

## **ENVIRONMENTAL AUDITING: SAI INDIA'S EXPERIENCE**

**By - K. P. Sasidharan**

### **Introduction**

Under Article 151 of the constitution of India and specific provisions of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971, the Supreme Audit Institution of India is entrusted with full mandate of conducting government auditing with regularity (financial and compliance) as well as performance audit frameworks. As this mandate is equally applicable to Environmental Auditing (EA), SAI, India has been integrating sustainable development concerns and EA concepts in different streams of its audit and, in certain cases, where deemed appropriate, has also been producing independent environmental audit reports on projects, programmes and activities. The guidelines, study papers and other research products on how to conduct systematically EAs, disseminated by the INTOSAI Working Group on Environmental Auditing since 1998 have further facilitated and intensified its efforts not only towards capacity building but also bringing out qualitatively more focused EA reports in recent years.

INTOSAI WGEA 'Guidance on Conducting Audits of Activities with and Environmental Perspective' classifies EAs into the following 5 specific types: "audits of government monitoring of compliance with environmental laws; audits of the performance of government environmental programmes; audits of environmental impact of other government programmes; audit of environmental management systems; and evaluations of proposed environmental policies and programmes". This article dwells upon some of the SAI India's EA reports in recent years and tries to identify different types of EAs conducted by SAI India in diverse spectra of its audit domains, applying the three well recognized government audit frameworks – Financial Audits, Compliance Audits and Performance Audits. Besides providing a bird's eye view of various EA reports, the paper also overviews three of SAI India's EA reports; (i) "Performance Audit of Conservation and Protection of Tigers in Tiger Reserves" (Report No: 18 of 2006); (ii) Report of the CAG on Government of Maharashtra for 2006– 'Performance Audit of Floods in Maharashtra – preparedness and response'; and (iii) "Environmental Management of Mumbai Port Trust" (Report 3 of 2007) as illustrative examples of SAI India's significant efforts in conducting full fledged EA reports with

*\*The author is a member of the Indian Audit & Accounts Service and is presently Pr. Director of Audit (Central), Mumbai. He is an alumnus from the London School of Economics; UK; Certified Information Systems Auditor (CISA, USA); Certified Fraud Examiner (CFE; USA); qualified Lead Auditor ISO 9001:2000; and Lead Auditor ISO14001:1996 (EMS).*

Performance Audit framework, applying internationally accepted guidelines and benchmarked best practices.

### **Types of SAI India's EA Reports**

Of the five specific categories of EAs, SAI India has, by now, produced reports identifiable in all the five distinct categories applying the government audit frameworks, though INTOSAI guidelines might not have been fully applied in preparation of some of those reports for obvious reasons. SAI India has not only conducted audit of air, noise, water, waste management, biodiversity, Environmental Impact Assessments, Environmental Management Systems and audit of execution of projects and programmes resulting into policy review by the executive by now, but also endeavoured to tread along new critical domains of environmental audit relating to flora, fauna, rehabilitation and relief issues, urban planning, agricultural activities, energy audit, and even on disaster planning and preparedness. The following discussion is an attempt to touch upon some of those significant EAs conducted in multi spectra domains of audit.

Reviewing the CAG's central and state reports during 2001 to 2006, about 187 EA reports/paras could be identified on varied subjects ranging from performance audit of Ganga Action Plan, 2000, compliance audits of applicable environmental regulations on air, water, solid waste management, hospital waste management, biodiversity etc. Some of the reports such as Ganga Action Plan were deliberated in depth by the PAC and recommendations offered for better management of the projects. These reports also provided in some cases, key inferences, valuable database and analysis for failure and non achievement of objectives with a view to help the executive making appropriate changes in policy formulation and strategy. There are few CAG reports falling in the fourth category of EA, commenting on the environmental impact of non-environmental program or any program or activity till 2006 or so.

Reviewing the SAI India reports of 2006, it is seen that Report No.4 – Union Government (Defence Services) contained performance reports on three naval projects – construction of a naval academy, a naval base and modernization of a navy hospital – where environmental impact had been commented upon. These three projects were not essentially environmental projects, but audit had commented environmental impact on coastal ecosystems, destruction of flora, fauna and degradation of beaches. Report No.5 of 2006 – Railways included performance appraisal of medical and health services highlighting non-maintenance of the prescribed standards for drinking water and food products and non-conformity in case of bio-medical waste management in railway hospitals. The Report recommended creation of facilities such as autoclave/incinerator for treatment of biomedical waste. Report No.2 of 2006 on Department of Atomic Energy commented on non-installation of incinerator system even after a lapse of nine years; causing environmental hazard by inefficient nuclear waste management. Performance Audit Report No.18 of 2006 on 'Conservation and Protection of Tigers in Tiger Reserves' is entirely a performance audit of an

environmental project and hence undoubtedly an EA report. This report is discussed subsequently in detail in the later part of the report.

A review of CAG's latest State Reports prepared in 2006 revealed that Accountant General of West Bengal had undertaken EA of arsenic alleviation programme as part of Receipt, Works and Local Bodies Audit. Accountant General of Himachal Pradesh had reviewed government commercial and trading activities and commented on air, water, soil pollution and non-existence / malfunctioning of sewage treatment plant (STP) and effluents treatment plant (ETP), afforestation and deficiency in EMS of State PSUs. State Report (Commercial & Receipt Audit) contained a report on EMS in a State PSU. State report of Tamilnadu had an EA report on water supply to Chennai city. State Report (Commercial & Receipt Audit) of Andhra Pradesh dealt with environmental safeguards in thermal power station of Power Generation Corporation Limited. Report of Goa for 2006 also contained a performance review on water supply and sanitation programme.

These reports were prepared by following internationally accepted INTOSAI performance audit guidelines and methodology. EA reports of SAI India cut across different streams of SAI India's audits – Defence, Railway, Central Government Departments and State Governments. Some of these reports were on non-environmental projects, but their environmental impacts were commented upon unlike in earlier performance reports and therefore, these reports became EA reports too. Methodology, audit criteria, evidence gathering and analytical techniques used for bringing the audit conclusions were based on internationally accepted performance audit framework. These performance reports are well structured with defined audit scope, objectives, conclusions based on data analysis, supported by relevant and adequate audit evidence, accompanied by recommendations.

In so far as financial audit relating to certification of accounts of PSUs, autonomous bodies and other organizations is concerned, Institute of Chartered Accountants of India, is yet to bring out environmental accounting standards and till such time auditors can only use existing standards for factoring environmental costs including contingent costs, environmental impact on assets, liabilities including contingent liabilities and disclosure. Certified Management Accountant (CMA) guideline categorizes environmental costs as regulatory, upfront, back end, voluntary, contingent, image and relationship costs. Unless and until mandatory accounting standards are introduced, environmental audit of Balance Sheets, Profit and Loss Accounts of companies, Income and Expenditure accounts of other bodies and organizations could be done to a limited extent only. However, CAG's Report 11 of 2006 commented on non-provision of liability for removal of unauthorized hutments at Indira Gandhi International (IGI) Airport by Municipal Corporation of Delhi. Significant findings of statutory auditors included comment on Brahmaputra Valley Fertilizer Corporation Ltd., stating that the company did not recognize possible impairment loss in respect of unviable Ammonia – I Plant. Audit comments on Central Coal Fields Ltd. included non-provision of sunk cost

of dropped project, prospecting, boring and development expenses of project not implemented since 1992-93.

In 2006 SAI India conducted audit of project tiger, an all India review and audit of floods in Maharashtra commenting on the disaster management and preparedness of the government. In 2007 SAI India has also attempted EA of the fifth category – audit of environment management system of a port, first of its kind on ports by any SAI so far. These three reports are discussed in detail in the subsequent paragraphs.

### **Performance Report on Conservation and Protection of Tigers in Tiger Reserves**

This report encompassed significant activities of the Project Tiger – wild life management, protection measures, and specific ecodevelopment activities undertaken in 28 Tiger Reserves created in 17 states between 1973-74 and 1999-2000. The audit was conducted starting with scrutiny of the concerned documents relating to policy and planning in the ministry at the apex level and subsequently followed by simultaneous parallel audit of implementation of the project in the concerned states in close coordination with different audit teams working in the states. This all India review demanded collection of enormous volume of data, facts, figures, and relevant audit evidence from all concerned authorities. The pivotal aim of the audit was analysis of root causes for decline in tiger population in the country and identification of systemic deficiencies with a view to bringing out acceptable recommendations for the government for taking appropriate detective, corrective and preventive measures to achieve the project objectives.

Audit objectives were clearly laid down to assess whether the efforts made by the government had ensured a viable tiger population in India. Besides evaluating the adequacy of planning, allocation, prioritization and utilization of resources, audit also examined and commented on effectiveness of measures taken to reduce the biotic disturbance from the tiger habitats caused by human settlements along with effectiveness of monitoring, evaluation and follow up mechanism.

Audit findings included wide gap between the financial projections made in the management plans and the annual plans of operations and the actual release of funds for the project along with diversion of allocated funds by the states. There was non compliance of stipulated requirements in creating reserves. Inadequacies in relocation of project affected families and not providing adequate funds for resettlement of them added ecological stress and biotic pressure on the tiger population, adversely impacting the tiger habitats. Irregularities in implementation of ecodevelopment component of the project, non utilization of allocated funds for village development, absence of laboratories and lack of research officers for research, absence of measures to combat poaching combined with deployment of aged field staff and inadequate monitoring systems resulted

in depletion of tiger population over the years. The over all tiger population in the country declined from 3623 to 2906 during the period.

Report recommended that all tiger reserves should have a well formulated management plan specifying medium and long term targets, accompanied by annual plans of operations with appropriate allocation of resources. Necessity of streamlining financial allocations was emphasized by audit along with prioritization of allocation based on risk perception. Relocation of human settlements from the core and buffer areas of the reserves by implementation of comprehensive resettlement programmes supported by credible financial package needed urgent attention from the government. Stringent action for eviction of poachers was suggested. Necessity of regulating tourist interventions, efforts to improve communication and intelligence network, effective patrolling, posting of adequate competent manpower, streamlining the census taking procedures and strengthening the monitoring mechanism at the centre and the state levels were also emphasized in the report.

### **Performance Audit of Floods in Maharashtra – Preparedness and Response**

Maharashtra state faced unprecedented torrential rainfall in 2005 flooding all the four regions of the state, claiming around 1100 human lives and 27000 cattle lives. Similar disaster repeated in 2006 killing 400 human beings, resulting in relief and rehabilitation measures by the government. Audit reviewed implementation of the disaster management plan and commented on varied deficiencies in the system such as delay in desiltation works in Mithi river, nonfunctioning of the disaster warning system, inadequacies in distribution of relief assistance and diversion of funds. Disaster management audit was done for the first time by SAI India. Report examined the magnitude of the calamity, pre-disaster management, post disaster management, relief and rehabilitation measures, financial management, monitoring and reporting mechanism, and analyzed the lessons learnt along with sensitivity to error signals. Recommendations were accepted by the government.

### **Environmental Management by Mumbai Port Trust**

It is a pioneering effort for SAI, India to conduct a performance audit on environmental management of a port. The audit was primarily aimed at assessing the extent of compliance of applicable, mandatory legislative requirements, performance of the port against the stipulated conditions, obligations and commitments along with effectiveness of implementation of the specified environment protection measures. As there was no comprehensive EA reports on ports available on the World Wide Web as a benchmark, SAI India referred to best practices pertaining to environmental management for port as suggested by American Association of Port Authorities' (AAPA) Handbook along with mandatory and relevant regulations for identifying port environmental management practices and thereby deriving irrefutable audit criteria. Audit focused also on the

adequacy and effectiveness of implementation of Environmental Management Programmes.

The scope of the audit was clearly defined indicating the period of audit coverage, stating the audit focus as management of air quality monitoring, water quality monitoring and waste disposal. Audit objectives were unambiguously stated to assess whether the port has an appropriate Environmental Management Plan, whether it carries out Environmental Management Audit, Environmental Impact Assessment and takes the requisite mitigation measures systematically at regular intervals. Audit looked at the adequacy and effectiveness of monitoring and controlling mechanism for prevention of air, noise, water pollution and waste management by the port authorities and the role of the regulatory authorities in ensuring adequacy of compliance.

Audit criteria were derived from the applicable, mandatory legislative enactments regulating the activities of ports such as Major Port Trust Act, 1963; The Indian Ports Act 1908; Water (Prevention and Control of Pollution ) Act, 1974; Air (Prevention and Control of Pollution ) Act, 1981; Environmental Protection Act, 1986; Hazardous Waste (Management and Handling) Rules, 1989; along with other obligations and commitments undertaken while obtaining clearance for various activities and projects by the port from time to time.

Audit findings included absence of Environmental Management Plan, deficient Environmental Management System and absence of Environmental Management Audit. Audit assessed the performance of the port and highlighted the systemic deficiencies in monitoring prevention of air, water and noise pollution and hazardous waste management, leading to ecological stress and damage to the environment. As environmental impact assessments were not carried out regularly, prompt mitigation measures were not taken by the port. Audit also noticed diversion of funds earmarked for environmental protection measures. Audit scrutiny brought out ecological stress on harbour by illegal harvesting of mangroves and non development of tree cover as stipulated. Inadequacies in waste management led to accumulation of hazardous waste like oil sludge at marine oil terminal. Noise levels arising out of ship repairing activities was not monitored or controlled. Oil industry safety norms were not adhered to. It was also found that harmful marine invasive species were introduced through Ballast Water. Hazardous waste generated out of ship breaking activities was not controlled and managed properly. It was also found that the provisions of Batteries (Management and Handling) Rules, 2001 were not complied with in disposal of batteries. The port has been operating since its operation without obtaining consent to operate from the pollution control regulatory authorities,

After evaluating environmental compliance against mandatory legislative and regulatory requirements and assessing the performance of important activities of the port, SAI India suggested corrective and preventive actions wherever deemed fit. Considering the sensitivity of the

port's geographical location in the thickly populated financial capital of the country, the report emphasized the necessity of the port to attend to its environmental responsibilities through concerted action plan with particular focus on adherence to environmental legislative requirements and implementation of a comprehensive Environmental Management Plan.

## **Conclusion**

In compliance with commitments to international accords, Government of India has taken significant steps towards integrating sustainable development concepts in policy formulation, strategic planning, design of programmes, projects and schemes cutting across economic, social and environmental sectors. Adoption of Clean Development Mechanism prescribes technological solutions to environmental problems in economic sectors like transport, energy, agriculture and industry. In social sectors like poverty eradication, human resource development, urban governance and service arena, sustainable development concepts are increasingly being embedded. In so far as environmental resources are concerned, though legal and regulatory frameworks have been created to protect environment and reduce impact on air, water, land, forestry, biodiversity, and marine ecosystem, it is the responsibility of government auditors to increasingly use EA for reporting sustainable development status to the stakeholders especially the parliament while auditing economic, social and environmental sectors.

As auditing and accounting are inextricably interlinked, the important pre-requisite for effective environmental auditing is sound environmental accounting. Environmental issues and sustainable development concerns may get finally integrated into environmental accounting: firstly, at macro level, while calculating GDP, consumption of the nation's natural resources, both renewable and non-renewable are not presently and green GDP not derived; secondly, at micro level, in financial accounting, firms and organizations need to estimate and report environmental liabilities including contingent liabilities and environmental costs including contingent costs; thirdly, in internal reporting and decision making process, management accounting can use data on costs of possible alternative inputs for raw-materials, utilities like water, electricity with reference to emission and discharge of pollutants and conservation of non-renewable resources, choice of technology in processing, preventive and remedial measures to be taken for compliance with mandatory environmental regulations.

In the internal reporting within an organization, data on environmental costs and liabilities can be used for better decision making in areas like use of inputs, choice of technology for processing and handling of byproducts. These can in turn help decision making relating to usage of alternative raw materials, consumption of utilities like water and power, choice of processing technology based on environmental cost of treating emission into air, discharge into water, adverse environmental aspect and impact on flora fauna and human beings, treatment of byproducts, conservation of non-renewable resources etc. can be looked into

systematically for achieving competitive advantage and image building. Substantial amount of work needs to be done in these areas for evolving an acceptable System of Environmental Economic Accounting (SEEA) which may finally provide a solid foundation for conducting more effective and purposeful environmental auditing.

**References:**

1. Guidance on Conducting Audits of Activities with an Environmental Perspective: INTOSAI Working Group on Environmental Auditing.
2. Environmental Management Handbook for Ports by the American Association of Port Authorities (AAPA).
3. Environmental Accounting Reporting and Auditing by the Institute of Chartered Accountants of India.
4. CMA Management Accounting Guidelines: Tools and Techniques of Environmental Accounting for Business Decisions.
5. Environmental Audit and Regularity Auditing by INTOSAI WGEA.
6. Reports of the CAG of India Referred to in the Article