### Appendix 4.1 Outline for Proposal of Specialized Research Laboratory

1. Title
2. Background and Rationale
3. Objectives

* Overall Objectives
* Specific Objective

1. Capacity building needs with respect to current situation

**Inventory of equipment and instruments in Specialized Research Laboratory**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Instruments/Equipment** | **Quantity** | **Use for which analysis** | **Quality(ages, working condition, etc.** | **Remarks (Repair, calibration, maintenance)** |
|  |  |  |  |  |
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|  |  |  |  |  |

**Checklist for Equipment, Instruments and Infrastructure**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.N | Items | Yes | No | Remarks |
| 1. | Availability of essential and specialized equipment |  |  |  |
| 2. | Inventory of equipment |  |  |  |
| 3. | Repair and maintenance |  |  |  |
| 4. | Performance check of equipment |  |  |  |
| 5. | Traceability of calibration of equipment |  |  |  |
| 6. | Status of Laboratory supplies |  |  |  |
| 7. | Environmental stresses (e.g. temperature, vibrations, wind, dust, smell, etc.) |  |  |  |
| 8. | Safety devices(fume hoods, emergency showers, eye touches, fire extinguishers, fire blanket) |  |  |  |
| 9. | Layout, size, structural condition, of laboratory buildings |  |  |  |
| 10. | Availability of available space for bench testing, equipment, administrative activities and general storage |  |  |  |
| 11. | Secured environmental controlled areas |  |  |  |
| 12. | Uninterruptible power supply(UPS) |  |  |  |
| 13. | Means of water supply controlled by static pressure or electricity |  |  |  |
| 14. | Specialized gas supply schemes (hydrogen, nitrogen, oxygen, helium etc.) |  |  |  |
| 15. | Validation of new equipment |  |  |  |
| 16. | Maintenance system and records |  |  |  |
| 17. | Standard operating Procedure(SOPs) |  |  |  |
| 18. | Availability of reference materials (Weights, thermometers, pressure gauze etc.) |  |  |  |
| 19. | Monitoring of environmental conditions |  |  |  |
| 20. | Trouble shooting orientation to equipment operators |  |  |  |
| 21. | Good Housekeeping /Store |  |  |  |

1. Proposed modality of "Specialized Research Laboratory "
   1. Expected beneficiaries
   2. Innovative features of the laboratory model
2. Strategy for sustainability (at-least five-year operational plan)
3. Operational plan
4. Risk Analysis
5. Detailed Budget
6. Expected Outcome
7. Baseline report of the existing laboratory to be developed/strengthened