using CMS. DR site at Pune installed and configured NIC cloud services agreed for setting up of DC site.

All Polytechnics under Dte of Training & Technical Education will have separate website during 2016-17. Bilingual website with disabled friendly features will be prepared.

**Security Audit:** Government portal are always subject to security risks and attacks. Department proposes to get audited Delhi government Web Portals and applications from Competent agencies with respect to security provisions and subsequently take necessary steps to secure the portal from hacking, defacing and other security threats. To address the cyber security concern, DeGs under Department of IT, has empanelled an agency to conduct security audit in house. The Department opting for security audit will be charged @ Rs. 3000/- per man day. The security agency will also prepare State Cyber Security plan to reduce/ prevent cyber security threats.

**State Data Centre:** - Delhi Government has designated NICS Data Centre as State Data Centre. State Data Centre involves collocation charges, AMC charges of servers, SAN and takes TAPE back-up charges, hiring charges of virtual machines on Gol clouds i.e. Meghraj.

## **7. Readiness for implementing various Government of India's ICT related bill /Framework Standard /TETRA**

Annual Plan Outlay 2016-17 : ₹ 400 Lakh

**Tetra Communication System:** Government of NCT of Delhi has adopted TETRA Network during the CWG-2010. Delhi police, Divisional Commissioner Office, DTC, Health and Family Welfare, CATS, MCD, Directorate of Home Guards and Civil Defense, Trade & Taxes and Election are using Tetra for the legacy period w.e.f. 1st March, 2012.

Department will keep using existing TETRA network and more Department may request for using TETRA system. Further Delhi State has to comply/ implement various bills, standards, guidelines and framework of the government of India. Total 4796 Tetra sets are being used by various departments in GNCTD Delhi including Delhi police.

**Implementation of National e Authentication Framework:** - National e-Authentication Framework is to assist all government departments/agencies at both central and state levels in the selection and implementation of appropriate authentication mechanisms for delivery of government services through internet/mobile.

The propose outlay shall be utilized for hiring of consultants, license fee, rent of Tetra sets and expenditure on authentication framework.

## **8. IT Component for Samajik Suvidha Sangam**

Annual Plan Outlay 2016-17 : ₹ 100 Lakh

Mission Convergence (Samajik Suvidha Sangam), Government of NCT of Delhi (GNCTD) has been implementing the system integration project for developing robust web based application and centralized database encompassing demographic details of households living in the slums. To develop the convergence application M/s Vayam Technologies Ltd. was selected as system integrator to develop the convergence application i.e.

1. Development of integrated workflow application and portal development and deployment.
2. Mission convergence data centre preparation and installation.
3. **Hardware procurement and installation:**
  - Deployment of hardware at 24 extended GRC-SKs under SI Project.
  - LAN at 20 new location and internet connection.
  - Server installation at Data Center at NICSI, LNDC.
  - Server installation at Disaster recovery Site at Pune
  - SI schemes of SW &WCD – application implementation's schemes of Urban development, GNCTD, SI schemes of Labour Department.

- Department for Welfare of SC/ ST/OBC/ Minorities, Schemes of Education, health and Food & supply department of NCT of Delhi.
- GRC-SKs Activities Module – Finance module
- STQC appointed as TPA for System testing and Audit for SSS, System Integration Application and Data Center.

### **Achievements:**

- Application redesigned and upscaled for GRC-SKs Activities Module and Finance module.
- Obtained Security Audit certification from STQC.
- Data Center operationalization and port opening for accessing live application.

### **Physical Targets for 2016-17:**

- Implementation and Monitoring of online application for Delhi Building And Other Construction Workers Welfare Board (DBOCWWB) under Labour department
- Implementation of schemes of SC/ST Departments and Integration with existing database.
- Health and Family welfare department for Dashboard Application
- Establishment of secure VPN Connectivity from to NICSI for GRCs, DRCs and department's nodal offices.

## **9. Preparation of Geo Spatial Data Base for Delhi**

Annual Plan Outlay 2016-17 : ₹ 100 Lakh

The Project is aimed at creating geospatial data of Delhi, enabling for better planning/implementation of public amenities (Roads, sewage, water supply, land records) and for checking the encroachments. The Project was started during the year 2004-05. This Project has been transferred to a Govt. owned company Geo Spatial Delhi Ltd w.e.f. 1-07-2012. 28 I.P. Cameras have been installed in 26 locations, 28 lease lines have been terminated. 63 I.P. Cameras are to be installed. All the line departments have to update their data.

The Project will not only benefit the department in preparation of their planning but also give updated information to public in r/o civil, electrical work done in their locality. According to the provisions of Delhi Geo Spatial Infrastructure (Management, Control, Administration, Security, and safety) Rules 2011, Geo spatial Delhi Limited has to provide services to line department under Delhi Spatial Data Infrastructure (DSSDI) Project. GSDL has to perform following tasks on behalf of Government of Delhi.

- To Provide navigation and other information through internet protocol camera, Portal or any other photographic or other medium for the facilitation of various organizations including Police, Fire Brigade, Municipal authority, Civil Administration Disaster Management Authority etc, in the event of any natural or manmade disaster in Delhi.
- To establish, manage and maintain helpline services for the public to seek and or provide information pertaining to any development activity including excavation work in any area or locality within the territory of the Delhi along with similar information on the web-portal with facility to update the information in consonance with the periodical -progress of such development work from time to time.
- To provide any other services based upon the applications of the Geo Spatial Data as deemed necessary by the Government.

## **10. Wi-Fi Delhi**

Annual Plan Outlay 2016-17 : ₹ 2500 Lakh

Department of IT has been selected as the nodal department for this ambitious project of Govt. of NCT of Delhi. It is proposed to install 3000 Wi-Fi hotspots in entire Delhi initially. It may be increased to more 3000 Wi-Fi spots at later stage. All of the 70 constituencies will be covered under this project.

The Wi-Fi facility is being provided at Delhi Secretariat to the guest and officers/officials. #