

PC – II DOCUMENT

FOR

ESTABLISHMENT OF

NATURAL HISTORY MUSEUM, LAHORE



TOTAL COST: RS.17.000 MILLION
(JULY, 2021 TO JUNE, 2022)

WILDLIFE & PARKS DEPARTMENT
GOVERNMENT OF PUNJAB

SEPTEMBER, 2021

PC-II PROFORMA

Government of Pakistan Proforma for Development Projects (Survey & Master Plan)

- | | | |
|--------|--|---|
| 1. | Name of Project | PC-II for Establishment of Natural History Museum, Lahore. |
| 2. | Authorities Responsible For | |
| | (i). Sponsoring | Forestry, Wildlife and Fisheries Department, Government of the Punjab. |
| | (ii). Execution | Wildlife & Parks Department, Government of the Punjab. |
| | (iii). Operation & Maintenance | Department of Wildlife & Parks Government of the Punjab. |
| 3. | Time required for completion of project. | 12 – Months
(01.07.2021 to 30.06.2022) |
| 4. (a) | Plan Provision: | |
| | (i). If the project is included in the current five-year plan, specify the actual allocation | The Project is included in ADP 2021-22 at G. Sr. No. 6638 with an allocation of Rs. 17.000 million. |
| | (ii). If not included in the current five-year plan, how is it now proposed to be accommodated | Not applicable |
| | (iii). If the project is proposed to be financed out of block provision of a Programme, indicate. | Not applicable |

4.1 General Description

4.1.1 Background

A Natural History Museum is a scientific institution with natural history collections that include current and historical records of animals, plants, ecosystems, geology, paleontology, climatology and more. The museums have a double role: To exhibit the objects and to provide a working collection for scholars, researchers and students. The Museums are also used to educate the people. A Museum is a "Classifying House" for various kinds of objects, displayed to highlight their form and differences.

Through public programmes, the visitors and participants are involved in a rewarding learning experience focusing on the Museum's collections, research programmes and the bodies of knowledge that they represent.

The objects acquired and preserved by the Museum are a permanent record of human endeavors and the natural world. The record of the past that we maintain is of vital interest today, and would become even more important as change in nature and society accelerates.

A Natural History Museum highlights the inter-relationships between individuals, populations, species, and their environments. On the whole spectrum of inter-relations that have woven the pattern of evolution and produced the multitude of plant and animal forms.

The need for a Natural History Museum in Lahore, the capital city of Punjab has been felt for a long time. Zoological specimens have been preserved in the form of skeletons or stuffed animals. Museum of Zoology Departments especially those of Zoological Departments of Government College, Lahore and University of the Punjab, Lahore have no reference to their ecology. The habitat and the environment have totally been neglected. A visitor to such collections can appreciate only the morphological or anatomical finesse of these creatures, but the life processes and the surroundings in which the animal lives remain obscure from the visitors. True appreciation and understanding of Natural History cannot be made unless the wild animals, and plants are displayed in their natural habitats.

The display in the Natural History Museum would be helpful in arousing love for animals and passion for their conservation.

Besides the exhibits, the Natural History Museum would cater for the collection and exhibition of flora, and fossil history of Pakistan.

A Major function of the Natural History Museum is the education to make the general public aware of the importance of natural history. Information would be provided for the general public and for those who seek knowledge. Students would be the main target group. Lectures, talk shows and audio-visual arrangements would be made to achieve this object.

A Museum is also a place of research. Research would be conducted into the natural history of plants, animals and fossils. Specimens of all living forms would be collected, identified, categorized and preserved. This would be a continuous activity of the Museum.

Necessary viewing and visitors facilities would be provided in a relaxed atmosphere.

4.1.2 Purpose of the plan

The need of a Natural History Museum in Lahore has long been felt. A Natural History Museum would be of a great help in creating an awareness about the conservation of wildlife and the environment. Such an awareness could give a boost to the efforts of conservation agencies and would be helpful in saving the depleted wildlife and other natural resources.

The natural species of flora and fauna are facing destruction due to environmental changes and by the rapid agricultural, industrial, mining and civic developments. The masses,

particularly the younger generation, shall be the most affected and ignorant about their past environment. A museum is a clear and a precise demonstration of man and human culture and an interpretation of present environment in the light of the past.

The proposed museum is a part of the programme to collect, indentify, preserve and exhibit the flora, fauna, fossils, rocks and minerals of the region and thereby build a reference collection in their allied disciplines.

4.1.3 Aims and Objectives

The Natural History Museum, Lahore is proposed to be established within Lahore Safari Zoo, spreading over 250 acres with the following objectives in view.

- i. Collect, indentify, preserve, acquire Natural History specimens; build up reference collection of plants / animals / rocks / minerals / fossils.
- ii. Conduct and sponsor research for the study of plants / animals / rocks / minerals / fossils and ecology.
- iii. Display Natural History exhibits to general public / students / researchers for enhancing their knowledge shaping their taste, arousing their curiosity and awakening their creative instanticts.
- iv. Provide training facilities in Natural History research / education / conservation / exhibit designing / curation / taxidermy / modelling / casting etc.
- v. Highlight the efforts made by the Punjab Wildlife Department towards conservation.

5. Scope of Works --- Responsibilities of the consultants

5.1 Feasibility Study

To develop workable feasibility study, master plan, strategic business plan and comprehensive PC-I document with detailed costing, designs / drawings / plans. The scope of work will include but not necessarily limited to followings:

- Proposed site and area evaluation including review of market proximity, physical limitation or constraints, access routes, traffic patterns, surrounding development, potential complementary and competitive facilities.
- Concept description and industry trends.
- Market analysis including review of population growth, age distribution, income distribution, tourist / visitors market including current size of visitors, historic growth and other prominent characteristics.
- Evaluation of comparable existing facilities highlighting their name and locations, physical descriptions, financial performance and development cost.

- Annual usage highlighting potential annual usage for the proposed Natural History Museum for a period of 5-years of operation based on the following factors.

- Planned components.
 - Size of available market.
 - Qualitative market characteristics.
 - Market performance achieved by comparable facilities.
 - Location and potential competitors
- Review of current status of available technologies to be used.
 - Review of scalability of the project and operation.
 - Review and technical / financial analysis alongwith viability indicators.
 - Differentiate aspects and technologic recommendations.
 - Review of legislation / legal framework, necessary resources and opportunity cost.
 - Area demographic ----- study the area demographic and population trends, socio-economic status, paying capacity of potential visitors and their level of education.
 - Review of visitors demographic ---- define visitor's types i.e. family visitors, students, researchers, eco-tourist etc.
 - Review of area partners / competitors ---- this shall include list of similar major institutions in the surrounding of the proposed Natural History Museum.
 - Area tourism ---- define major attractions and area of interest for tourist including historic sites.
 - Benchmark study ----- to consider the base model of comparable existing similar institutions.
 - SWAT analysis ---- Outline the strength, weakness, opportunity, threats and alternate proposals.
 - Propose development of various facilities and interventions alongwith their costing which could be developed in PPP and Joint Venture modes.
 - Propose comprehensive management set up along with different options.
 - The detailed feasibility study shall include clear summary of findings supported with supplementary material which shall includes all relevant visual aids and appendices.
 - A 3D view presentation about the results of feasibility study with a “fly-through” or “walk through” computer animation of the proposed plan would also be a part of the detailed feasibility report.

5.1.1 Planning, Designing and PC-I Document

To develop a workable Master Plan and project document that shall include the following:

1. The layout & designs / plans of proposed Natural History Museum, display of exhibits highlighting their proper habitats and placement in a natural setting and a list of the animal species, flora, fossils, rocks, minerals to be displayed in a geographic thematic manner.
2. The layout & designs / plans of public infrastructures such as entrance plaza, toilets, educational facilities, food and beverage (F & B) retail outlets, watch & ward system and other utilities etc.
3. The layout & designs / plans of reticulation of service roads and footpaths, security systems, electrical and fiber-optic system, potable and recycled water, drainage, waste water and sewerage lines, also the sources of electrical power (both conventional and alternate to be considered) potable water (ground water) and sewerage treatment (oxidation, reed beds or septic tanks).
4. The master plan, concept designs / plans and Feasibility Study shall include the following: -
 - Topographic survey, contour mapping and preliminary soil investigation.
 - Environmental impact assessment.
 - Economic & financial impact and evaluation / analysis, cost benefit ratio and internal rate of return.
 - Identify legal, institutional and regulatory framework.
 - Assumptions and risks log with mitigation plan.
 - Land use plan, study various international models, best practices and proposed practical viable option.
 - Total area of the Natural History Museum.
 - Area to be developed.
 - Location of infrastructures.
 - Location of bus stop, taxi stands and public parking
 - Location of emergency medical care facilities and other management buildings.
 - Location of public toilets.
 - Sites for security posts and visitors shelters / rest areas.
 - Location of fire-fighting and disaster management systems including Museum emergency preparedness or museum disaster planning.

- Identification and development of interventions / initiatives likely to be developed / added to achieve stipulated objectives of Natural History Museum.
- Identification of transport facilities for visitors, adjoining communities and stakeholders.
- Location of public call offices (public phones).
- Preparation of PC-I document alongwith detailed cost estimates & detailed designs / plans of proposed interventions based on the approved feasibility study and master plan.
- Any other activity required for successful completion / commission of project.

5.1.2 Strategic Business Planning

To develop the following in a strategic capacity in order to develop a realistic Business plan:

- The recommended corporate structure and organizational structure of Natural History Museum reviewing possible ways to be autonomous from government.
- The recommendations to establish an independent Management Board under overall control of the Wildlife & parks Department.
- Exploration of possible models for out sourcing the operation of the Natural History Museum through Public Private Partnership or through a company mode.
- Strategic recommendations & action plan for marketing communications of the project.
- The strategic recommendation plan for HR management required to maintain the project in professional management mode together with employees career plan.
- To develop a realistic model for the size of the visitor market segments and their respective spending power which will translate into admission pricing and discounting types and price ranges of F&B and retail etc.
- Estimate source of revenue: admission charges, F & B, rides, photography, retail, donations, government subsidies others etc.
- Estimate the capital as well as operating costs of the project.
- Develop a 10-year profit and loss projection for the project.

5.1.3. Technical aspects of the study

Detailed feasibility study and concept designing / planning of the Natural History Museum will be undertaken considering:

- Total area identifying the extent of the Natural History Museum & related activities / interventions.
- Area to be developed with new facilities and zonation / regional thematic setting to develop in accordance with international standards. The exhibition areas consist of spaces for the display of different ecological zones, exhibition narrative / story line, exhibition layout but not limited to the followings.

Exhibition Areas (Setting in habitat thematic manners)

- Coniferous Forests and alpine meadows.
- Tropical Dry Deciduous Forests
- Subtropical Broad Leaved Thorn Mixed Forests
- Tropical Thorn Forests (Non Sandy) including Irrigated Forest Plantations and Riverine Forests
- Tropical Thorn Forests (Sandy)
- Wetlands
- Agricultural Fields
- Metropolitan Environment
- Marine Habitat and Mangrove Forests
- Earth treasury containing specimens of rocks, plants, minerals and fossils etc.
- Morphological Depictions etc.
- Circulation space for above

Public Facilities

- Foyer / information centre
- Toilets
- Rest rooms
- Souvenir shops
- Cafeteria / Kitchen / Pantry
- Lawns / landscaping etc.

Facilities for Dissipation of Education

- Narrative description of a typical visit from the perspective of students, researchers and family visitors.
- 3D-Computer graphics visualization and inter-active digital Communication for selected activities.
- Library
- Office
- Magazine / Journal rooms
- Books / Ebook
- Audio-Video/Lecture rooms

Administrative Areas

- Office for Project Management, supporting staff and allied infrastructures
- Toilets
- Reception
- Guard / Drivers / Rooms
- Kitchen / Pantry & other pre-requisites

Drawing and Design Unit

- Rooms for Designers / Artists / other Professionals
- Design Hall for Designers / Artists / other Professionals
- Modeling and casting unit
- Photographic studio
- Dark room
- Publication unit, Computer room etc.

Workshops / Stores

- Stores
- Workshops

Activities in the Workshops

- Mechanical
- Foundry
- Electroplating
- Carpentry & others

Labs

- Store
- Offices
- Lab space

Activities in the Labs

- Botany
- Zoology
- Earth Sciences
- Fumigating, drying and mounting unit
- Fossil preparation & rock cutting unit
- Taxidermy, skeleton and embalming unit

Miscellaneous

- A.C. Plant Room
- Control / Switch Room
- Visitors circulation and any others
- Water supply

- Sewerage
- Surface drainage
- Electrification
- Gas supply
- Air conditioning & others pre-requisites

5.1.4. Surveys / Studies

The surveys / studies have to be carried out by the Consultants in a wide variety of fields to harmonize developmental activities with natural history and its scenic beauty.

- a) Integration of cultural & religious values and eco-tourism into the Natural History Museum.
- b) Physical survey to ascertain the feasibility for the proposed interventions mentioned above, like:
 - Areas to be developed as eco-friendly tourist resort, centre of research & education and recreational attraction as well.
 - Zonation / thematic setting of exhibits.
 - Conservation complex based on ecological zoning in thematic settings.
 - Land use and landscaping of proposed area
 - Infrastructures
- c) Identification of existing approach routes & internal roads and proposal for new / alternate routes / roads.
- d) Identification of traveling links and transport facilities.
- e) Identify locations for fire-fighting and disaster management system and proposed plans.
- f) Development of thematic areas within the proposed Natural History Museum and eco-friendly interventions to realize full tourist / visitors potential.
- g) Any other activity required for successful completion / commission of project.

6. JUSTIFICATION

The need for a Natural History Museum in Lahore, the capital city of Punjab has been felt for a long time. Zoological specimens have been preserved in the form of skeletons or stuffed animals. Museum of Zoology Departments especially those of Zoological Departments of Government College, Lahore and University of the Punjab, Lahore have no reference to their ecology. The habitat and the environment have totally been neglected. A visitor to such collections can appreciate only the morphological or anatomical finesse of these creatures, but the life processes and the surroundings in which the animal lives remain obscure from the visitors. True appreciation and understanding of Natural History cannot be made unless the wild animals, and plants are displayed in their natural habitats.

The display in the Natural History Museum would be helpful in arousing love for animals and passion for their conservation.

Besides the exhibits, the Natural History Museum would cater for the collection and exhibition of flora, and fossil history of Pakistan.

A Major function of the Natural History Museum is the education to make the general public aware of the importance of natural history. Information would be provided for the general public and for those who seek knowledge. Students would be the main target group.

Lectures, talk shows and audio-visual arrangements would be made to achieve this objective.

A Museum is also a place of research. Research would be conducted into the natural history of plants, animals and fossils. Specimens of all living forms would be collected, identified, categorized and preserved. This would be a continuous activity of the Museum.

7. Month of Commencement & Completion

- | | | |
|------|---------------------------------|----------------------------------|
| i. | Commencement date | 01.10.2021 (subject to approval) |
| ii. | Gestation period of the project | 12-Months (2021-22) |
| iii. | Consultancy period | 180-Working Days |

8. Detail of deliverables, timelines and proposed payment schedule for the study

Stage	Scope of services	Timeline	Payment Schedule
i.	Signing of agreement and submission of work plan & methodology.	05 days	10%
ii.	Submission of draft detailed feasibility study & conceptual plan in accordance with the TORs and PPT presentation to the department.	40 days	15%
iii.	Submission of final detailed feasibility study & conceptual plan in accordance with the observations / recommendations on draft feasibility study and PPT presentation thereon.	15 days	10%
iv.	Submission of draft strategic business plan and PPT presentation thereon.	30 days	10%
v.	Submission of final strategic business plan on the basis of observations/ recommendations on draft business plan and PPT presentation thereon.	15 days	10%
vi.	Submission of draft project proposal based on the agreed feasibility report and business plan and PPT presentation thereon.	30 days	15%
vii.	Submission of final project document alongwith master plan, detailed costing and designs / plans / construction drawings of proposed interventions / infrastructures based on the observations / recommendations on draft proposal and presentations to the competent authority for final approval.	45 days	30%

9. Estimated cost

Rs.17.000 million
(Breakup of cost is attached as Annex- A)

10. Personnel Requirements

a) Professional & Technical

The consultant(s)/consortium of consultants for the proposed feasibility study, concept & master planning, strategic business plan and project document shall possess the following experience, skills and expertise.

- **Conservation Biologist / Ecologist:** M.Sc. in Forestry, Zoology / Wildlife Management / Wildlife Ecology with minimum 20-years National / International experience in natural resource management / forestry, knowledge of issues and challenges related to conservation and management of natural resources and natural environment, understanding of sustainable natural resource management models and their implementation. Experience in Natural History Museum setting would be an added advantage.
- **Earth Scientist:** Master in earth sciences with minimum 20-years national / international experience in taxonomy, systematics, biodiversity, natural resources, planetary services, evolution and informatics etc. Experience in Natural History Museum development would be an added advantage.
- **Bio-diversity Conservation Specialist:** M.Sc. in Natural Resource Management / Forestry with minimum 20-years national/ international experience in conservation of biodiversity at par with international practices, natural resource management / forestry, knowledge of issues and challenges related to conservation and management of natural history museum and natural environment, understanding of sustainable natural resource management models and their implementation
- **Environmental Expert:** M.Sc. in Environmental Sciences with minimum 20-years National / International experience relating to conducting Environment Impact Assessment, knowledge of environmental issues and challenges, identification of environmental risks and remedial measures and mainstreaming the environmental issues in overall project development and implementation mechanism.
- **Horticulture / Habitat Development Specialist:** M.Sc. in Horticulture with minimum 20-years National / International experience in horticulture, habitat development and enrichment, landscaping and provision of semi natural environment to exhibits close to natural settings and overall landscaping planning and implementation of agreed plan.

- **Architect:** preferably experience in Museum / Natural History Museum Structures, B.Sc. / MSc. in Architecture Engineering with minimum 20-years national/ international experience preferably in designing of Museum / Natural History Museum and animal's structure in semi natural environment.
- **Civil Engineer:** B.Sc. / MSc. in Civil Engineering with minimum 20-years National / International experience in civil engineering.
- **Financial Expert / Economist:** Post Graduate in relevant disciplines / C.A. / ACMA with minimum 15-years National / International experience in relevant fields relating to development of funding mechanism of projects preferably related to natural resources, experience of developing projects in PPP mode, due diligence of related financial implications and assurance, financial / cost analysis of projects including IRR, BCR, NPV cash flow etc.

b) Administrative / Executive and Managerial Staff

The Director General, Wildlife & Parks, Punjab being head of Department would be overall incharge of the project. However, Deputy Director Wildlife, Lahore Safari Zoo alongwith existing supporting staff would be responsible for execution of project as per approved scope & specifications.

11. Period of contract of consultants and their Terms of Appointment

Period :	180-Working days (after award of contract)
Terms of appointment :	As per attached TORs <u>(Annex-B)</u>

12. Probable Mode of Financing

The project is included in the ADP 2021-22 at Gr. Sr. No.6638 with an allocation of Rs.17.000m.


13. Details of scheme likely to be submitted after survey / feasibility.

Detailed feasibility study including concept plan and Strategic Business Plan would be completed first. Whereas master planning, detailed schematic planning / designing, construction drawings / designs, cost estimates / BOQs and PC-I document will be prepared on the basis of agreed feasibility study.


14. Prospects

- A centre for education and research on natural resources / biodiversity conservation will be established
- Eco-tourism and recreational attraction will be promoted
- Local development will take place
- Business opportunities will be promoted
- Awareness for wildlife resources amongst the general public will be promoted
- Wildlife conservation will be ensured
- Socio-economic life of the area will be improved
- Private sector participation will be encouraged
- Education in nature conservation will be promoted.


PREPARED BY:


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WILDLIFE & PARKS DEPARTMENT
HEAD OFFICE, LAHORE

CHECKED BY:


(MALIK SANAUULLAH KHAN)
DIRECTOR GENERAL
WILDLIFE & PARKS DEPARTMENT
LAHORE

APPROVED BY:


(SHAHID ZAMAN)
SECRETARY
GOVERNMENT OF THE PUNJAB
FOREST, WILDLIFE & FISHERIES DEPARTMENT

Annex-A

BREAK-UP OF COST AND TENTATIVE MAN-MONTHS

Sr. #	Title	Tentative Man-months	Rate per Man-month	Tentative Cost
1.	Conservation Biologist / Ecologist	5	4,50,000	22,50,000
2.	Earth Scientist	5	5,00,000	25,00,000
3.	Biodiversity Conservation Specialist	5	4,50,000	22,50,000
4.	Environmental Expert	2	4,00,000	8,00,000
5.	Horticulture / Habitat Development Specialist	5	4,50,000	22,50,000
6.	Architect	5	4,50,000	22,50,000
7.	Civil Engineer	3	4,00,000	12,00,000
8.	Financial Expert / Economist	3	4,50,000	13,50,000
9.	Support Staff inputs (AutoCAD Draftsman, Artist, Technician, Sub-Engineer, Computer Operator, Driver etc.)	3	4,00,000	12,00,000
10.	Firm's overhead / other charges (Traveling & daily expenses, boarding, lodging, report generation/ printing charges etc.)	L.S.	9,50,000	9,50,000
Total:				1,70,00,000
Or Say:				17.000 m

Note: The figures are tentative. However, payment to the selected consultants would be made on aggregate basis as per agreed consultancy fee.

ANNEX-B

INVITATION FOR CONSULTANT

TERMS OF REFERENCE

FEASIBILITY FOR THE “ESTABLISHMENT OF NATURAL HISTORY MUSEUM LAHORE”

PURPOSE OF PLAN

The need of a Natural History Museum in Lahore has long been felt. A Natural History Museum would be of a great help in creating an awareness about the conservation of wildlife and the environment. Such an awareness could give a boost to the efforts of conservation agencies and would be helpful in saving the depleted wildlife and other natural resources.

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- Estimate source of revenue: admission charges, F & B, rides, photography, retail, donations, government subsidies others etc.
- Estimate the capital as well as operating costs of the project.
- Develop a 10-year profit and loss projection for the project.

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- Morphological Depictions etc.
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- Foyer / information centre
- Toilets
- Rest rooms
- Souvenir shops
- Cafeteria / Kitchen / Pantry
- Lawns / landscaping etc.

Facilities for Dissipation of Education

- Narrative description of a typical visit from the perspective of students, researchers and family visitors.
- 3D- Computer graphics visualization and inter-active digital Communication for selected activities.
- Library
- Office
- Magazine / Journal rooms
- Books / Ebook
- Audio-Video/Lecture rooms

Administrative Areas

- Office for Project Management, supporting staff and allied infrastructures
- Toilets
- Reception
- Guard / Drivers / Rooms
- Kitchen / Pantry & other pre-requisites

Drawing and Design Unit

- Rooms for Designers / Artists / other Professionals
- Design Hall for Designers / Artists / other Professionals
- Modeling and casting unit
- Photographic studio
- Dark room
- Publication unit, Computer room etc.

Workshops / Stores

- Stores
- Workshops

Activities in the Workshops

- Mechanical
- Foundry
- Electroplating
- Carpentry & others

Labs

- Store
- Offices
- Lab space

Activities in the Labs

- Botany
- Zoology
- Earth Sciences
- Fumigating, drying and mounting unit
- Fossil preparation & rock cutting unit
- Taxidermy, skeleton and embalming unit

Miscellaneous

- A.C. Plant Room
- Control / Switch Room
- Visitors circulation and any others
- Water supply
- Sewerage
- Surface drainage
- Electrification
- Gas supply
- Air conditioning & others pre-requisites

Surveys / Studies

The surveys / studies have to be carried out by the Consultants in a wide variety of fields to harmonize developmental activities with natural history and its scenic beauty.

- a) Integration of cultural & religious values and eco-tourism into the Natural History Museum.
- b) Physical survey to ascertain the feasibility for the proposed interventions mentioned above, like:
 - Areas to be developed as eco-friendly tourist resort, centre of research & education and recreational attraction as well.
 - Zonation / thematic setting of exhibits.
 - Conservation complex based on ecological zoning in thematic settings.
 - Land use and landscaping of proposed area
 - Infrastructures
- c) Identification of existing approach routes & internal roads and proposal for new / alternate routes / roads.
- d) Identification of traveling links and transport facilities.
- e) Identify locations for fire-fighting and disaster management system and proposed plans.
- f) Development of thematic areas within the proposed Natural History Museum and eco-friendly interventions to realize full tourist / visitors potential
- g) Any other activity required for successful completion / commission of project.

The client will have the right to increase or decrease the scope of work

Detail of deliverables, timelines and proposed payment schedule for the study

Stage	Scope of services	Timeline	Payment Schedule
i.	Signing of agreement and submission of work plan & methodology.	05 days	10%
ii.	Submission of draft detailed feasibility study & conceptual plan in accordance with the TORs and PPT presentation to the department.	40 days	15%
iii.	Submission of final detailed feasibility study & conceptual plan in accordance with the observations / recommendations on draft feasibility study and PPT presentation thereon.	15 days	10%
iv.	Submission of draft strategic business plan and PPT presentation thereon.	30 days	10%
v.	Submission of final strategic business plan on the basis of observations/ recommendations on draft business plan and PPT presentation thereon.	15 days	10%
vi.	Submission of draft project proposal based on the agreed feasibility report and business plan and PPT presentation thereon.	30 days	15%
vii.	Submission of final project document alongwith master plan, detailed costing and designs / plans / construction drawings of proposed interventions / infrastructures based on the observations / recommendations on draft proposal and presentations to the competent authority for final approval	45 days	30%

Personnel Requirements

a) Professional & Technical

The consultant(s)/consortium of consultants for the proposed feasibility study, concept & master planning, strategic business plan and project document shall possess the following experience, skills and expertise.

- **Conservation Biologist / Ecologist:** M.Sc. in Forestry, Zoology / Wildlife Management / Wildlife Ecology with minimum 20-years National / International experience in natural resource management / forestry, knowledge of issues and challenges related to conservation and management of natural resources and natural environment, understanding of sustainable natural resource management models and their implementation. Experience in Natural History Museum setting would be an added advantage.

- **Earth Scientist:** Master in earth sciences with minimum 20-years national / international experience in taxonomy, systematics, biodiversity, natural resources, planetary services, evolution and informatics etc. Experience in Natural History Museum development would be an added advantage.
- **Bio-diversity Conservation Specialist:** M.Sc. in Natural Resource Management / Forestry with minimum 20-years national/ international experience in conservation of biodiversity at par with international practices, natural resource management / forestry, knowledge of issues and challenges related to conservation and management of natural history museum and natural environment, understanding of sustainable natural resource management models and their implementation.
- **Environmental Expert:** M.Sc. in Environmental Sciences with minimum 20-years National / International experience relating to conducting Environment Impact Assessment, knowledge of environmental issues and challenges, identification of environmental risks and remedial measures and mainstreaming the environmental issues in overall project development and implementation mechanism.
- **Horticulture / Habitat Development Specialist:** M.Sc. in Horticulture with minimum 20-years National / International experience in horticulture, habitat development and enrichment, landscaping and provision of semi natural environment to exhibits close to natural settings and overall landscaping planning and implementation of agreed plan.
- **Architect:** preferably experience in Museum / Natural History Museum Structures, B.Sc. / MSc. in Architecture Engineering with minimum 20-years national/ international experience preferably in designing of Museum / Natural History Museum and animal's structure in semi natural environment.
- **Civil Engineer:** B.Sc. / MSc. in Civil Engineering with minimum 20-years National / International experience in civil engineering.
- **Financial Expert / Economist:** Post Graduate in relevant disciplines / C.A. / ACMA with minimum 15-years National / International experience in relevant fields relating to development of funding mechanism of projects preferably related to natural resources, experience of developing projects in PPP mode, due diligence of related financial implications and assurance, financial / cost analysis of projects including IRR, BCR, NPV cash flow etc.

TIME LINE

- 180-Working Days from the date of signing of the agreement. Working days would be calculated on the basis of 05-working days in a week.

PAYMENT

Wildlife & Parks Department will pay the consultants on the basis of aggregate consultancy fee as per scope of services following the submission of requisite documents / reports and completion of deliverables. The hiring of consulting firm(s) would be done under the provisions of PPRA Rules, Government of the Punjab. The payment of stage-wise consultancy fee / rate will be agreed upon with the consultants prior to signing of the contract.

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