Standard Operating Procedure
for the functioning of
Women Technology Parks

As part of the project titled

Study of Women Technology Parks across the Country
for the Integrated Development of Rural Women

Catalysed and Supported by

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PREAMBLE

India is a growing economy with an increasing say of Science and Technology (S&T) in almost all fields and walks of life. The S&T intervention has brought significant changes in the lives and livelihood of people for good. It has also empowered women as never before.

The challenges faced by women range from social to cultural, from economic to political, etc. The numerous challenges that rural and peri-urban women have to face in their day-to-day lives are a bit different from those encountered by women in metropolitans and big cities. The myriad challenges faced by rural women are managing the household chores to struggling for their daily bread.

Against this backdrop, women's empowerment is the need of the hour and no community or country can afford to take it for granted. A noble step in this direction is the establishment of Women Technology Parks (WTPs) across the nation that act as centres for empowering rural women by training them on the use of appropriate technologies that uses locally available raw materials for the production of indigenous products. The WTPs have emerged as potent centers for the livelihood generation of rural women thus bringing them to the fold of the economy from the fringes.

WTPs help create an enabling environment so that the S&T interventions can be extended for micro-enterprise development by women and enhance their income. These parks strive to provide a competitive market for the indigenous products manufactured by women and thus are a real boost to the 'VocalforLocal'. Capacity building, value-addition of products, and technology up-gradation lie at the core of making these parks sustainable.

OBJECTIVES OF WOMEN TECHNOLOGY PARKS

- To develop area-specific technologies and make rural women adapt them for livelihood generation, transfer of proven technologies and live demonstration of technology models
- To address the weak links that hamper the livelihood generation for the rural women in an area and promote supplementary income generation among women
- To generate employment opportunities for women through their skill development and capacity building
- To utilise the resources found locally and empowerment of rural women through S&T
- To address issues related to health & nutrition, drudgery reduction and addressing the occupational hazards faced by women in a particular area

SCOPE

Women Technology Parks (WTPs) are established for the development and adaptation of innovative bouquet of technologies, transfer of proven technologies and demonstration of live technology models to address the weakest link and/or strongest link of the livelihood system of women, resulting in significant improvement in quality of life and income generation. The mandate of WTPs are to innovate in sectors like health & hygiene, food & nutrition, and sanitation technologies for different stages of women's life; strive for skill enhancement and capacity building of women using science & technology, preferably as per National Occupational Standards (NOS) for various sectors using area-specific resources; provide hands-on training, promote the establishment of micro-enterprises, and ensure value-addition of the products and access to markets. The nuclei of the focus areas of WTPs are to attain local self-reliance of women for economic re-growth in rural and peri-urban areas and aspirational districts with sizable populations.

The scope of WTPs can be drawn in critical functional areas such as technology improvisation, promotion & demonstration, capacity development and skill enhancement, income & livelihood enhancement, building institutional and market linkages, and overall enhancement of quality of life.

PRINCIPLE

An ideal WTP has the potential to train rural women in technologies that optimally use at least one of the local resources and bring forth value-added products that are a source of income and livelihood generation for them. Facilitating women to be self-reliant by providing all possible support from financial institutions, banks, non-banking finance corporations (NBFCs), and government agencies and strengthening market linkages are integral to model WTP. These agencies are intended to act as connections between Knowledge Organizations (KOs) and field-level community-based organisations and agencies. It must act as a resilience focal point, increasing community resilience through S&T components. Further, it should be developed as a park that demonstrates and incubates need-based technologies and strives for sustainability.

Following are the essential roles that a WTP needs to perform:

- **Knowledge Resource Point:** Nodal point for knowledge transfer to rural women, making them use the technologies, capacity building and help them to become self-reliant

- **Establishing linkages**: Empowering rural women by connecting them with appropriate technology delivery platforms. Facilitating the trained women with financial support and market linkages for developing micro-enterprises. Strengthening the rural women, S&T enable training that enhances prospects of livelihood generation
- **Capacity Development and Skill enhancement point**: Providing training to women on the use of appropriate technologies, product development and capacity building

PRE-REQUISITES

Following are the pre-requisites an organisation applying for establishing a WTP must fulfill:

Organisations that can apply

1. Academic, R&D Institutions, Central and State Government organisations with a proven track record in executing S&T-based projects
2. Private Universities/Colleges/Autonomous Institutes recognised by at least one government institute for having experience in executing S&T projects
3. Community Based Organisations/Potential Voluntary Organisations (NGOs) with experience and have successfully implemented projects with support from S&T Departments/other credible funding agencies
4. Community Based Organisations (Voluntary organisations & NGOs) should have mandatory tie-up with S&T Institutions for technology transfer
5. A scientific expert needs to be engaged with the organisation who can look for the S&T aspects of the implementable technological interventions

Applying against a Call for Proposal

1. Evidence of conducting a baseline survey to study the socio-cultural and economic backdrop of the area. The problem addressed should precipitate from the baseline survey.
2. Frame objectives of a WTP in alignment with the objectives laid by the respective funding agencies, which fulfill natural resource management, skill development, promotion of livelihood generation and dissemination of appropriate and need-based technologies.
3. Selection of appropriate technologies: Technical availability, environmental sustainability, economic viability, and other administrative requirements related to a technology need to be considered. At least one of the technologies should use the local natural resources of the target region.

4. Methodology to be adopted for establishing WTP covering detailed information about system approaches followed for community mobilisation, involvement of social bodies, technology modulation and diffusion, conducting awareness and training program at the applying organisation.
5. Frame project timeline based on deliverables and measurable impacts considering the regional resource availability, identifying linkages with local governmental or non-governmental bodies to benefit the trainees.
6. Defined project planning in terms of team members, implementation organisation, nature of implementation, capability, links with local bodies, voluntary organisations, S&T, industries or banks etc.
7. Finalise the qualitative and quantitative analysis indicators.
8. Calculate the economic viability of each technology and project as a whole. While calculating and documenting a project's financial viability, the capital cost, running cost, human cost and infrastructural cost, etc., along with the recurring cost for every technology, should be covered.
9. Follow-up action plan for post-project activity through which the trainees acquire support/ guidance from WTPs. It assists trainees in getting proper advice and solutions to the problems encountered and retaining the benefits of the training and technology after the project is over.
10. Chalk out the sustainability plan and mechanism sustaining the WTPs by forward and backward linkages

Check-list for a Funding Agency

1. The submitted proposal needs to aim at improving women's livelihood opportunities and focuses on-field demonstration, capacity building and training oriented activities.
2. Selected technology packages need to be primarily based on locally available resources, innovative and cover potential areas of S&T. These validated technologies need to have proven records of livelihood enhancement or drudgery reduction.
3. Technologies – requiring additional R&D aspects and validation – that specifically focus on problems relating to women may be considered. These may be from sectors like health & hygiene, food & nutrition, geriatric issues, etc.
4. The technological interventions and the benefits to the target population may be clearly expressed in terms of quantifiable goals, targets, a list of verifiable progress indicators, etc.

5. Pre-planned marketing linkages (forward linkages) emphasising micro-enterprise development may be mechanised and indicated in submitted proposals.
6. A mechanism must be developed to ensure the project's sustainability after the support from the funding agency gets over.
7. The local physical presence of these types of organisations in a particular region needs to be ensured.

PROCEDURE

On any initiative to work upon, there needs to be a certain way of accomplishing the objective and deliverables. The procedures outlined here are meant to target two types of audiences – one who wants to establish a WTP and the other who wants to support the establishment of a WTP by any means, like financial, technological, etc.

For Funding Agencies

1. Organise regular briefing sessions for new Principal Investigators (PIs) of WTPs to orient/reorient them.
2. Perform continuous follow-up of the functions of ongoing WTPs and visits by PAC members or any other Committees.
3. Evaluate the completed WTPs and their outputs/deliverables as per the guidelines, and document them on measurable indicators. These documents will be the evidence for future WTPs to cite as references.
4. Ensure the completed WTPs submit their best practices and success stories in the form of short videos and texts for new WTPs to follow.
5. Identify the top performers as a WTP and PI for replicating and upscaling the best practices and success stories. Also, recognise them and showcase them at various platforms.
6. Provide handholding to the weak performers on identified parameters.
7. Develop a mechanism to mentor the weak performers and the new WTPs by the successful WTPs.
8. Build a database and establish a mechanism for networking of WTPs.
9. Document the due-diligence report of each technology timely.
10. Ensure that the technology selected adds value to the existing livelihood system of the area and should be able to facilitate the forward and the backward linkages to them.

For WTPs

1. **Need Assessment:** An exhaustive and in-depth baseline study is required to gauge the needs at the grassroots level. It also includes identifying issues specific to rural women, understanding the present capacities of the target group, and understanding the socio-economic parameters.
2. **Identification/Development of Appropriate Technology:** Develop or identify the appropriate technology that not only helps resolve the present issues through the S&T component but also generates employment and income opportunities for rural women.
3. **Resource and Community Mobilisation:** It includes aligning the community members, here rural women, to make them understand that science and technology (S&T) can help resolve their problems while simultaneously generating income opportunities by value-addition of the local products.
4. **Training and Capacity Building:** Capacity building is a continuous process having regular training and certification as integral components. It can be aligned with National Skill Qualification Framework of Government of India to enable trained women to enter the mainstream livelihood system. It is done by enhancing their skills would bring about a socio-economic change as it enhances their income and elevates their standard of living.
5. **Livelihood Enhancement:** The basic idea is that women should be self-reliant and the technology developed/used for livelihood generation should be sustainable. Financial support is also needed for business development, and WTPs help facilitate financial support from the government and other agencies. Ensuring economic viability is an essential component.
6. **Operation of WTPs and Delivery:** Ensuring the technical viability of the enterprises, establishing the linkages with markets and other essential linkages, and support to and from the rural women are essential for the successful operation of WTPs. The approach to enterprise development becomes more effective through Group led or community-led training programmes and could bring a significant change in the women through extensive scale participation and seamless adoption of appropriate technologies, thereby making the WTPs an effective platform for technology delivery.
7. **Monitoring and Evaluation:** Regular monitoring and evaluation helps identify the bottlenecks if any, and thus find ways to get rid of them. Evaluation helps in identifying the parameters or the weak areas that need to be reworked upon.

SUSTENANCE

The sustainability of a WTP depends on several factors. The two most essential parts are the constant engagement of the target audience and the drawing of funds for sustaining different administrative processes.

The following steps need to be incorporated into the procedure to ensure the sustainability of WTPs:

1. The WTPs will refine the procedure of selecting beneficiaries, creating market tie-ups, and promoting SHGs.
2. They need to build strong backward and forward linkages for every technology besides aligning some technologies with their respective NSQF levels. This should start from the second year onwards.
3. The safety of the products manufactured under the aegis of the WTPs must be verified through a standardisation procedure like FSSAI certification. The product should, however, be registered with the FSSAI with the appropriate brand name and the name of the implementing organisation rather than that of DST.
4. The WTPs need to establish linkages with banks to provide financial support to the women and buy-back arrangements and marketing linkages.
5. A collaboration between government and field agencies is essential for the success of the WTPs. For better marketing, associations such as those between GEM and E-Mahila Haat are suggested. An expedition to various centres of NIRD and NABARD can provide knowledge on funding and support for the enterprises and help establish linkages with different organisations such as the Department of Rural Development and Panchayats, Punjab Agriculture University, KVKs, etc.

QUALITY CONTROL

Quality control is essential for highlighting a WTP's potential for creating a bigger picture.

1. **ISO Certification:** The WTP can strive for ISO certification for any novel activity, method, technology or technique supported under its umbrella. There are various ISO certifications available for each one of them.
2. **Standardisation and Validation:** After developing any products, they need to be standardised and validated by following specific guidelines by respective quality control and assurance agencies.
3. **Certification of Products:** After standardisation of the respective products, the certification to be obtained after fulfilling all the pre-requisites from respective QC agencies, like FSSAI.

Science for Equity Empowerment and Development (SEED) Division, DST

Science for Equity Empowerment and Development (SEED) Division under the Department of Science and Technology provides opportunities to motivated scientists & technologists from national Research and Development (R&D) labs, S&T-driven Non-Governmental Organizations (NGOs) and field-level workers to take up action-oriented and location-specific projects aiming at Socio-economic development of disadvantaged sections of the society through appropriate interventions of Science, Technology and Innovation (STI), leading to their improved quality of life and livelihood. Through its diverse schemes and programmes, efforts are being made to empower the community by adopting technologies to address locally defined needs and priorities that consider available resources and the moral prosperity of society for sustainable development.

Various schemes and programmes under SEED Division are Scheme for Young Scientists and Technologists (SYST), Strengthening, Upscaling & Nurturing Local Innovations for Livelihood (SUNIL) Programme, Technological Intervention for addressing Societal Needs (TIASN), Technology Acceleration Platform for Rural Innovation and Social Entrepreneurship (TAP-RISE), Science Technology Innovation (STI) Hubs, Technology Interventions for Disabled and Elderly (TIDE), Scheduled Caste Sub Plan (SCSP), Tribal Sub Plan (TSP), Science & Technology (S&T) for Women, Women Technology Park (WTP), Community Resilience Resource Centre (CRRC), and Scientific Utilization through Research Augmentation-Prime Products from Indigenous Cow: SUTRA-PIC India.

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