



SPECIAL STUDY REPORT

ON

ENVIRONMENTAL ISSUES IN ISLAMABAD

CAPITAL DEVELOPMENT AUTHORITY

CAPITAL ADMINISTRATION & DEVELOPMENT DIVISION

AUDIT YEAR 2015-16

AUDITOR GENERAL OF PAKISTAN

PREFACE

The Auditor General conducts audit in accordance with Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan, 1973 read with Section 8 of the Auditor-General's (Functions, Powers and Terms and Conditions of Service) Ordinance, 2001. The Auditor General can also undertake studies under Section 10 the Ordinance. Special study of Environmental Issues in Islamabad was carried out accordingly.

The Directorate General Audit Works (Federal), Islamabad conducted the special study in 2016 with a view to reporting significant findings to the stakeholders. Audit assessed, on a test check basis, whether the management complied with applicable laws, rules, and regulations to protect the environment. The Report indicates specific actions that, if taken, will help the management preserve the environment and beauty of the city. Audit observations included in the Report could not be discussed with the Principal Accounting Officer in the Departmental Accounts Committee meeting despite efforts made by Audit.

The Report has been prepared for submission to the President in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan, 1973 for causing it to be laid before the Parliament.

Islamabad
Dated: 23rd February, 2017

Sd/-
(Rana Assad Amin)
Auditor General of Pakistan

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ABBREVIATIONS AND ACRONYMS

CDA	Capital Development Authority
DAC	Departmental Accounts Committee
EIA	Environment Impact Assessment
EPA	Environment Protection Agency
ICT	Islamabad Capital Territory
JICA	Japan International Cooperation Agency
MES	Military Engineering Service
MGD	Million Gallons per Day
NGO	Non-Governmental Organization
NOC	No Objection Certificate
PEP	Pakistan Environment Programme
PEPA	Pakistan Environmental Protection Agency
RDA	Rawalpindi Development Authority
SDO	Small Dam Organization
Sft	Square Foot
STP	Sewage Treatment Plant
TMA	Tehsil Municipal Administration
UV	Ultraviolet
WHO	World Health Organization

EXECUTIVE SUMMARY

The Directorate General Audit Works (Federal), Islamabad carries out audit of Federal Government entities, including government departments and autonomous bodies, engaged in construction works. This office is mandated to conduct regularity (Financial Attest and Compliance with Authority) audit, performance audit, special audit/studies of these entities as well as project audit of mega projects executed by them. Capital Development Authority (CDA) is one of the entities under the auditorial jurisdiction of Directorate General Audit Works (Federal).

The Capital Development Authority Islamabad

CDA was established under CDA Ordinance promulgated on 27th June, 1960. CDA is governed through an Executive Board constituted by Federal Government under Section 6 of the Ordinance. Secretary, Capital Administration and Development Division is its Principal Accounting Officer. The objectives of CDA include:

- Planning and Development of Capital (Islamabad),
- Provision of Municipal Services within the Federal Capital Territory Islamabad,
- Establishment and Maintenance of Various Sectors of Islamabad,
- Allotment and Transfer of Plots in these sectors,

Planning Wing of CDA is responsible for planning and authorizing land use as per master plan of the Islamabad Capital City. Allotment of land rests with Estate Management Wing. Environment Wing has also been established within the Authority to deal with various environmental issues of the capital city. Sanitation Directorate is responsible for delivery of adequate sanitation and garbage disposal services within municipal limits of Islamabad. Approximately 600 tons of solid waste is collected and transported from Islamabad on daily basis. One of the functions of Sanitation Directorate is clearance of nullahs / streams in coordination with Environment Wing. Enforcement Directorate of CDA is responsible for taking action

against any illegal activities carried out within the jurisdiction of CDA vis-à-vis the CDA Ordinance.

CDA performs environment related activities through Environment Wing comprising following Directorates:

- i. Environment Directorate (Regional)
- ii. Environment Directorate (East)
- iii. Environment Directorate (Urban/West)
- iv. Directorate of Parks
- v. Zoo & Wildlife Management Directorate

Major functions of Environment Wing, headed by a Member, include protection, conservation and management of the city. It also caters for the protection and conservation of forests, control of forest fires, afforestation of open areas and development of view-points and their maintenance.

Environment Directorate (Regional) is responsible for protection, conservation & management of Margallah Hills National Park (MHNP) and soil conservation activities in the catchments areas of Simly Dam. To control diverse range of activities, the Directorate is divided into two Divisions including Forest and Soil Conservation Division. Forest Division spreads over the entire Zone-III of Islamabad (Margallah Hills National Park as notified under section 21 of the Islamabad Wild Life (Protection, Preservation, Conservation & Management) Ordinance, 1979, other protected ranges, forest areas and un-acquired land falling between the Margallah Hills & north of Murree Road) and is declared as Margallaha Hills National Park in 1980.

Environment Directorate (East) and Environment Directorate (West) look after urban areas and nurseries.

Directorate of Parks is responsible for Development & Improvement of Parks and Landscaping of green areas.

Zoo & Wildlife Management Directorate is responsible for public education, research, recreation and conservation of wildlife through captive breeding besides protection, preservation, conservation and management of wildlife.

Following table shows expenditure position of major Directorates of Environment Wing for financial years 2011-12 to 2014-15:

(Rs in million)

Financial Year	Environment Directorate (Regional)	Environment Directorate (East)	Environment Directorate (West)	Parks Directorate	Total
2011-12	283.900	277.965	29.312	327.864	919.041
2012-13	124.242	246.366	150.023	75.604	596.235
2013-14	141.125	277.728	156.322	248.348	823.523
2014-15	222.789	328.004	203.832	159.958	914.583
Total	772.056	1,130.063	539.489	811.774	3,253.382

Source: Annual Audit & Inspection Reports

Special Study of Environmental Issues in Islamabad

‘Special Study of Environmental Issues in Islamabad’ was carried out during 2015-16, as a part of the Approved Audit Plan. Environment, as defined in the Article 2 (x) of Pakistan Environment Protection Act, 1997, means:

- a) air, water and land;
- b) all layers of the atmosphere;
- c) all organic and inorganic matter and living organisms;
- d) the ecosystem and ecological relationships;
- e) buildings, structures, roads, facilities and works;
- f) all social and economic conditions affecting community life;
- g) the inter-relationships between any of the factors specified in sub-clauses (a) to (f)

Audit Objectives

Main objectives of the study were to:

- i. Ascertain the role, if any, specifically/formally assigned to CDA in the matters of protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution, promotion of sustainable development, and for matters connected therewith and incidental thereto; and

- ii. Assess the effectiveness with which the said role was being played by the Authority.

Audit Scope and Methodology

Scope and methodology adopted for the special study included:

- i. Review and analysis of the various environmental laws and policies of the Federal Government to ascertain their implications on the functions of CDA and the role, if any, required of/assigned to them.
- ii. See if any effective system existed within the CDA, being an Authority dealing with majority of components falling within the above definition of 'environment' for constant coordination with the Environment Protection Agency (EPA).
- iii. Ascertain if any regulations, procedure or grass root framework were required/devised by the CDA in consultation with EPA, for adherence in day-to-day performance of its functions to ensure protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution, promotion of sustainable development, and for matters connected therewith and incidental thereto, being a government agency/local authority.
- iv. If so, how effectively the said procedure/framework was being followed/implemented by the relevant segments of the Authority so that no violation of the relevant provisions of the Act could take place in the process of according various approvals during performance of its day-to-day functions.
- v. Review against rules and regulations to identify the areas where the laws, rules and regulations for protection of environment were violated.
- vi. Review of approvals for various projects/land uses to see that such approvals were in accordance with the approved

- plans/objects and changes, if any, were allowed only where there was no adverse impact on environment.
- vii. Ascertain that proper actions/measures were initiated to remove encroachments/illegal activities causing adverse impact on environment, human health and natural scenery of the capital city.
 - viii. Ascertain the consequences of violations of environmental laws and regulations.
 - ix. See if any initiatives were taken by CDA to prevent and save the environment from damage or de-gradation.
 - x. See whether buildings, land, etc. were being managed in accordance with approved plans/ laid down environment standards.
 - xi. Review studies/analysis carried out by NGOs/general public and articles published and see action, if any, taken to implement the recommendations made.
 - xii. Identification of weaknesses in system of internal controls and recommendations to avoid non-compliance of laws, rules, regulations and prescribed procedures.
 - xiii. Collection of information and meetings/discussions with CDA management/ employees, survey of green belts, natural streams, natural park areas as well as various sites/locations in the city (*Note*: Audit also issued two questionnaires to the Authority demanding specific information regarding system of environmental protection prevailing in CDA and environment related activities of the Authority, neither of which was responded).

Key Audit Findings

Key audit findings are as under:

- i. CDA was supposed to be designated by the Federal Environment Agency, as the ‘Government Agency’, in order to ensure, before according approval of building plans, that no violation of Pakistan Environment

Protection Act, 1997 would take place if the approval in question is accorded. Neither it has been so designated, nor do its byelaws make the mandatory Environmental Impact Assessment (EIA), to be obtained by the applicant from the designated government agency, a prerequisite to such an approval.

- ii. CDA has not made any regulations and procedures to ensure protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution, promotion of sustainable development and to ensure that no violation of the relevant provisions of Pakistan Environment Protection Act take place in the process of according various approvals.
- iii. The forest land measuring 122 Kanals was grabbed/encroached. Roads and buildings were also constructed illegally in the reserve forest compartments. The Environment Directorate of CDA, in this way, failed to protect and conserve the forest land.
- iv. There have been 146 occurrences of fire in the Margallah Hills from 2009 to 2014, with overall duration of fire for 575 hours damaging the forest/trees on 803.5 acres that added to air pollution in the Capital City. No concrete preventive measures appeared to have been adopted by the Authority to mitigate the risk of fire, nor was the required/specialized equipment, trained staff available with the Authority.
- v. CDA does not have a proper system for keeping record of the trees planted during campaigns and taking care/regular monitoring of the same to minimize plant mortality.
- vi. Integrated waste management system has not been developed despite recommendation of Environmental Protection Agency in October 2004.
- vii. Development of kachi abadies along natural streams/nullah and national park area was not controlled.

- viii. Hospital Waste Management monitoring system is not working effectively.
- ix. Measures have not been ensured to implement recommendations of various independent studies on the environmental issues.

Recommendations

- a) CDA may be declared as the 'Government Agency' for the purposes of Article 12 of Pakistan Environment Protection Act, 1997.
- b) The Authority may amend its byelaws to make the mandatory Environmental Impact Assessment (EIA), to be obtained by the applicant from the designated government agency and fulfillment of all other prerequisites prescribed in the Act.
- c) CDA may also frame an elaborate procedure or grass root framework and internal controls, within the Authority, in consultation with EPA to ensure protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution.
- d) Recommendation of the various surveys/reports including those mentioned in this report need to be implemented in letter and spirit.
- e) Master Plan of Islamabad needs to be strictly implemented to ensure that no encroachments on the CDA land are made and commercial activities in greenbelts/national park area should be effectively checked and must be discouraged.
- f) Hospital Waste Management System needs to be monitored strictly.
- g) A proper system of survey and monitoring of the forests/trees needs to be devised to keep record, minimize the plant mortality and to save them from being removed illegally.

AUDIT FINDINGS

1. Role of CDA in Environment Protection

Article 12 of Pakistan Environment Protection Act, 1997, under caption “*Initial environmental examination and environmental impact assessment*” provides that ‘No proponent of a project shall commence construction or operation unless he has filed with the Government Agency, designated by Federal Environmental Protection Agency or Provincial Environmental Protection Agencies, as the case may be, or, where the project is likely to cause an adverse environmental effects, an environmental impact assessment, and has obtained from the Government Agency approval in respect thereof’. CDA has not been so designated.

1.1 Non-assignment of any designated role for the purpose of Pakistan Environment Protection Act

1.1.1 The CDA was supposed to be designated by the Federal Environment Agency, as the ‘Government Agency’ referred to above, being an Authority, responsible for according approvals for building plans, developing sectors in the capital city and leasing land for different uses, in order to ensure, before according any such approval, that no violation of the Act would take place if the approval in question is accorded. Neither it has been so designated, nor do its byelaws make the mandatory Environmental Impact Assessment (EIA), to be obtained by the applicant from the designated government agency, a prerequisite to such an approval. In one such case, mentioned here by way of illustration, another government agency, Pakistan Housing Authority Foundation (PHAF) awarded a work “*Infrastructure Development Works of Housing Scheme for FG Officers Residencia at Kurri Road, Zone-IV Islamabad*” to M/s MAAKSONS (Pvt.) Ltd. at a cost of Rs 579.76 million and started the construction work in March, 2012 without preparing any Environmental Impact Assessment (EIA) and approval from Pakistan Environment Protection Agency. On being pointed out, it was replied that the preparation of EIA report was still under process.

1.1.2 Similarly, Article 11 of the Act, under caption '*Prohibition of certain discharges or emissions*' states that, subject to the provisions of the Act and the rules and regulations, no person shall discharge or emit or allow the discharge or emission of any effluent or waste or air pollutant or noise in an amount, concentration or level which is in excess of the National Environmental Quality Standards or, where applicable, the standards established under another provision of the Act. CDA being an overall regulator of activities taking place in its jurisdiction, including allotment/lease of land for industrial and commercial use, approval of plans and monitoring construction of the buildings to be constructed upon this land, is supposed to ensure that none of its approvals has an effect of allowing the discharge or emission of any effluent or waste or air pollutant or noise in an amount, concentration or level which is in excess of the National Environmental Quality Standards. This is not a part of byelaws applicable to such approvals/constructions, nor has any power been delegated by the Federal Agency to CDA authorizing it to check any such discharge or emission.

1.1.3 Hence no role has specifically been assigned to CDA, being a local authority dealing with majority of components falling within the definition of 'environment' as given in Article 2(x) of Pakistan Environment Protection Act. There hardly exists any system within the Authority for constant coordination with the Environment Protection Agency (EPA) as well, to carry out purposes of the Act during its daily functions.

Audit recommends that the Authority may make it mandatory to conduct Environmental Impact Assessment, improve its functions as regulator and evolve a system for constant coordination with EPA.

1.2 Non-framing regulations, procedures, grass root framework for improvement of environment

1.2.1 CDA has also not made any regulations, procedures or grass root framework, with or without consultation of Environment Protection Agency, for adherence in day-to-day performance of its functions to ensure protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution,

promotion of sustainable development, and for matters connected therewith and incidental thereto, being a government agency/local authority and to ensure that no violation of the relevant provisions of the Act takes place in the process of according various approvals and their implementation.

1.2.2 Hospital Waste Management

Hospital waste management means the management of wastes produced by hospitals using techniques that will check the spread of diseases. Hospital waste carries a high potential of infectious contents. Inadequate and improper handling thereof may not have only serious public health consequences but also a significant impact on the environment.

As per Rule 4 (1) of Hospital Waste Management Rules 2005, the Medical Superintendent shall constitute a Waste Management Team comprising the following by whatever designation called namely:

(a) Medical Superintendent	.....	Chairman
(b) Head of all Hospital Departments	.....	Member
(c) Infection Control Officer	.....	Member
(d) Chief Pharmacist	.....	Member
(e) Radiology Officer	.....	Member
(f) Senior Matron	.....	Member
(g) Head of Administration	.....	Member
(h) Hospital Engineer	.....	Member
(i) Head of the Sanitation Staff	.....	Member
(j) Other Hospital staff members as the Medical Superintendent may designate...		Member
(k) A public representative of the District Administration nominated by District Coordination Officer	.....	Member
(l) A representative of a Provincial Agency Concerned or in case of a hospital located in Islamabad Capital Territory, the Federal Agency	.....	Member

CDA runs its own hospital (Capital Hospital) at Islamabad. Audit observed that a Waste Management Team has been notified by Capital Hospital but no proceedings or actions taken by the said team are forthcoming from the record. Moreover, CDA was requested to provide information regarding hospital waste management system or any monitoring mechanism established within the entity but no information was provided.

Audit recommends that hospital waste management is an important process that must be dealt with diligently.

2. Violations of Pakistan Environment Protection Act and Other General Policies

Following violations were noticed during regular annual audits of the Authority:

2.1 Use of green belts in violation of Master Plan of Islamabad

As per Master Plan of Islamabad Capital City, wide green strips are to be maintained and kept clear of any sort of construction. Audit noticed during regular audit of CDA that a number of green belts detailed below were being used by various private concerns/government departments for different purposes in violation of the Master Plan:

- Green belt G-5 is being used for parking purpose.
- Green belt on 9th Avenue Islamabad (F-8) is being used for Traffic Police Office.
- Various departments are using green areas/spaces along Mauve Area G-8, G-9 & G-10 for parking purpose.
- CNG/Filling Stations are established along Kashmir Highway.
- Kiosks stand established in green belts of all sectors.
- Bus Stands, shops etc., have been established on green belts between IJ Principal Road & sectors of I Series.

- Huge structures have been erected in the name of security.

Audit recommends that Master Plan may be observed and measures be taken to restore the scenic beauty and desired civic pattern of the capital.

2.2 Non-clearance of green belts on cancellation of allotments of kiosks

A judicial commission constituted by Islamabad High Court, Islamabad recommended in its report that *temporary permission for lease/licenses regarding use of CDA land should be banned*. Accordingly, the Directorate of Municipal Administration, CDA cancelled all temporary licenses issued by it for tea stalls/tuck shops/Kiosks/counter/cabin/snack bars etc. within the municipal limits of Islamabad w.e.f. 01.11.2013 but no action was taken to physically remove the same.

Audit recommends that judicial commission's recommendations be implemented in letter and spirit.

2.3 Leasing of a restaurant in national park area without approval from Planning Wing

Land measuring 47,000 Sft. was leased out by Directorate of Municipal Administration, CDA for restaurant at Pir Sohawa without approval/clearance from Planning Wing of the Authority. In actual, however, an area measuring 61,740 Sft. has been occupied by the allottee/lessee.

Audit recommends that fulfillment of codal formalities under Land Disposal Regulations may be ensured in letter and spirit. Moreover, public asset may be made secured besides proper leasing of the area under rules.

2.4 Inefficient Forest Management causing grabbing of forest land and non-adoption of preventive measures to minimize fire incidences in Margallah Hills National Park

Margallah Hills National Park comprising 12,605 hectares of land was established towards north of Islamabad city in 1980, which constitutes a remarkable diversity of ecological, cultural and recreational environment. Environment Directorate is responsible for developing the Margallah Hills National Park (MHNP) and for protection, preservation, conservation and management of scenery, flora and fauna in a natural state. Audit noted that:

- i. The forest land measuring 122 Kanals was grabbed/encroached by some encroachers. Roads and buildings were also constructed illegally in the reserve forest compartment No. 8 & 23. The Environment Directorate, in this way, failed to protect and conserve the forest land.

The matter was discussed in DAC meeting held on 16th, 17th and 31st December, 2013 wherein CDA apprised the Committee that demarcation was in progress. The Committee directed CDA to complete the demarcation and submit report of retrieval of CDA land.

The matter was again discussed in DAC meeting held on 11th May, 2016 wherein it was apprised that demarcation and retrieval of land is in progress by the Survey of Pakistan. The matter is also in the Court of Law. The Committee directed CDA to provide all relevant correspondence in this regard made with Government departments alongwith demarcation report and retrieval of land.

Compliance of DAC's directives regarding demarcation and retrieval of CDA land was not reported to Audit.

Audit recommends that implementation of CDA Ordinance be ensured to save precious CDA property

and an inquiry be held for fixing responsibility for non-safeguarding the CDA assets.

(PP 2.4.14/AR2013-14)

- ii. There have been 146 occurrences of fire in the Margallah Hills during a period of five and half years from 2009 to 2014, with overall duration of fire for 575 hours damaging the forest/trees on 803.5 acres that added to air pollution in the Capital City, besides other adverse impacts.

No preventive measures appeared to have been adopted by the Authority to mitigate the risk of fire and to reduce the instances of fire. Required/specialized equipment, trained staff was also not available with the Authority:

Year	Fire Instances (No.)	Duration of Fire (Hours)	Area Damaged (Acres)	Trees Burnt (No.)
2009	56	249	340	Not identified
2010	10	40	100	20
2011	12	12.30	5.5	Not identified
2012	46	217.50	307	53
2013	06	14.30	11.50	3,000
2014 (July 14)	16	42	39.5	Not identified
Total	146	575	803.5	3,073

Audit recommends that long term and short term mitigating measures be taken to secure green areas.

2.5 Non-existing of system regarding accounting of trees and monitoring

Every year a target is fixed by the Authority for tree plantation during Spring and Monsoon Seasons which is also shown achieved almost. For example, 2014-15 targets and results have been as under:

Monsoon Season

Sub-Division of Environment Directorate	Proposed Target (No.)	Target Achieved(No.)
Urban-II	20,000	16,770
Urban-III	20,000	14,573

Spring Season

Sub-Division of Environment Directorate	Proposed Target (No.)	Achieved Target (No.)
Urban-II	20,000	14,000
Urban-III	20,000	15,300

However, the Authority does not have a proper system for keeping record of the trees planted during these campaigns and taking care/regular monitoring of the same. There is no system of numbering such new plants. Even the existing trees are not numbered to ensure their verification during any subsequent survey. Any system of periodic survey of these plants/trees also does not exist to check survival/mortality rate and to save them from being cut/removed illegally.

As mentioned earlier, Audit demanded data as to the number of trees planted, survival of the trees planted in the past as well as those removed by the CDA itself, residents of relevant areas or as a result of a road construction project. No response was received despite repeated reminders/personal contacts.

Audit stresses for preparation of record of trees and adoption of appropriate measures to avoid illegal cutting and theft of the wood from forest.

2.6 Non-preparation of Integrated Waste Management System

In October, 2004, Environmental Protection Agency recommended that CDA should make a future waste management plan not only to reduce the waste management cost but also to be a pioneer in the field in Pakistan. The contract agreements concluded for

collection of garbage allowed the contractors to adopt any type of treatment, like recycling/composition activities on the collected waste at their own. It was noted that CDA spent Rs 262.96 million for cleaning & collection of garbage from various sectors to specified dumping sites in Sector H-12 during 2014-15 that was subsequently changed, on the complaints of residents about the pollution spreading in the area, to I-16 rather than addressing the issue in its true perspective i.e. disposal of the waste through scientific methods. The Authority intimated that planning for integrated waste management system was still underway.

Audit recommends that integrated waste management system may be evolved as early as possible.

2.7 Unauthorized commercial use of green belts, CDA land, development of kachi abadies, dumping of garbage, etc.

A survey of Islamabad city revealed the following facts:

- a) It was noted that unauthorized commercial activities like dumping of construction materials for sale, tea stalls, fruit/vegetable shops, etc. in greenbelts and along roads are still continuing.
- b) Sufficient vacant land was originally left as open space alongside natural streams to maintain un-interrupted flow of rain water and growing of plants. It was observed that residential plots were created on this land along natural nullahs.
- c) A number of unplanned/kachi abadies have emerged in Sectors F-7, G-7 and G-8 in the bed of nullahs. The one in G-7 Markaz covers the whole of the land along the nullah upto the edge of the nearby roads. There is hardly any check on development of such abadies in the capital city, which are increasing with the passage of time and tarnishing the image, "Islamabad-the beautiful".
- d) A huge quantity of sewage water is being thrown in nullahs without first being treated in the Sewage Treatment Plant (STP) constructed by CDA in Sector I-9.

The Plant is operating just at 37.53% of its capacity i.e. 06 million gallons per day (MGD), with full recurring cost being incurred. It is designed for treating 17 MGD of sewage.

- e) Rapid increase in population, has led to construction of a large number of multi storey/high rise buildings and a manifold increase in number of vehicles, in turn increasing air pollution in the city.
- f) About 500 tons of garbage is generated in the city every day, which is being dumped in Sector I-16 without any treatment.

Audit recommends that long term mitigating measures be taken to:

- i. Improve civic pattern and liveliness of Islamabad through rehabilitation of natural streams, bio life, etc.
- ii. Remove encroachments.
- iii. Take care of landfill areas which are spoiling environment.
- iv. Improve sewage water treatment function.

2.8 Removal of trees for development project

During a meeting between Chairman CDA and Commissioner Rawalpindi (Project Director of Metro Bus System) held on 16th April, 2014, it was decided to shift trees and other services falling en route the Metro Bus for smooth execution of the project.

CDA prepared an estimate of Rs 4.11 million for shifting of plants at the route of Metro Bus but no amount was recovered on this account from Metro Bus Project Authority.

Audit observed that during execution of Metro Bus Project, not only the trees/plants were uprooted, the service roads and green belts around the area were also badly affected. The estimate prepared by CDA did not include the cost of damaged trees, reconstruction of green

belt and rehabilitation of damaged service roads. Alternate routes were required to be prepared well in time before the start of the project but no such arrangements were made. Resultantly, the load of heavy traffic was shifted to the service roads and other alternate routes which were badly affected and caused loss to the Authority as those roads now require major repair/rehabilitation.

Although Metro Bus Project was being executed by the Government of Punjab, as a civic agency and municipal body it was an obligation of CDA to implement measures such as:

- i. Alternative routes for ensuring smooth flow of traffic.
- ii. Protection of Green belt from destruction or total elimination during the construction.
- iii. Protection from dust and air pollution due to heavy construction work.

CDA failed miserably to take necessary measures before commencement of the mega project. Most of the green belts falling in the route of Metro Bus were totally destroyed. Environment of Islamabad became heavily polluted due to non-implementation of requisite safety and protection measures such as sprinkling of water, etc. Due to massive digging and frequent transportation of excavated earth, Islamabad was engulfed in clouds of dust.

Audit pointed out the non-recovery and environmental hazards in October 2014. The Authority replied that said plants were shifted departmentally without involving any cost. In fact the provision was made for shifting of trees/plants through other sources, whereas the Authority shifted the plants at its own. The Metro Project administration would pay the rehabilitation cost after completion of Project. In reply, it was admitted that CDA used its own resources for shifting of trees and rehabilitation work and cost would be charged to Metro Project later on. The cost of manpower as estimated under the referred estimate should also be recovered.

Audit maintained that the mismanagement and non-recovery occurred due to negligence of the Authority and lack of oversight mechanism for implementation of internal controls.

Audit stresses upon recovery of tree shifting charges and rehabilitation cost and fixing responsibility for mismanagement and lack of initiative in such a mega project.

(PP 2.4.34/2014-15)

2.9 Irregular/Unauthorized award of work to a non-specialized firm - Rs 8.92 million

As per Notice Inviting Tenders for procurement of “Forest fire Equipment and Wireless System” sealed tenders were invited on percentage basis from the enlisted CDA firms/contractors in appropriate category and tenders were to be issued only to those firms having experience in relevant field of work. As per Pakistan Engineering Council (PEC) Bye-Laws, no engineering work/ procurement shall be made except by a contractor licensed as such by PEC. The license issued to the contractor shall specifically mention the type of work that the contractor can undertake according to discipline shown in the application form prescribed in the Appendix-A of the bye-laws.

Environment Directorate (Regional) CDA Islamabad awarded a work “Procurement of Wireless/Telecommunication Equipment” to a contractor registered under category CE-10 (General Civil Engineering Works) instead of required registration under category EE-07 (Telecommunication Installation). Audit observed that the supplier/ contractor was not registered under the relevant category of specialization, therefore, award of the work to a non-specialized firm was irregular/ unauthorized. This resulted into irregular/unauthorized award of work for Rs 8.92 million to a non-specialized firm.

The matter was discussed in DAC meeting held on 16th, 17th and 31st December, 2013 wherein CDA explained that required equipment was arranged by the contractor through its co-partner who was registered with PEC. DAC did not accept the viewpoint of the Authority and directed to hold an inquiry at Ministry level for fixing responsibility within one month.

The matter was again discussed in DAC held on 11th May, 2016 wherein it was apprised that the Wireless Telecommunication equipment supplied was of substandard. Recovery of Rs 3.50 million was effected from the contractor. The case has also been referred to FIA for further investigation. The Committee directed CDA to complete the proceedings of fact finding inquiry besides to furnish revised reply and latest status of the case, and get the effected recovery verified from Audit.

Outcome/Finding of the inquiry has not been finalized and shared with Audit.

(PP 2.4.10/AR2013-14)

3. Review of Various Studies Carried out by Different Agencies

The following study reports on different environmental issues were found posted on PEPA Website. Findings and recommendations made in each of these studies are also mentioned against each, but nothing was forthcoming from the website as to action, if any, taken by CDA towards implementation of these recommendations.

3.1 Case Study on Contamination of Drinking Water Quality of Water Filtration Plants Installed at Islamabad and Rawalpindi – August 2005

The Study found High Bacteriological Contamination Level and other issues in the drinking water. Summary of findings and recommendations of the study are as under:

Findings

Water is second to oxygen as being essential for life. The average adult consumer consumes and excretes about 6 to 8 cups per day. Drinking water is never pure. Water naturally contains minerals and micro-organisms from the rocks, soil and air with which it comes in contact. Whether or not drinking water is safe will depend on which impurities are present in what amounts.

World Health Organization (WHO) and most of the countries of the world including Pakistan have devised standards to ensure that public drinking water is safe. In Pakistan especially in urban areas the drinking water gets contaminated either from the source or through the distribution system. To ensure the supply of the safe drinking water to the public, the Government of Pakistan initiated “Clean Drinking Water for All” programme for all its citizens in three year till the year 2007. The local administrations of Islamabad and Rawalpindi initiated this programme and installed number of water filtration units. Until August 2005, five (5) water filtration plants are installed in Islamabad, while 32 similar types of units were installed in Rawalpindi. Many more water filtration plants were under construction in both cities.

Pakistan Environmental Protection Agency (Pak-EPA) has taken initiatives through its Pakistan Environment Programme (PEP) component to check the water quality of already installed filtration units in Islamabad and Rawalpindi. Water Sampling were performed both for chemical and biological analysis. For this purpose, a monitoring team was constituted by Pak-EPA comprising laboratory analysts along with PEP inspectors and officers. In-situ analysis of the number of parameters was performed, while for rest of analysis, water sampling was performed according to the standard sampling methods. A brief about the water filtration plants efficiency is reflected in following table:

Cities	Total No. of Filtration Units	Chemical Contamination	Bacteriological Contamination	Total No. of inefficient filtration plants	% Inefficient water filtration plants
Islamabad	5	-	3	3	60%
Rawalpindi	26	2	14	16	61%

The study shows that almost 60% water filtration units in both cities are inefficient and the water supply from these units is not safe for human consumption.

Recommendations

- a. To protect the public health, water filtration system requires careful:

- Selection
 - Installation
 - Maintenance
 - Operation
 - Oversight; and
 - Administrative Support.
- b. Replacement of Filtration Plants may be carried out as per required specifications
 - c. Ultraviolet (UV) Disinfection System may be installed.
 - d. Appropriate flow rate of filtered water to be ensured to allow receipt of required dose of carbon.
 - e. UV Lamps must be changed at intervals specified by the manufacturers
 - f. Both the water provider and regulatory department must have properly equipped laboratories with trained and qualified staff for monitoring water quality on regular basis and reports must be published for public awareness.

3.2 Report on Rawal Lake Catchment Area Monitoring Operation (June, 2004) by Pakistan Environmental Protection Agency, Ministry of Environment Islamabad.

Background

The Rawal Lake is the main source of water supply for Rawalpindi city and cantonment. Rawal Dam is constructed on Kurrang river and has a catchment area of 106 sq miles, which generates 84,000 acre feet of water in an average rainfall year. There are four major streams and 43 small streams contributing to its storage. The total storage capacity is 47,500 acre feet (12,994 MG). Live storage is 43,000 acre feet or 11,763 MG). Highest flood level is 1,752 feet. Rawal Lake and its catchment area are key resources for Rawalpindi and for the region as a whole. Proper management of this resource is important if full benefits are to be gained and maintained

for the future. Most obvious benefit of the resources is the provision of water supplies for Rawalpindi.

Findings

3.2.1 For the last few decades, the lake is subjected to pollution by a number of sources. These sources are:

- Human settlements
- Poultry wastes
- Recreational activities
- Agricultural activities
- Deforestation
- Erosion and sedimentation
- Eutrophication of Rawal Lake

3.2.2 Human settlements

The villages of Bhara Kahu, Malpur, Bani Gala and Noorpur Shahan are situated close to the Rawal Lake. The estimated population of these villages is about 5,000 (Mott Macdonald International Limited, 1995). Presently, indiscriminate activities are also underway. A number of housing colonies, residential areas are coming up in the Rawal Lake catchment area without any consideration that this will adversely affect the quality of water coming into Rawal Lake. This includes dumping of untreated sewerage and solid waste in water channel. With all these activities, there is no consideration of having environmental clearance from the concerned agency.

3.2.3 Poultry wastes

Approximately 170 poultry farms having about 360 poultry sheds lie within the catchment area. Some basic arrangements for disposal of poultry wastes have been made but these are unlikely to significantly delay or prevent the inflow of pollutants into the lake.

3.2.4 Recreational activities

Recreational activities are another source of pollution. The tourist part at Chattar lies adjacent to the river and has large number of visitors. At present, a substantial proportion of human and other waste ends up in the river. Car washing is another recreational activity which has been identified as a pollution risk.

3.2.5 Agricultural activities

Agriculture is done in small patches of land or as terrace cultivation. The excess irrigation water is drained out through Nullahs and enter into the lake. The use of pesticides and herbicides in agriculture is a source of toxic pollution. These toxic chemicals are washed away by streams and enter the Rawal Lake. Although this activity is not practiced at large scale in the catchment area, but as people are getting aware about the use of chemical fertilizers and pesticides to get more productivity per unit area. This activity can become a major problem as far as quality of water is concerned.

3.2.6 Deforestation

The catchment area is subjected to deforestation due to grazing of livestock and cutting of wood for fuel by villagers. The villagers do not have any energy sources except wood available in the catchments area. Plantation has also been removed for the construction of roads, housing schemes and commercial buildings within the catchment area.

Deforestation encourages the erosion of the soil. Increase siltation and turbidity level.

3.2.7 Eutrophication of Rawal Lake

In addition to the pollution generated by human activity, lake also receives natural pollutants from the catchment area, which contains various wild animal species and fowls.

The excreta of these animals is deposited in the catchment area and enters the lake via heavy rain fall. Bacteria decompose this organic matter in the presence of oxygen, thus oxygen depletion results in the Eutrophication of the lake.

Action taken and Recommendations

In 1995, the Pakistan Environmental Protection Council appointed a Task Force for the control of pollution in the Rawal Lake who in turn set up a Working Committee. The Task Force included officials from Ministry of Environment, Ministry of Interior, Islamabad Capital Territory Administration, Small Dam Organization (SDO), Cantonment Board and Rawalpindi Development Authority. The Task Force held number of meetings and gave recommendations.

The recommendations included:

- Construction of septic tanks by the residents in the catchment area.
- No further human settlements in catchment area.
- Wide scale plantation.
- Proper sewerage disposal in the housing colonies.
- Proper dumping of animal waste.
- Systematic monitoring of Rawal Lake.
- Creation of a technical committee comprising Rawalpindi Development authority, Pakistan Environment Protection Agency, Capital Development Authority, Small Dam Organization, Military Engineering Service (MES), etc.

Various meetings of the technical committee were then held for the purpose. The committee formulated suggestions for the task force and the second meeting of the task force was held under the chairmanship of Secretary, Interior on 8th April, 2004. Recommendations of the technical committee were deliberated upon and the following decisions taken:

- Immediate suspension of commercial fishing in Rawal Lake.

- Proper disposal of solid and liquid waste in the catchment area which included designing of trunk sewer and the possibly sewerage treatment plant by CDA.
- RDA being the major stakeholder will appoint maximum of ten environment inspectors to work as field force for Rawal Lake pollution control. These inspectors will be at the disposal of Pak-EPA.
- Pak-EPA will train these inspectors and give them appropriate powers to monitor the activities in Rawal Lake catchment area.

ICT Administration issued order under Section 144 putting up complete ban on construction activities in the Rawal Lake catchment area comprising of Zone 3 & 4. There was a complete prohibition of working of the cattle sheds and poultry farms established along the banks of the water inlets/nullahs, which were polluting the water flowing into Rawal Dam in Rural Sub-Division, Islamabad.

Tehsil Municipal Administration (TMA) - Murree, CDA, RDA & ICT Administration were requested to provide complete list of housing colonies/ schemes which had been issued NOC since June, 2000. The sponsors of these colonies were to be asked to provide details of their projects and the arrangements made therein for disposal of solid waste, sewerage and other environmental mitigations.

No further survey/study appears to have been carried out to ensure if the recommendations of this study were being implemented regularly or not.

3.3 Rawal Lake Water Quality Monitoring - Pak-EPA Initiative

While taking cognizance of the serious pollution issue in Rawal Lake, Pak-EPA planned to conduct water quality survey of Rawal Lake. This survey had been designed by Japan International Cooperative Agency's (JICA) Senior Volunteer, stationed at Pak-EPA. This water quality monitoring plan was for the whole year to monitor

the seasonal variation on the water quality. The first two cycles of water quality monitoring had been completed and results obtained.

4. A Short Comment on Federal Environment Protection Agency's Website

The Agency's website was visited to collect certain information/documents in connection with this study. The facts given below by way of illustration show the level of interest prevailing in the Agency itself towards its basic function of protection, conservation of environment:

- One of functions of the Federal Environment Agency vide article 6 (d) of the Act is to prepare and publish an annual National Environment Report on the state of the environment. The only 'State of the Environment Report' posted on the Agency's website was a draft prepared sometime in 2005.
- The latest information about the activities of the Agency is a brief on its activities performed during July 2006 to March 2007.
 - Just 2 Environmental Impact Assessment Reports were received that too were stated to be under process.
 - Just 3 Initial Environmental Examination Reports were received and were under process.

5. Conclusion and Recommendations

Audit concludes that CDA has not played its role of civic and regulatory body efficiently towards environment of the capital city. There should be a futuristic approach correlating this aspect with rising population and other needs of the city.

Audit recommends that:

- a) CDA may be declared as the 'Government Agency' for the purposes of Article 12 of Pakistan Environment

Protection Act, 1997, being an Authority, responsible for according approvals for building plans, developing sectors in the capital city and leasing land for different uses, in order to ensure, before according any such approval, that no violation of the Act would take place if the approval in question is accorded.

- b) The Authority may amend its byelaws to make the mandatory Environmental Impact Assessment (EIA), to be obtained by the applicant from the designated government agency, a prerequisite to any relevant approval to be accorded by it. In addition, meeting of all other prerequisites prescribed in the Act for different activities having an adverse impact on the prevailing environment, including that under Article 11 thereof, should also be made part of the relevant CDA byelaws.
- c) There needs to be a system within the Authority for constant coordination with the Environment Protection Agency.
- d) CDA may also frame an elaborate procedure or grass root framework and internal controls, within the Authority, in consultation with Environment Protection Agency, for adherence in day-to-day performance of its functions to ensure protection, conservation, rehabilitation and improvement of the environment, prevention and control of pollution, promotion of sustainable development, and for matters connected therewith and incidental thereto, being a government agency/local authority and to ensure that no violation of the relevant provisions of the Act take place in the process of according various approvals.
- e) Recommendations of the various surveys/reports including those mentioned in this report need to be implemented in letter and spirit.
- f) Master Plan of Islamabad needs to be strictly implemented to ensure that no encroachments on the CDA land are made and the land is used strictly in accordance with approved plans in order to maintain the environment of the city.

- g) Authority needs to ensure that the lapses of the kind mentioned in this report that are likely to hamper the existing environment are preempted and timely action is taken to prevent the same.
- h) Greenbelts, natural streams and national park area need to be preserved as per approved plan. Commercial activities in greenbelts/national park area should be effectively checked.
- i) Proper cleanliness and up keep of plantation in the area is required to make the environment human friendly.
- j) Formations responsible for implementation of rules and regulations need to be made accountable for increasing trend of violations.
- k) A proper system of survey and monitoring of the forests/trees needs to be devised to keep record, minimize the plant mortality and to save them from being removed illegally.

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