



## Chapter - 5

# THEME: ENVIRONMENTAL EDUCATION

*Environmental Education is a process of developing skills necessary for understanding and appreciating the inter-relationship among human beings, their culture and their bio-physical surroundings. In India, environment education is imparted through methods like infusion of environmental concepts in the textbooks at the school/college level, natural history museums, programmes like National Environment Awareness Campaign, National Green Corps etc.*

## 5.1 Activities of National Museum of Natural History, New Delhi

National Museum of Natural History (NMNH) was set up to promote environmental education all over the country. Its collections were old and archaic and its galleries/exhibits had not been changed/updated in the last 20 years. It had not developed any museum based projects and its activities in reaching out to children to educate them about environment and conservation were extremely limited. It had not undertaken any research and had failed to develop linkages with other agencies working in this area. Review of activities of NMNH lead to the conclusion that NMNH did not justify its status of being a 'national' museum in light of its poor quality of exhibits and its amateurish efforts in the field of promoting environmental education in the country.

### 5.1.1 Introduction

National Museum of Natural History, New Delhi (NMNH), a unit under the Ministry of Environment & Forests (MoEF), owes its genesis to the former Prime Minister of India, Smt. Indira Gandhi, who, while considering new projects to be initiated in 1972 on the occasion of the 25<sup>th</sup> anniversary of India's Independence, decided that the country needed a museum of Natural History to depict its flora, fauna and mineral wealth to provide an out of school facility for education of children and to promote environmental awareness among the masses. NMNH opened its doors to the public in a building rented from Federation of Indian Chambers of Commerce and Industry (FICCI) on Barakhamba Road on 5 June 1978, coinciding symbolically with the World Environment Day. The long term vision of NMNH was to be an institution recognised nationally and internationally in the field of environmental education and professional natural history museology. As a public service institution, the resources of the Museum were also to be made available and accessible to all visitors. NMNH had also established Regional Museums of Natural History in Mysore in 1995, in Bhopal in 1997 and in Bhubaneswar in 2004. The fourth museum was slated to be completed in 2009 in Sawai Madhopur in Rajasthan but the work of construction of the museum was still not complete.

Against budget estimates of ₹10.98 crore during 2004-09, NMNH received ₹12.50 crore at the revised estimate stage during this period. NMNH, however, spent ₹11.38 crore with savings of ₹1.12 crore.

#### (i) Organisational structure

NMNH, New Delhi is headed by a Director and it has four main units viz Art Unit, Exhibit Preparatory Unit, Taxidermy Unit and Audio Visual Unit. In MoEF, Advisor (Research Education and NMNH) oversees its functioning. Against a sanctioned strength of 84, there were 60 men in position (Group A-7, Group B-13, Group C-22, and Group D-18) as of 2009.

## (ii) Objectives of NMNH

The aims and objectives of NMNH are as follows:

### Educational

- To develop NMNH in the country's capital to achieve the highest level of quality to promote environmental education on a national level;
- To develop museum-based educational projects so as to help school curriculum on environmental education;
- To develop resource materials (such as audio-visual aids, low-cost teaching aids, school loan kits, etc.) to promote environmental education;

### Research

- To undertake research (museological and collection based) consonant with the scope and resources of the museum;

### Extension activities

- To develop regional offices (regional museums of natural history) in various regions of the country in order to extend its activities at the regional/local levels;
- To extend professional help to other agencies/organisations regarding natural history collections/museums; and
- To develop national and international cooperation/collaboration with other organisations/ professional bodies/museums related to natural history/ environmental education.

**Audit findings relating to the functioning of NMNH, New Delhi, are discussed in the succeeding paragraphs.**

#### 5.1.2 Educational activities of the Museum

The museum's objectives include activities to promote environmental education (EE) by developing museum-based educational projects to help school curriculum on EE and EE resource materials (such as audio-visual aids, low-cost teaching aids, school loan kits, etc.) to promote EE.

#### (a) Non-development of museum based educational projects

One of the main objectives of NMNH was to develop and structure museum-based education projects at the formal and the non-formal level. This was to be used to promote education about the environment amongst the public, and especially for children. In this regard, it was observed in audit that:

- NMNH did not have any consultation with NCERT<sup>69</sup> for the development of curriculum for schools which would help them in structuring and standardising environment education.
- No audio visual (AV) aids were developed for EE during 2004-09. Only in the year 2008-09, one interactive aid 'Nature Study kit for Juniors' was developed.
- NMNH in 1986 had developed 20 school loan kits (total 70 sets) like shells, echinoderms, termites, food chain, insects, skin, corals, beaks and claws etc., at a cost of ₹45,000. During

<sup>69</sup> National Council of Educational Research and Training





Damaged school loan kits

audit it was observed that after 1986, no new kit was developed or purchased by NMNH for the use of school children. Moreover, it was found that all the school loan kits were not in use for over 10 years. Considering the fact that there were more than 4930 schools in Delhi, NMNH's efforts in this regards were woefully inadequate. Further, the Advisory Committee of NMNH in December 2006 had observed that the mandate of the museum was not reflected in the activities undertaken by NMNH. It had also observed that galleries and exhibits had deteriorated and activities undertaken by NMNH were not innovative.

- NMNH did not develop any non-formal educational projects; however, they organised non-formal educational activities and programmes like celebration of environmental-oriented days like World Wetland Day, Earth Day, World Environment Day, International Ozone Day, Wildlife Week, Conservation Day and International Disabled Day.

Thus, NMNH had not developed any effective formal and non-formal material and resources to promote environmental education in the country.

NMNH stated in October 2009 that it was essentially a non-formal educational institution and that new Audio Visual kits would be developed in the future and the existing kits would be evaluated. It further added that after arrival of internet facilities, the role of loan kits has been found minimal and that kits were also damaged by school children and therefore, its requirement was being assessed. NMNH also stated that the formal educational programmes of the museum would be reviewed and if found necessary, other means of environment education would be explored.

The reply is to be viewed in light of the fact that the objectives of NMNH clearly provide for developing and structuring museum-based educational projects at the formal and non-formal level to promote education about the environment to the public and especially for children.

## **(b) Inadequate efforts in promotion of Environment Education**

### **(i) Permanent exhibitions**

NMNH has four permanent galleries depicting various aspects of environment. These four galleries are named 'Introduction of Natural History'<sup>70</sup>, 'Nature's network: Ecology'<sup>71</sup>, 'Conservation'<sup>72</sup> and 'Cell: The Basic Unit of Life'<sup>73</sup>. These galleries were opened between June 1978 and June 1989.

<sup>70</sup> It portrays the origin and evolution of life and presents the variety and diversity of the flora and fauna in the country.

<sup>71</sup> It presents an overview of major ecosystems of the world, role of plants as primary producers, food chains, food webs, decomposition, bio-geochemical cycles.

<sup>72</sup> It deals with many aspect of conservation of nature.

<sup>73</sup> It highlights cell as the structural and functional unit of life.



Empty displays

It was observed in audit that these galleries were not updated or changed to reflect current issues in environment and conservation and the exhibits remained the same during the last 20 years. Current issues like climate change, global warming, afforestation, tsunami, depletion of ozone layer, conservation of energy, application of eco-friendly items in daily life, steps to control air and water pollution, rain water harvesting, combating desertification, utilization of solar energy etc., were not depicted in the galleries. It was further observed that though the Advisory Committee of NMNH, in December 2006, had advised that the restoration of galleries and exhibits of NMNH be completed by March 2007 but this was not done. It also recorded in March 2007 that the exhibits in some galleries were archaic and suggested that the development of galleries be outsourced immediately and some skilled workers be taken on contract basis; however this was not done.

Besides, the exhibits being very old and very limited in scope, they were very amateurish and not presented in a way to encourage people to explore and learn various concepts of natural history. The exhibits did not present advances in the field of environment or natural history and thus, were outdated. This detracted from NMNH's utility as a center for promoting environmental education and its status as a national museum.

NMNH stated in October 2009 that since the permanent galleries were permanent in nature, only occasional restructuring was undertaken and on account of lack of filling up post of curator/scientist in charge of technical section, maintenance and restructuring of permanent exhibitions in the galleries could not be undertaken and that efforts were also on to restructure certain sections of the permanent exhibition. It also stated that a review of all the galleries would be undertaken and corrective measures implemented. The reply of NMNH needed to be viewed in light of the fact that despite 37 years of its existence, NMNH was not able to achieve the highest level of quality to promote environmental education on a national level as envisaged at the time of setting up of the museum.





Exhibits without any labels

### (ii) Temporary exhibitions

One of the primary objectives of NMNH is to promote environmental awareness by organising temporary exhibitions on specific themes from time to time. However, it was noticed in audit that during the period 2004-09, NMNH organised only six temporary exhibitions that too, were not conceptualised by NMNH. Five exhibitions were organised by NMNH in which mainly models, projects, posters, paintings etc., made by Delhi/NCR school children on different environmental issues conducted by NMNH during different programmes were displayed and one exhibition was organised by a Non Governmental Organisation (NGO) on vultures (Public Art Ecology). Audit also observed that there was no record in NMNH to confirm the number of visitors to these temporary exhibitions and no feedback of the visitors was available in NMNH about their comments/experience on quality of exhibits//learning items, the knowledge gathered from the temporary exhibitions etc.

In its reply, NMNH stated in October 2009 that the temporary exhibition hall of NMNH has been handed over to FICCI in May 2008; hence NMNH has discontinued organising the temporary exhibitions. It also stated that the matter would be discussed in its Advisory Committee, to explore the possibility of replacement of Gallery 4 by a temporary exhibition hall.

### (c) Non-development of Information Technology tools and Multi-media

In the Tenth Five Year Plan, ₹5 crore were earmarked for the purpose of adopting new Information Technology (IT) tools and multimedia into their exhibits and activity areas for better dissemination of information to the masses. NMNH also created a Bio-science computer room to provide school and college students a variety of interactive multi-media computer programmes for understanding various biological phenomena besides teaching people to handle computers for getting more information of multi-media programmes on various natural sciences and environmental issues.

It was, however, observed in audit that during the period 2004-2009, NMNH had purchased only three LCD projectors, one VCD player and 12 DVDs/VCDs and did not make any further efforts to develop new IT /audio-visual aids for dissemination of information. NMNH had not setup or adopted any of the multi-media facilities like touch screens, guide-phones, video walls, animations, virtual reality etc. It had also not adopted latest web-based technology for current data information and dissemination, especially among kids. In the Bio Science room, eight computers were installed in March 2004 with facilities of

internet, multimedia DVDs and interactive CDs on nature and environment. Audit observed that only 107 visitors/students/teachers used the Bio Science computer room during 2004-09 indicating that Bio-Science Laboratory did not fulfill the purpose for which it was set up.

NMNH stated that three LCDs were being used regularly (one by the Director, another one by the Education Division and the third one in the Auditorium). The Bio Science room was now closed to the students/public and was in the process of being converted into an extension library for public utilisation. It also stated in October 2009 that the audit suggestions would be taken care of.

Thus, NMNH failed to incorporate the use of IT tools and multimedia into its museum experience which would have enriched the experience of visitors and helped in wider dissemination of environmental education.

#### (d) National Photographic Index

During Ninth Five Year Plan, ₹1 crore was earmarked for setting up a National Photographic Index on the flora, fauna and ecosystems of India at NMNH, with a purpose to document, catalogue and preserve the acquired/prepared slides, negatives and photographs on the plants, animals and ecosystems. Creation of the National Photographic Index was also included in the Tenth and Eleventh Five Year Plan. However, it was observed in audit that the National Photographic Index on the the flora, fauna and ecosystems of India had not yet been set up in NMNH.

NMNH stated in October 2009 that efforts would be initiated to review the project and take remedial measures on a priority basis.

Thus, it can be seen that NMNH failed to develop museum based educational projects. Its permanent exhibition had not been changed or updated in the last 20 years, and it had no policies or procedures to guide acquisition of collections or display of collections. NMNH did not organise temporary exhibitions. Its Bio Science computer room served very limited use. NMNH failed to fruitfully utilise IT tools and multimedia to disseminate concepts of the environment and to enrich the museum experience of visitors to the museum and it failed to develop a national photographic index. Hence, NMNH's objective of promoting environment education was not fully achieved.

#### Recommendation - 29

NMNH may develop user friendly and high quality museum based educational material for children and adults, which would help it in effectively promoting environmental education. NMNH may regularly update its exhibits and organise temporary exhibitions regularly besides increasing the use of IT tools and multimedia like touch screens into the museum experience which will enable visitors to have easier and more enriching sources of information and knowledge.

#### 5.1.3 Research activities of the Museum

One of the major objectives of NMNH was to undertake research (museological and collection based) activities consonant with the scope and resources of the museum. In this regard, it was, however, observed that no research was being conducted in NMNH. Four scientists posted in NMNH had not undertaken any research activities to further the quality of environment conservation. The scientists are highly specialised in their fields and are being paid higher remuneration based on their qualification and skills. NMNH was using scientists for doing routine jobs. The Memorandum for the Tenth Five Year Plan proposals for NMNH stated that trained scientific human resources were being diverted in planning, designing, execution and administrative works. Hence, very little time was left to conduct and direct research in the areas consonant to the scope of the museum.



NMNH stated in October 2009 that research was one of the functions among many functions performed by scientists. It however, agreed that efforts would be increased to have more museum research works related to various functions of natural history museums in particular and museology in general.

#### Recommendation - 30

It is recommended that NMNH may ask its scientists to undertake scientific research which is one of the mandates of NMNH. This would help NMNH in expanding the scope of activities currently undertaken by NMNH and add more updated and relevant exhibits to its collection.

#### 5.1.4 Extension activities

The extension activities of NMNH comprised of extending professional help to other agencies/organisations regarding natural history collections/museums and developing national and international cooperation/collaboration with other organisations/ professional bodies/ museums related to natural history/ environmental education. In this regard, the following was observed in audit:

##### (a) Absence of national and international cooperation/collaboration

In the follow-up action on the recommendations of the Advisory Committee meeting held in November 2007, it was stated that NMNH should collaborate with other institutions in organising new innovative programmes. But it was noticed in audit that NMNH had not undertaken any national/international cooperation/collaboration programmes/projects during the period 2004-05 to 2008-09. NMNH has not signed any Memorandum of Understanding (MoU) with any natural history museums/environmental educational institutions for collaborating in research in environmental issues.

NMNH stated in October 2009 that it was planning MoUs/collaboration with different agencies like Aligarh Muslim University and with NGOs. It further stated that audit suggestions would be followed up.

#### Recommendation - 31

NMNH needs to intensify its efforts in developing collaboration with different agencies so that it can extend its activities in the fields of environment education and thus, broaden its own research activities and knowledgebase.

##### (b) Lack of exchange/training programmes

The Advisory Committee of NMNH had emphasised in December 2006 that NMNH needs to strengthen networking with other institutions. The Advisory Committee meeting held in November 2007 (follow-up action) had re-emphasised the development of exchange programmes with natural history museums abroad. However, it was noticed in audit that no such exchange programmes had been conducted with any natural history museums and none of the officials of NMNH were sent for training during 2004-09.

NMNH stated in October 2009 that it has initiated efforts to have international and national cooperation with museums and other professional agencies. It also stated that proposals had been submitted to the Ministry (MoEF) for exchange/training programmes. However, none of these proposals were made available to audit.



### (c) Inadequate outreach activities for children

One of the objectives of NMNH is to organise year-round educational programmes and outreach activities for children. During the period 2004-09 NMNH had organised only 16 outreach programmes. The Advisory Committee of NMNH had also observed in December 2006 that there was '*no focus on the outreach activities for children, particularly special children, who might find it difficult to visit the museum due to certain limitations*'. There are more than 4930 schools in Delhi alone and NMNH covered only 147 schools for its programmes (only 2.98 per cent). This shows that outreach activities undertaken by NMNH were insufficient in promoting environmental education, especially among children.

NMNH replied in October 2009 that Audit's suggestions would be taken care of.

Thus, the objectives of NMNH relating to extending professional help to other agencies/organisations, to develop national and international cooperation/collaboration with other organisations across the world and carrying out outreach activities for promoting environmental education, especially among children, were not achieved.

### (d) Programmes for Persons with Disabilities

One of the aims of NMNH was to organise regular programmes for all categories of persons with disability.

However, it was observed in audit that:

- During the period 2004-2009, NMNH had organised only 20 programmes for disabled children which were mainly for one day only.
- No research work was undertaken by NMNH to create/initiate any new programme for physically handicapped children and no kits developed for physically challenged children during 2004-09. Further only 2 wheelchairs, though purchased for handicapped children in 2005, were never issued. During audit it was also observed that the wheel chairs were lying rusted and were not in a usable state.
- The FICCI building, where NMNH is located had two lifts. One lift was permanently closed down for want of replacement and other one was prone to frequent breakdowns/ not in working condition as it was more than 35 years old. Since the museum is spread over 4 floors, it is evident that disabled persons would not be able to access most of NMNH. NMNH had not taken any action to replace/refurbish the lifts. It was observed in audit that no ramps were provided for easy access to all the floors of NMNH.

Thus, NMNH was not friendly to disabled persons and discouraged the visit of children with special needs and senior citizens, who would have benefitted immensely from the museum experience.

NMNH replied in October 2009 that the new campus of NMNH expected to come up soon would have fully accessible infrastructure for physically handicapped visitors. It also stated that since NMNH did not have specialised staff for special education, efforts were on to involve volunteers and have collaboration with NGOs working for the welfare of the disabled. It further stated that the programmes for the disabled were highly specialised and these would be reviewed with NGOs working in the field.

#### Recommendation - 32

NMNH needs to plan more programmes for the disabled in consultation with NGOs so that enriching museum experience could be provided by the museum to disabled persons, especially children.

**(e) Generation of public interest (Publicity)**

Publicity materials like pamphlets, brochures, flex board etc., and publicity by means of advertisement in dailies, hoardings at prominent places etc. are required for creating awareness among the public regarding different programmes, temporary exhibition and other activities conducted by NMNH from time to time. During audit it was observed that neither was any publicity materials displayed nor was any newsletter of NMNH published as suggested and agreed in Advisory Committee meetings of 2006 and March 2007.

NMNH stated in its reply in October 2009 that audit suggestion would be followed up.

**5.1.5 Maintenance/creation of the infrastructure by NMNH****(a) Non-establishment of NMNH on its own land in a suitably designed building**

When the proposal for setting up of a Natural History Museum in Delhi was approved in April 1973, it was suggested that the museum be temporarily created in the FICCI building until a permanent building was ready.

Since then, NMNH has been functioning from a rented building and has not constructed its own building. Despite a proposal for acquiring land and construction of the museum being included in the Ninth and Tenth Five Year Plan, no progress could be achieved as of March 2009. Some efforts to acquire land had been made from the Ministry of Urban Development and National Zoological Park, however these did not yield any results and NMNH continued to function from the rented building. An amount of ₹8 crore was also earmarked in the Tenth Five Year Plan for acquisition of land and construction of building for NMNH, New Delhi. Audit observed that NMNH had paid an amount of ₹3.77 crore towards rent during the last five years (2004-2009) alone. Thus, due to non-construction of its own building, NMNH continued to incur avoidable expenditure of ₹75 lakh per annum on account of rent paid for hired accommodation which was inadequate and unsuitable.

The space constraint and the shabby nature of the building has severely restricted the scope of activities of NMNH and NMNH needs to make efforts in this regard so that a modern museum with good collection and facilities, worthy of national museum, can be established as soon as possible.

NMNH stated in October 2009 that MoEF would be requested to speed up efforts to get land for the proposed permanent headquarters for NMNH in New Delhi.

**(b) Poor condition of galleries**

It was further observed in audit that the Advisory Committee had repeatedly raised concerns in December 2006, March 2007 and November 2007 about the deteriorating condition of galleries and exhibits and the need for taking up their renovation and improvement. However, NMNH did not take up repair work of galleries and therefore the galleries were in highly damaged condition. Even the routine maintenance of the galleries was not being carried out. Some of the glasses of the cabin/cabinet/enclosures in the galleries were not dusted and were covered with sticky material; the exhibits in some galleries were archaic and did not have labels; some of the specimens were in a state of decay. In the rainy season, the galleries were flooded with water. Gallery walls suffer from leakage of rain water/seepage resulting in damage to exhibits and a shabby air. In case of power failure, there is no power backup system viz; generator, inverter etc., for which small children had to face difficulties while moving in the dark galleries.

NMNH stated in October 2009 that not much money was invested in repair and maintenance as the building was rented and the infrastructure was damaged and dilapidated. It also stated that audit suggestions would be followed up. NMNH reply highlights the need for expediting the process of acquisition of land and construction of its own building, which is pending for last 37 years.





Poor condition of galleries

**Recommendation - 33**

NMNH needs to pay serious attention a improvement of galleries and their exhibits so that they can achieve the highest level of quality to promote environmental education at a national level.

**(c) Lack of maintenance of Taxidermy Unit and Reserve Collection unit**

NMNH has a taxidermy unit which is responsible for activities like mounting and preparation of zoological specimen, collection and preservation of zoological specimen, day to day maintenance of taxidermy specimens in the gallery, receipt of specimen from wild life department, curing and maintenance, producing it in court and taking custody of the specimen etc.

During audit it was observed that:

- Though specimens of 102 birds, 180 mammals and 15 reptiles were kept in Taxidermy unit, only 26 items like painted stork, hog deer, python, tiger cub, musk deer etc., were exhibited in the galleries. Audit observed that some of them were dumped in cupboards and above the almirahs of a room in the Taxidermy unit. Many of these were very valuable and their trade is prohibited under law.
- It was observed that upkeep of this cell was very poor as many of the items in the Taxidermy Unit were in a deteriorated condition and malodorous.
- NMNH has neither conducted any physical inspection/verification of these collections kept in this unit nor had maintained complete list of all of these items.

NMNH also has a Reserve Collections Unit, where specimens of various insects, birds, eggs etc. and forests products are collected and preserved for future use in the museum. These collections are sent to the temporary exhibitions and to the regional museums of NMNH. They also serve as replacement of the specimens in the galleries of NMNH. However, the Reserve Collection Unit of NMNH did not maintain any record to confirm the number of items sent to exhibitions or to the regional museums or to the galleries of NMNH and the collections received back from the exhibition etc.



**Exhibits which have been dumped**

During audit, it was observed that there are 5560 collections in the Reserve Collection Unit of NMNH like invertebrates, fishes, reptiles, mammals etc., as found in the accession register. There were no new collections after September 2004.

Thus, the Taxidermy unit and the Reserve Collection unit were not functioning as envisaged and valuable skins, tusks etc., were deteriorating due to lack of care.

NMNH replied in October 2009 that many specimens were old and damaged due to poor maintenance as the Museum was in a rented building. It also assured that corrective measures would be taken for updating records for better documentation. It further stated that the issues of framing a collection policy would be discussed in the third party evaluation and the suggestions made would be taken care of.

#### **Recommendation - 34**

NMNH may engage a professional taxidermist so that such valuable assets are not lost through poor maintenance.

#### **(d) Non-documentation of the activities of Art unit and Exhibit Preparatory unit (Modeling unit)**

Art Unit of NMNH assists scientists in architectural drawing of exhibitions, designing of exhibitions, preparing the mock-up of models of exhibition, etc. It also helps in design of the cover of Annual Action Plan, proposals and other booklets of museum. The Exhibit Preparatory unit helps in preparation and designing exhibitions, making models of plant/animal and making moulds and casts of model in different media like fiber glass, plaster of paris, latex, papier-mâché etc.



It was observed in audit that the unit did not maintain any register to record the work done. There was also no documentation in respect of details of work orders received, date of receipt and date of completion of work etc.

NMNH replied in October 2009 that efforts would be initiated to correct this situation.

#### **(e) Poor maintenance of Library and books**

One of the prerequisites for a good museum is an extensive library with latest and relevant books which serve and further promote and spread conservation and environment awareness. It was noticed in audit that the library, situated in the sixth floor, purchased 2134 books during 2004-09. During 2008-09, NMNH purchased 155 books which were based on general topics like healthcare, marriage, meditation, reference books, etc. Only 34 per cent of the total books purchased were on environmental education.



**Materials lying in Modeling Unit**

It was further observed in audit that the library software installed for easy access to the library books was not working since 2006. Further, during the last five years, only 643 people visited this library at the rate of just one person visiting the library in about three days. Audit also observed that the condition of library was very poor and there are no proper sitting arrangements where a visitor can sit and make use of library books. Most of the collections/books were covered with thick layer of dust. The roof of the library has been damaged at many places and in the rainy season, rainwater entered the library and damaged books and almirahs containing the books. There was no signage showing where the library was located. The Advisory Committee meeting held in March 2007 had also recorded that the conditions in the library were fast deteriorating and that it was being misused by the members of the staff. It further stated that library was not conducive to reading and most of the books were covered by dust.

Audit also observed that 580 books were stated to have been lost as of March 2009. No action had been taken and no responsibility was fixed so far, for the missing books which constitute an important resource of a library. 286 books were issued to various members of office since 1981 onwards had not been received back in the library.

NMNH replied in October 2009 that the library needed to have books on all kinds of subjects. Agreeing with the audit conclusion, it further stated that in future, more books on environment and related topics including environment education would be purchased. It also stated that action would be taken to enrich the library for public service.

#### Recommendation - 35

NMNH needs to put in place a modern well equipped library with latest books on environment and environmental education. It also needs to put in place library software to ensure that books were tracked and returned to the library timely.

#### (f) Guide facility

A guide is necessary to explain the details of exhibits in the galleries, especially to children and to make them aware of the concepts of environment and conservation. During the audit, it was observed that no guides were provided for visitors. Some of the remarks given by the visitors in visitors book were '*There was no one in the galleries to watch the visitors*', '*There was no staff or guide to provide us information*', '*No signs, no guides, no system worked*', etc. The Advisory Committee in December 2006 had also observed that there were no guides to explain the exhibits to children visiting the museum.

NMNH in its reply in October 2009 stated that available strength of staff was not sufficient and efforts would be made to have more manpower for visitor services. It also stated that audit's suggestions would be followed up.

#### (g) Basic amenities

With regard to basic amenities it was observed in audit that:

- NMNH lacked basic amenities like seating arrangement in the galleries of each floor where the children, specially the handicapped children, can take rest.
- In the absence of Air Conditioning in the galleries, the visitors, especially young school children had to face a lot of difficulties during the hot summer of Delhi. Even the fans were not working and some cases of children falling sick, had also been reported.
- Many times electronic appliances like oral commentary, music etc., installed in the galleries were not working.
- There were no public conveniences like washrooms, toilets, drinking water facilities in each floor of the museum for the public use except two toilets and taps for drinking water in the ground floor which are very dirty and in unhygienic condition.
- No parking facilities were available in NMNH for the visitors.



Thus, NMNH was severely lacking in basic amenities for visitors. NMNH stated in October 2009 that audit suggestion would be followed up.

**Recommendation - 36**

NMNH needs to appoint an adequate number of guides for explaining the concepts displayed in the galleries which are spread over four floors of the building and thus educating young school children and general visitors in environment concepts. NMNH also needs to provide basic amenities to the visitors so that visits to the museum could be a comfortable and enriching experience.

Thus, NMNH has not been able to set up the museum in its own land which has seriously constrained its activities in the field of environment education. The conditions of the galleries are very poor, with no maintenance and upkeep. The basic amenities are lacking in NMNH impacting interest of visitors. Thus, NMNH performs very poorly as a public service institution.

### 5.1.6 Monitoring and Evaluation of the Museum

#### (a) Absence of Policies and Procedures

Each museum needs to have a policy governing acquisition of exhibits, collection and display of exhibits, research framework to guide research activities undertaken by the museum, strategic plan to guide the development of the museum etc. The Advisory Committee in its meeting in December 2006 expressed concern that NMNH had not come upto the mark and had directed NMNH to prepare a vision document to guide its functioning.

It was observed in audit that:

- i) NMNH had not developed any vision document as of March, 2009.
- ii) Though the galleries and exhibits had deteriorated, NMNH did not evolve any documented policies that would govern the care of its collection and display of exhibits, research framework etc, which would guide research activities undertaken by the museum.
- iii) No detailed action plan to guide the development of the museum had been developed.
- iv) NMNH has also not prescribed any procedure to be followed so that it can ensure that adequate care of collections, their documentation arrangements, proper use and replacement of these collections are in place.
- v) NMNH has not submitted any report to the Ministry with respect to the care of collections. MoEF also did not ask for any such report from NMNH.

Without such policies and plans, NMNH would find it difficult to acquire specimens in keeping with its mandate, sustain and care effectively its collection as well as expand its activities in keeping with the objectives for which it was set up.

NMNH replied in October 2009 that it did not have a policy and audit suggestion would be taken up during the meeting of Advisory Committee as well as proposed third party evaluation of the Museum.

**(b) Monitoring Committee**

Audit observed that no monitoring committee was setup by NMNH since its inception to monitor its activities in NMNH and its regional offices. An advisory committee had been setup by MoEF to give advice on improvement of the Museum galleries, which was to meet quarterly. However, the first meeting of the Advisory Committee was held only in December 2006 and during 2004-09, only three meetings were held and more than 19 months have already lapsed since the last meeting in November 2007. No internal audit was conducted in NMNH since 2002.

NMNH stated in October 2009 that meetings of the Advisory Committee could not be undertaken due to the fact that there was no regular Director for many years.

**(c) Visitors in NMNH**

The main objective of NMNH, New Delhi is promotion of environment education and creation of conservation awareness among general public. The objective is achieved by the museum through its exhibit galleries both permanent and temporary, activities in-house as well as outreach. Children and teachers from various schools including handicapped and physically challenged children and general visitors visit the NMNH, Delhi. As per the reply of NMNH the number of visitors who visited the permanent galleries during last five years is as detailed below.

**Table - 17**

Number of visitors		
Year	Number of general visitors	Number of school students
2004-05	Not available	42,384
2005-06	Not available	42,288
2006-07	Not available	50,613
2007-08	80,087	56,936
2008-09	77,893	67,191
<b>Total</b>	<b>1,57,980</b>	<b>2,59,412</b>

During audit, it was observed that there was no authenticity regarding number of visitors visiting NMNH as no records giving details of the visitors were maintained by NMNH. Hence, the number of visitors who had visited the museum could not be verified in audit.

NMNH did not charge for the entry of the visitors to the museum and its galleries. To create interest among the public on the issues relating to the environmental education and natural history and to generate funds for proper upkeep of the galleries and exhibits, entry ticket of a minimum charge should be encouraged/introduced for the benefit of the museum as is being done for other such similar institutions like National Zoological Park etc., under MoEF.

NMNH stated in October 2009 that suggestions would be followed up and proposal will be sent to MoEF for charging of entry tickets.



#### **(d) Visitors Comments**

The comments of visitors in the visitors' book provide important feedback on the quality of maintenance and efficiency of functioning of any place/museum/art gallery etc. Audit requested for visitors' books for the period 2004-09; visitors' books for the period from 10th December, 2004 to 15th March, 2006, were not made available to audit. Visitors' book of NMNH mainly consisted of the comments regarding the dilapidated condition of the museum. Some of the adverse remarks in visitors' book were:

- 'In very poor condition-needs cleanliness, lift arrangements, water coolers. No proper presentation and guidance. Some broken parts need to be replaced'
- 'No manpower engaged, most electrical appliances were not working, lifts out of order, it seems no care is here.'
- 'Very very ill maintained, a very bad and dirty place'
- 'No renovation has been seen since last five years'
- 'The film show was of poor quality'
- 'Poor maintenance, water flooded at upper floor exhibition area'
- 'No one to attend to us, most of the instruments, lights, sound and music are not working'
- 'This Museum does not make sense being named National Museum'
- 'This museum should be closed immediately as the facilities are even worse than any small school whereas it is occupying world class space.'
- 'There is nothing to be seen except filthy building and non-working models'

Thus, the comments of visitors underlined the poor maintenance and quality of exhibits and galleries in NMNH.

NMNH stated in October 2009 that visitors were facing hardships due to the fact that the building was rented. It also stated that MoEF was making concerted efforts to have a new campus where public amenities would be of utmost priority. It further stated that efforts would be taken to evaluate the comments of visitors and undertake corrective measures.

#### **(e) Feedback forms**

In the Advisory Committee meeting for NMNH held in March 2007, the Director-in-charge pointed that the proforma, in which data was compiled, was substandard, inadequate and confusing. NMNH should formulate new proforma for collection of data on visitors and their comments and suggestions on the Museum's utility in environmental education and the efficacy of the staff in explaining the different exhibits. But during audit, it was noticed that the new proforma for exhibits has not yet been prescribed. There were no feed-back forms for the visitors attending temporary and permanent exhibitions. No separate register was maintained to record the number of visitors/public visiting temporary exhibitions.

NMNH stated in October 2009 that efforts would be initiated to collect feedback from visitors and undertake corrective measures.

**(f) Reports and returns**

No returns are prepared in NMNH, except a monthly report only on educational programmes conducted by NMNH. Thus, all the activities of NMNH were not monitored. In the absence of proper monitoring systems, it was not clear as to how MoEF assessed the achievement of objectives for which NMNH was set up.

NMNH stated in October 2009 that monthly, quarterly and mid-year reports, as per the formats suggested by MoEF were being regularly prepared. However, none of these reports were produced to audit except monthly report of educational programmes conducted by NMNH. Further, NMNH itself had stated in September 2009 that no prescribed proforma for reports/returns had been received from MoEF.

Thus, all the activities of NMNH were not monitored. In the absence of monitoring systems, it was not clear as to how MoEF assessed the achievement of objectives for which NMNH was set up. The Advisory Committee did not meet adequately to discuss the issues impacting functioning of NMNH. Visitors recorded their poor opinions about the lack of basic amenities in NMNH.

**Recommendation - 37**

In order to systematize acquisition, collection and display of exhibits and ensure their adequate care, NMNH needs to put proper policies and plans in place so as to emerge as a leading center for environment education and conservation. NMNH also needs to strengthen its monitoring mechanism, draw a time bound roadmap indicating its vision and methods by which it would achieve the milestones laid down in the roadmap. There should be a system to evaluate feedback received from the visitors and take action on suggestions that are aimed at improving the visibility and facilities in NMNH

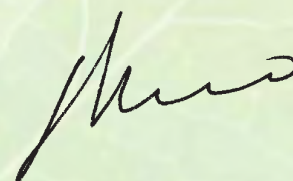
**5.1.7 Conclusion**

NMNH was set up to promote environmental education all over the country. It was also mandated to conduct research as well as build networks with other agencies/institutions in the field of environmental education. NMNH failed to achieve any of the objectives for which it was established. Its collections were old, antiquated and archaic and its exhibitions had not been changed or updated in the last 20 years. It had not developed any museum based projects to promote environmental education. Its activities in reaching out to children to educate them about environment and conservation were extremely limited. It had not put into place any policies or procedure which would guide its acquisitions as well as display of its exhibits. It had failed to set up the national photography index which would have been a source of information about plants, animals and ecosystems. It had not undertaken any research in the field of environment and conservation and had failed to develop linkages with other organizations/agencies in this area, both of which would have gone a long way in improving the quality of activities undertaken by NMNH. NMNH failed miserably as a public service institution as exhibits were dirty and not maintained according to good standards, no guides were available to provide information on the collections, and basic amenities like clean drinking water, clean toilets, lifts etc., were not available. Monitoring was non-existent and there was no control over the functioning as well as the quality of functioning of NMNH. Visitors had a very poor view of the facilities of NMNH as well the educational inputs provided by it.



Review of activities of NMNH lead to the conclusion that NMNH did not justify its status of being a 'national' museum in light of its poor quality of exhibits and its amateurish efforts in the field of promoting environmental education in the country. It has also failed in its long term mission of being recognised nationally and internationally in the field of environmental education and to serve as a public service institution. Further, it failed to meet the vision of the former Prime Minister Mrs. Gandhi who had said that "Our Natural History Museum should be nothing less than first rate. Its conceptual themes, collections and the manner of presentation should be sophisticated and imaginative". Further, she had expressed apprehensions that "a temporary museum is being created in the FICCI building till the time a permanent building is ready. This will result in unnecessary expenditure. The haste with which the exercise is being conducted will also result in poor quality." The review of the functioning of NMNH revealed that the former PM's apprehensions quoted above did prove to be true as NMNH failed to fulfill the vision of the former Prime Minister.

New Delhi  
Dated: 10 November, 2010



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Dated: 10 November, 2010



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