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National Medicinal Plants Board
Ministry of AYUSH
Government of India

Subject: Notice for inviting project proposals for setting up of Eight (8) Regional Raw Drug Repository Centres.

National Medicinal Plants Board, Ministry of AYUSH to setup Eight (8) Regional Raw Drug Repository Centres of ASU&H systems in different regions of Country.

Proposals are invited from Government/ Semi- Government/ Government-aided organizations *viz.* Research Institutes, Laboratories, Universities and Councils etc. engaged regularly in work in medicinal plants sector, for setting up of Eight (8) Regional Raw Drug Repository (RRDR) Centres, in **Western Region** (Rajasthan, Gujarat, Punjab, Haryana, Delhi), **Central Region** (Madhya Pradesh, Maharashtra, Chhattisgarh), **Eastern Region** (West Bengal, Orissa, Sikkim), **Northern Region** (Uttar Pradesh, Bihar, Jharkhand), **Southern Region** A (Karnataka, Andhra Pradesh, Telangana), **Southern Region B** & Island Region (Tamil Nadu, Kerala, Pondicherry, Andaman & Nicobar, **Himalayan Region** (Uttarakhand, Himanchal Pradesh, Jammu-Kashmir), **North Eastern Region** (Assam, Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Tripura, Manipur) of the country.

For more details, Kindly visit NMPB's website viz. www.nmpb.nic.in , or Ministry of AYUSH's website viz. http://indianmedicine.nic.in .

Last date for submission of proposal shall be within **45 days** from the date of publication of the advertisement in News Papers.

Proposal can be submitted to **Chief Executive Officer, National Medicinal Plants Board, Room No. 309, Block-B, Ayush Bhawan, GPO Complex, INA, New Delhi – 110023**.

If the Wisdom is herbal, many ailments are curable

Terms of Reference for Inviting Project Proposal for setting-up of Regional Raw Drug Repository Centres

1. Introduction

National Medicinal Plant Board (NMPB), Ministry of AYUSH intends to setup region based Regional Raw Drug Repositories (RRDRs) in respect of raw drugs used in the Ayurveda, Siddha, Unani and Homoeopathy (ASU&H) systems of medicine.

2. Objectives & Activities

The key objectives of establishing these repositories are to:

1. Act as a collection center of raw drugs available and used in each region.
2. Act as an accredited reference library for authentication of raw drugs.
3. Establish standard protocols and keys for authentication of raw drug used in the herbal industries.
4. Act as an educational Centre for disseminating general awareness about the usefulness of raw drugs.

The activities of the RDRs shall be focused on the following:

1. Collection, compilation, cataloguing of raw drugs and documentation (including digitization) on information of raw drugs that are used in the traditional systems of medicine (ASU&H) and preparation of comprehensive monographs thereof if required.
2. Collection of plants and raw drug samples and preserving those specimen with label passport data for future reference and proper display in museum for enhancement of knowledge.
3. Digital Data Base: Plants and their parts are to be identified, named and interrelated to have detailed studies on particular groups of plants. Compare their similarities and dissimilarities and document it in the digital form.
4. To provide standard genuine and authenticated reference samples of raw drug to the needy.
5. Development of appropriate manuals of identification keys to delineate the features for easy understanding and field identification.
6. Testing of raw drugs for pesticide residues, aflatoxins, heavy metals and microbial load etc. to international standard or any other as per requirement.

Tasks of the Regional Raw Drug Repositories (RRDRs)

Tasks of the RRDRs would include development of comprehensive database for all raw materials used in ASU&H:

1. Raw drug repository
2. Herbarium- digital herbarium.
3. Reference extracts, samples of raw drugs for validation.
4. Development of profile for identification of raw drugs - macroscopic & microscopic, chemical profiling are to be developed.
5. Development of field identification key for major drugs.
6. Establish infrastructure for the testing facility.

3. Proposed regions for setting up RRDRs

1. Himalayan Region (Uttarakhand, Himanchal Pradesh, Jammu-Kashmir)

2. Western Region (Punjab, Haryana, Delhi, Rajasthan, Gujrat)
3. Northern Region (Uttar Pradesh, Bihar, Jharkhand)
4. Central Region (Madhya Pradesh, Maharashtra, Chhattisgarh)
5. Eastern Region (West Bengal, Orissa, Sikkim)
6. North Eastern Region (Assam, Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Tripura, Manipur)
7. Southern (A) Region (Karnataka, Goa, Andhra Pradesh, Telangana)
8. Southern (B) & Island Region (Tamil Nadu, Kerala, Pondicherry, Andaman & Nicobar

4. Proposed activities for RRDR

The region-specific RRDRs shall carry out the following core tasks:

- Collection of raw drug samples of regionally traded medicinal plants along with associated passport data, cataloguing of the raw drugs and storage for easy retrieval.
- All the endemic, endangered region specific plants of medicinal importance should be included. The species so proposed will be collected for all the parts being used in drug manually.
- The RRDRs will come out with a proposed list of plant species including region specific endemic, RET species of medicinal importance along with commonly used medicinal plants of the region.
- Substitutes and adulterants should also be included in the proposal.
- Development of herbarium of traded medicinal plant species of the region
- Cataloguing and educational display of raw drugs in museum for creating general awareness interest and spirit of enquiry.
- Development of image library and virtual repository
- Development of identification keys based on macroscopic, microscopic, and chemical profile of raw drugs
- Providing services like identification, authentication, testing and training etc.
- Quality certification of raw drug including testing for pesticide residues, aflatoxins, heavy metals and microbial loads etc.
- Act as regional raw drug reference library for further innovative research on medicinal plants.
- Any other services related to raw drugs.

(a) Collection of raw materials

RRDRs will have to undertake survey, inventorisation and collection of genuine raw drugs in trade, along with their substitutes and adulterants, from the critically identified plants from the field (wild and/ or cultivation). Raw drugs in trade would also be collected from market. Similarly, the RRDRs would make herbarium collection of the plant species forming source of the assigned raw drugs of the region. Each RRDR shall deposit one set of the raw drug samples and the herbarium sheets and share database with the National Raw Drug Repository (NRDR).

(b) Processing, cataloguing and profiling

Processing and cataloguing of data shall include all kinds of raw materials which are traded under codified ASU&H systems. Development of database of all the raw materials collected includes categorization, details of protocols for processing, accession, cataloguing and bar-

coding. Custom designed software is necessary to key-in and maintain data related to different accessions for easy retrieval and reference. A brief profiling along with monograph with botanical and chemical parameters viz. taxonomical, morphological, macroscopic, microscopic, powder analysis, HPTLC shall also be developed.

(c) Development of image library and virtual repository

The prime focus under this activity is to establish a virtual repository which contains all information regarding the raw materials with botanical and chemical profiling. The information created shall be uploaded on a website portal, to be specially developed and maintained by the NRDR, which could be accessed by various user groups through registration as annual or life-time membership fees. The information on the web-portal shall also possess image library of all raw materials that are traded, codified and used in folk medicines for easy identification.

(d) Research functions of the repository

The prime research function is to address the concerns about the identity and quality of the raw material being used and its sustained supplies. The research activity shall also include:

i. Field character based identification keys for critical identification of plant species forming source of prioritized raw material

ii. Key Distinguishing Characters (KDC) database on morphological and anatomical characters for prioritized raw materials and their known adulterants/ substitutes/ equivalent species using techniques such as:
- Macroscopy (organoleptic characters like color, odor, taste, fracture, etc.)
- Microscopy (anatomy and powder microscopy)

The RRDRs would be encouraged to take up the project route to add/ modify on specific research activities to the assigned core activities.

5. Service function of RRDRS

The service function of the repositories would include the following:

i. To act as referral center for validation and to authenticate botanicals of raw drugs.

ii. To periodically replenish the stocks in the repository through proper mechanisms.

iii. To provide authentic raw material to educational and research institution, industries, farmers at specific cost.

iv. To develop education materials, appropriate to the target group (students, rural communities, traders and commercial consumers, etc.) in the form of books, pamphlets, posters, audio-visuals like CDs, etc.

v. Capacity building and awareness creation for ASU practitioners, staff of Forest Departments, farmers, wild gatherers, traders, manufactures, etc.

vi. Issue Quality Certification to tested raw material.

6. Quality analysis of raw materials

90% of the ASU&H industry is of micro and small level with turnover of a few lakhs of rupees with no laboratory facilities for quality control as per GMP (Good Manufacturing Practices) requirements of Govt. of India (Schedule T, Drugs & Cosmetic Act, 2000). The RRDRs shall provide paid service to such manufacturers for identification and testing of raw material used by them.

The suggested parameters for such testing include the following:

- Macroscopic, Microscopic, Powder analysis
- Physicochemical analysis: Ash values, extractive values, moisture content, density, viscosity, surface tension, optical rotation, congealing point, etc.
- HPLC profile, Assay of active constituents
- Microbial analysis: Total microbial load, pathogens, etc.
- Heavy metal analysis: By AAS
- Pesticide residues
- Aflatoxins analysis: B1, B2, G1, G2

7. Eligibility criteria for RRDRS

All Government, Semi-Government and Government-aided institutions working in collaboration with Govt. Departments *viz*. Laboratories, Research institutions, Universities and Research Councils having following eligibility criteria would be eligible for applying for RRDRs:

(a) Clear long-term mandate for research and development work on raw drugs used in Ayurveda, Siddha, Unani and Homoeopathy (ASU&H).
(b) Necessary infrastructure
(c) A minimum of 10 year experience in operation and maintenance of similar nature of work
(d) Demonstrated capacity to manage the repository beyond the project period.
(e) Detailed Mechanism of sustainability of the RRDR setup after the withdrawal of NMPB funding.

8. Time Frame of the project

The time frame for first phase of development of the RRDRs will be five years (5 years) from the date of sanction of the project.

9. Amount of Financial Assistance

As per operational Guidelines of Existing scheme of NMPB viz. Central Sector Scheme on Conservation, Development and Sustainable Management of Medicinal Plants financial assistance upto Rs. 5 Crores is admissible for each of RRDRs.

Payment to RRDRs

Funds will be released in instalments as under:

1st Instalment - 10% of the total sanctioned budget will be released after signing of agreement
2nd Instalment - 25% of the total sanctioned budget will be released after acceptance of proposal and inception of work.
3rd Instalment - 15% of the total sanctioned budget will be released after assessment and acceptance of first progress report.
4th Instalment - 15% of the total sanctioned budget will be released after assessment and acceptance of second progress report.
5th Instalment - 15% of the total sanctioned budget will be released after assessment and acceptance of third progress report.
6th Instalment - 10% of the total sanctioned budget will be released after assessment and acceptance of Fourth progress report.

7th Instalment - 10% of the total sanctioned budget will be released after assessment and acceptance of Final progress report.

10. Submission of EOI

EOI shall consist of all technical details along with commercial terms and conditions and financial requirements. The organization should submit the proposal (EOI) in two parts viz. Part-I containing Technical requirements and Part-II containing financial requirement. **The proposal should also include list of plant species for which RRDR can be established.**

The Technical requirements and the financial requirements should be sealed by the bidder in separate covers duly superscribed and both these sealed covers, are to be put in a bigger cover should also be sealed and duly superscribed. The proposals are to be **addressed to Chief Executive Officer, National Medicinal Plants Board on its official address**. The Part-I containing Technical requirements shall be opened at the first instance and evaluated by the Competent Committee or Authority. The agencies submitting proposals (EOI) may also have to make presentation before the Committee for which they shall be called by NMPB.

At the second stage, Part-II of the proposal (EOI) containing financial details of only technically acceptable organisations shall be opened for further evaluation. Information on the following and other aspects as felt appropriate by the agency shall have to be submitted:

The selected agency will further be scrutinised for its technical and financial aspects by PSC and SFC, and the progress will be assessed before release of every next instalments by State Medicinal Plant Board (SMPB), third party agency and also by PSC and SFC.

Part - I: Technical Requirements

1. Name and address of organization along with Telephone no., Fax, e-mail etc.
2. Area of work of organization and expertise.
3. Details of the different divisions/ extension of the institute.
4. Details of the technical skill available with the organization.
5. Experience in the field with supporting documents indicating the core competence.
6. Number of key personnel available with the organization (total) in office/ branches (Permanent as well as contractual).
7. Number of technical personnel available with the organization with their qualification and experience.
8. Number of key personnel, required with their qualifications etc. to be engaged/ hired for the assignment of RRDR.
9. Any other information to highlight their strength and the claim to undertake the activities of RRDR.
10. Proposed list of plant species for which RRDR will be established.
11. Proposed facility to be developed though RRDR.
12. Details of Lab facilities (current status) along with list of instruments/ equipments and other infrastructure available with the institution.
13. Self-sustainability model for running the RRDR after 5 years as NMPB will only support for establishment.

Part - II: Financial requirements

Annual financial requirement shall have to be submitted along with the Technical requirements. The financial requirement should include all liabilities including Service Tax etc. if any. However, financial requirement of only the technically acceptable offers shall be opened for further evaluation. Any proposal which is incomplete in any respect will be rejected by the Board without any further reference.

Documents in electronic form will not be accepted.

11. Self-sustainability Model

The selected organization would allocate necessary budget and manpower resources to the management of repository beyond project period. The repositories would also maintain a revolving fund created out of the revenue received from the services provided. **The agency should submit a sustainability plan along with technical proposal which will also be evaluated along with the proposal**.

12. Administrative requirements

- Legal documents
  Documents for Registration, Accreditation certificate, Audit reports and other related legal papers.
- Infrastructure facility and indicative cost for development and maintenance of RRDR.
- Head-wise Expenditure of grant for development and Maintenance of RRDR.
- Manpower to be engaged/ hired with their fields (concerned subjects) for the assignment of RRDR.
- Revenue sources (if any) – Like training, Authentication of sample or certification etc.
- Any other information relevant to project

13. General terms and conditions

The selected organization has to sign an Agreement and Bond as per the prescribed format Part-VIII and Annexure-VIII of Operational Guideline for Central Sector Scheme on Conservation, Development and Sustainable Management of Medicinal Plants with the NMPB, Ministry of AYUSH for rendering satisfactory services and completion of the work in a time bound manner (for more details visit www.nmpb.nic.in) and further continuance.

- ***Note:*** NMPB shall have the power to amend any of the above mentioned clauses at any point of time (If it is essentially required for achieving objective of the EOI and selection of institutions) with the approval of competent authority.
  Revenue recovery- In case of unsatisfactory progress, funds released shall be recovered with interest.

14. Evaluation of EOIs

The EOIs of the applicant which fulfils the eligibility criteria conditions will be called for a presentation which will be evaluated by the Committee. The Comparative weightage for each activity of technical proposal would be as mentioned below:

- Type of Organization
- Past experience in relevant field
- CV and experience of key personnel

- Exposure of the Agency
- Clarity to Objectives of work
- Methodology and clarity of Task
- Feasibility of work
- Infrastructure available with organization
- Presence of the agency in different regions of the country
- Others

15. Rejection of EOI

The application for consultancy is liable to be rejected if:

a) The application is not covered in proper sealed cover with superscription as indicated above.
b) Financial bid is not received in proper by sealed cover with superscription as indicated above.
c) If it is, not in prescribed proforma and not containing all required details.
d) If it is, not properly signed.
e) Application received after the expiry of due date and time

The NMPB reserved the right to

a) To reject any / all applications without assigning any reasons thereof.
b) To relax or waive off any of the conditions stipulated in this document as deemed necessary in public interest and the objectives of the scheme without assigning any reasons thereof.
c) To include any other item in the Scope of work at any time with approval of competent authority.

16. ARBITRATION

In case of any dispute, Secretary (AYUSH) or his nominee shall be the Arbitration authority.

17. JURISDICTION

In case of any dispute, this shall be subject to the exclusive jurisdiction of Courts at Delhi.

18. Clarifications

For clarifications, if any the Contact point will be Dy. CEO, National Medicinal Plants Board, Room No. 309, Block-B, Ayush Bhawan, GPO Complex, INA, New Delhi - 110023. Phone number- 011-24651825.

Interested institutions **may submit their proposals in detail to CEO, National Medicinal Plants Board, Room No. 309, Block-B, Ayush Bhawan, GPO Complex, INA, New Delhi - 110023**. The EOI may be submitted within 45 days from the date of publication of advertisement in the News Papers.