

Pragat Maharashtra Prakalp

1. **Preamble.** Pragat Maharashtra Prakalp (PMP) is a project of the Chief Minister's Office, Govt. Of Maharashtra and the Ministry of Higher and Technical Education. Its vision is to build an ***independent and public*** knowledge infrastructure for the state of Maharashtra which will bring socio-economic and cultural development for its people, especially those in the bottom 80% of the socio-economic strata.

Its mission is to (i) **enable demand-driven research:** enable citizens, elected representatives, and state agencies to access institutions of learning (i.e., institutions of higher education, IHEs) for topical research such as in feasibility studies, evaluation, assessment, or innovative design and (ii) **align with development:** to align curricula and research in higher education towards better development outcomes and to train students for a future role as development professionals and researchers.

The program will enable students, assisted by faculty members, to undertake inter-disciplinary stake-holder driven research on live problems as a part of their curricula. It will thus give exposure and insight to students on governance and development problems and an openness about solutions, measurements and outcomes. The vision and mission align with the *Unnat Bharat Abhiyan* (UBA) of MHRD, Govt. Of India, see <http://unnat.iitd.ac.in>. In fact, the *Pragat Maharashtra Prakalp* supplements and extends the UBA so as to make it more effective and Centrally Funded Institutions (CFIs) have a special role to play.

2. **The agenda for Govt. of Maharashtra.** The development agenda for the PMP is to prepare future development professionals and researchers, and to provide a responsive and effective mechanism for topical research in the broad areas:
 - (i) **Rural and Urban Services.** Access and quality of service of rural and urban services and amenities such as water supply, electricity, sanitation, and public transport,
 - (ii) **Core Sectors.** Access and efficiency in core sectors such as water, cooking energy, agriculture and also social services such as health and education,
 - (iii) **Programs.** Delivery of state programs such as NREGA, PDS and others.
 - (iv) **SME.** Enabling small and medium enterprises to compete on quality, efficiency, and market access. Strengthening the sector to provide both quality employment and quality services and products.
3. **Objectives for institutions.** The objectives of the project are
 - (i) to align the research, curricula and training of professional colleges with problems of development.
 - (ii) to create avenues for students, guided by staff and faculty, for gainful interactions between IHEs and state agencies.
 - (iii) to enable IHEs into becoming a regional knowledge resource which is accessible to the public at large.
 - (iv) to promote a scientific temper in society and to evolve a collective, inclusive and sustainable vision of development.
4. **Modes of Interaction.** There will primarily be four modes of interactions between IHEs and state agencies. These are:
 - (i) **Case Studies (CS):** academic work with fixed objectives and methodology, executed in a regional context.

- (ii) **Research Project (RP)**: problem which needs new topical research.
- (iii) **Internships (IP)**: deputation of the student at an agency office with a fixed work description and reporting officer. It may also need access to facilities of the IHE.
- (iv) **Fellowship (F)**: Suitable for long-term interaction of strategic interest between institutions and GoM.

Examples of such studies are feasibility study, assessment and evaluation, alternative design, regional analyses, audits and failure analyses. Each study will be requested by a stakeholder, will have a sector of work, a funding source and a type of engagement. A sampler of typical tasks are given in Table I. All outcomes of these studies will be in the public domain.

5. **Caution: Routine consultancy vs. this program.** The program promotes *student-driven* applied research which is (i) in the public domain, and (ii) typically requested by a stakeholder or beneficiary. It should not be used for routine assessment and certification activities of the institution or as requested by implementing agencies.
6. **Organization.** The project will operate under the CMO and will consist of two entities.
 - (i) **Advisory council**, composed of 9 members, viz. (i) two members of the Academic council (see below), of which one of them is the Chairperson, (ii) Director of Technical Education, (iii) a Municipal Commissioner, (iv) representative of the CMO, (v) representative of line departments, (vi) representative of GoM research laboratories and technical agencies, (vi) a representative of the state S&T administration, (vii) an elected representative.
 - (ii) **Project Coordination Unit (PCU)** will be an agency of the Directorate of Technical Education and assist in the conduct of the program. The PCU will deal with the liaison, data requirement, sources of funding, arrangements of workshops and other meetings, and assist the Advisory and Academic Councils.
7. **Roles of the Advisory Council** will periodically assess the progress of the program and advise on its conduct. It will (i) identify key areas where knowledge inputs are required, (ii) give directives to state agencies to identify sources of funding, (iii) enable the liaison with IHEs and access to data.
8. **Sources of funding.** The primary source for most projects should be the District Planning Committee and urban local bodies. These will set aside 2% of its expenditure for topical research under this program and debit it to various departmental/project heads such as WSSD, IWMP or Jal Yukta Shivar and also district-level funds such as the District Innovation Fund. Most state agencies, including Jal Swarajya, MSEDCL have a separate provision for R&D and M&E funds which may be used by the DPC. Large projects may seek the assistance of the Rajiv Gandhi S&T Commission or from national bodies.
9. **Financial Support to Institutions.** Funds for specific studies should be made available to the institutions as follows. Case Studies should be at a fixed %-age of project cost, e.g., 0.5-2% of project cost depending on project size. Research Projects should be on person-month costs such as Rs. 20,000 to Rs. 50,000. Internship should be based on expertise required and support from institution. This could be in the range of Rs 5000-Rs. 15000 p.m. Travel, liaison costs, facility and laboratory costs at institutions should be discussed before hand.
10. **Project Cycle.** The project cycle for CS and RP will consist of **Phase I** consisting of (i) formal request from agency/stakeholder, such as a *gram sabha* resolution, (ii) proposal by

institution (iii) approval by competent authority and part-funding and access to data. Phase I must be enabled in **3 months**. **Phase II** will consist of (iv) work initiation and completion (v) initial reporting (vi) full-funding. Phase II will be aligned with academic programs. **Phase III** will consist of (vii) final reporting, dissemination and review. IP and F will be operated on an MoU between the appropriate agency and the institution.

11. **Data.** Participating institutions will have all access to relevant data held by state and national agencies such as MRSAC, Irrigation, Census, MSEDCL, etc. with the condition that they use this for academic research and analysis.
12. **Academic Council** will be an independent council of representative selection of heads of state institutions and Centrally-Funded Institutions and headed by a Chairperson. It will lead the academic agenda, i.e., (i) ensure scientific integrity and usefulness, and (ii) guide curriculum and research, so that it meets the objectives of the program. It will liaison with the PCU and Advisory Council to enable the research, procurement of funding and data. A key activity will be *Topical Study Workshops* which will identify research areas and train faculty, staff and students in these.
13. **Role of Centrally Funded Institutions (CFIs).** CFIs are invited to participate in the program. Indeed, for those under UBA, the PMP provides an effective mechanism for organizing the interaction between various stakeholders, get access to data and funding. Given their stature and their access to students, expert faculty and research infrastructure, it is expected that these institutions will evolve path-breaking case-studies, provide guidance and technical support to the program.
14. **Eligible Institutions.** All institutions identified under the TEQIP program and the CFIs are eligible to participate in the program. Based on regional needs and expertise, or participation in Study Workshops, other institutions may be added to this list, on the advise of the Academic council and the Advisory Council.
15. **Topical Study Workshop.** Institutions will network with each other and meet regularly to develop rigorous case-studies and other applicable research. Workshops will be organized by a few resource institutions and the PCU for the benefit of other IHEs. These studies will develop expertise for IHEs in new areas and also produce study material which may be used in course-work. A few example Topical Study list appear in Table II.
16. **At the institution.** Participating IHEs must start an independent and empowered Technology and Development Cell (**TDC**) which will embody the spirit of the program. It will propel the IHE on a trajectory of research and curriculum design to prepare the future professionals and researchers in the development sector.
17. **The TDC-Internal.** The TDC will be an inter-disciplinary cell within the IHE and will be composed of several faculty members and technical staff. There will be at least one lady faculty member and one social scientist. The TDC will also develop and administer several inter-disciplinary courses, including a for-credit Technology and Development Project (TDP) course which will enable students to work on development projects for credit.
18. **The TDC-External.** The TDC will be the interface between the external world and the institution. It will develop various areas of expertise, document case-studies, regulate interactions, organize stake-holder meetings, provide continuity, manage data, meet research expenses and receive payments.

19. **The role of NGOs, CSOs and other institutions.** State and regional NGOs, local colleges, the NSS etc. are important partners in the program. These may collaborate on individual projects, based on their experience, expertise and regional presence. This may be in the form of joint teams, joint academic work or participation in surveys and measurements. The technical and financial logistics shall be mediated by the TDC.

Specialist NGOs and CSOs with broader experience and knowledge, such as documented case-studies, may also participate in Study Workshops as both resource persons and as learners. This role will be mediated by the Academic Council.

| Requesting Body | Work Area | Type | Sector/Agency | Funding Head |
|-----------------------------|--|-------------|--|---------------------|
| GP, MP/MLA, ZP, RDD | Village plan, sanitation design and assessment | CS | RDD | RDD, ZP |
| GP, MP/MLA, ZP, WSSD | PWS, water quality | CS | WSSD | WSSO |
| GP, MP/MLA, ZP | Watershed, JYS | CS | Agriculture, Water Conservation | JYS, IWMP, DPC |
| GP, MP/MLA, ZP | Eco-village/Vill. Development Plan Assessment | CS | RDD | RDD, ZP |
| GP, MERC, MP/MLA | Audit of rural electric supply | RP, IP | MSEDCL | MERC, Collector |
| GP, MP/MLA, ZP | Watershed analysis | RP, IP | Agriculture, Water Conservation, Forest | IWMP, DPC |
| Collector, MP/MLA, ZP | District/taluka regional DW assessment | RP, IP | WSSD, MJP | WSSO, DPC |
| Collector, MP/MLA, ZP | District/taluka water budget and plan | RP, IP | WSSD and Irrigation | WSSO, DOC, MERI |
| Collector, MP/MLA, ZP | District/taluka tanker plan assessment | RP, IP | Collector Office | DPC |
| Collector, MP/MLA, DPC | GIS planning | RP, IP | DPC, MRSAC | DPC |
| Collector, MP/MLA, DPC | District road network design assessment | RP, IP | DPC, MRSAC, PWD | PWD, DPC |
| GP, MLA | Social Audit | RP, IP | RDD | NREGA |
| ULB, elected representative | PWS assessment and guidance | CS+RP | MJP, WSSD | ULB |
| ULB, elected representative | SWM plan assessment and guidance | CS+RP | ULB | ULB |
| ULB, elected body | MSNA absorption | CS+RP | ULB | ULB |
| Industry Body | Bottled Water: Standardization and Efficiency | RP | Local Producers, standards institutes, testing facilities. | DIC |

Table I: Sample Interactions.

| S. No. | Topic | Duration | Suggested Eligibility |
|---------------|---|-----------------|-----------------------------------|
| 1 | Design of Rural Bulk Water Schemes | 4 days | B.E, M.E in Civil. WRE |
| 2 | Rural Assessment Methods | 3 days | all branches |
| 3 | Assessing Maharashtra Sujal Nirmal Abhiyan | 4 days | B.E., M.E. in Civil, Mech., Chem. |
| 4 | Making Rural Sanitation Plans | 3 days | all branches |
| 5 | Rural Power Supply-the network and its assessment | 2 days | B.E., M.E. in EE |
| 6 | GIS and its applications in planning | 4 days | all branches |
| 7 | Groundwater simulation for watershed applications | 5 days | B.E, M.E. in CSE, Civil, Chem. |
| 8 | Energy audit in small enterprises | 3 days | All branches |

Table II: Sample Topical Study Workshops