

# **West Bengal State Council of Science & Technology**

Expression of Interest (Eoi)

For

Academic Institutions / Colleges / Universities / Research Institutions /  
Scientific Organizations / Private Agencies to transfer the existing  
Biotechnologies for Societal Welfare



**Department of Science & Technology and Biotechnology**  
**Government of West Bengal**

Vigyan Chetana Bhavan

26/B DD Block, Sector I, Salt Lake, Kolkata-700064

August 2021

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**Text of Advertisement:**

The Department of Science & Technology and Biotechnology, Government of West Bengal invites sealed Expression of Interest (Eoi) through West Bengal State Council of Science & Technology, from Academic Institutions / Colleges / Universities / Research Institutions / Scientific Organizations / Private Agencies to transfer the existing Biotechnologies for Societal Welfare. The Department intends to implement this program inviting Eoi from the organizations having requisite experience in the area of transferring biotechnologies. The Eoi Document containing the details of qualification criteria, submission requirement, brief objective & scope of work and evaluation criteria etc. can be downloaded from the website **[www.dstbt.bangla.gov.in](http://www.dstbt.bangla.gov.in)** and **[www.vigyansathi.in](http://www.vigyansathi.in)**. Further details, if any, may be obtained from the Administrative Officer, West Bengal State Council of Science & Technology, Department of Science & Technology and Biotechnology, Government of West Bengal, Vigyan Chetana Bhavan, 26/B DD Block, Sector I, Salt Lake, Kolkata-700064 up to **20<sup>th</sup> September 2021** till **05.00 PM**. Last date for submission of Eoi is **30<sup>th</sup> September 2021** till **05.00 PM**. Sealed envelopes separately for technical (Envelope A) and financial (Envelope B) bids respectively marked to the captioned address, containing Eoi along with all necessary annexures may be submitted mentioning **“Eoi for transferring Biotechnologies for Societal Welfare”** on the top cover to the **Administrative Officer, West Bengal State Council of Science & Technology, Department of Science & Technology and Biotechnology, Government of West Bengal, Vigyan Chetana Bhavan, 26/B DD Block, Sector I, Salt Lake, Kolkata-700064**. Applicants meeting the pre-qualification criteria may be invited for presentation of proposal before the Selection Committee of DSTBT, GoWB. The Department reserves the right to cancel this request for Eoi and/or invite afresh with or without amendments, without liability or any obligation for such request for EOI and without assigning any reason. Information provided at this stage is indicative and DSTBT, GoWB reserves the right to amend/add further details at final stage of selection.

## **Invitation of EoI for transferring biotechnologies:**

### **1. Objectives:**

To facilitate the process of transfer of research leads developed at scientific organisations (public or private) to the common/grass root people.

### **2. Background:**

The Department of Science & Technology and Biotechnology is mandated to promote research and development and translation research in the area of Biotechnology. With the changing situation of the human civilisation, especially in post-pandemic life, the society needs the support of scientific and technological interventions for healthy living as well as for the better livelihood generation. The rural and tribal economy of West Bengal primarily stands on agriculture, horticulture, animal husbandry, fisheries, food processing, medicinal plants etc. However, most of the technologies practised in rural and tribal areas are conventional and sometimes, hazardous, for the usage of harmful pesticides, fertilizers, synthetic food colour and other additives, adulterants and so on. Sustainable crop production depends on good soil health and integrated nutrient management. Indiscriminate use of inorganic fertilizers has led to the pollution and contamination of the soil, has polluted water basins, destroyed micro-organisms and friendly insects, making the crop more prone to diseases and reduced soil fertility. The above technologies, in present time, have been advanced many folds beyond the conventional methods, but what is necessary, is to disseminate the new technologies from lab to land, in practical sense.

### **Trending technologies in the modern Society:**

Transfer of technologies for rural empowerment should be a good blend of modern research outcomes with indigenous knowledge and traditional practices. On the other hand, rural economy will be improved if the products can reach the urban/suburban markets. Organic food and vegetables, herbal products, natural colour-flavour-preservatives and so many such eco-friendly products have been the point of attraction in the urban/suburban society in the last few decades. However, most of the products and the raw materials are sourced from the rural areas.

**Organic farming** is mainly based on **organic compost, vermicompost, bio-fertilizers, bio char** and **bio-pesticides** which are also essential for healthy soil as well as in conserving the natural biodiversity. Bio fertilizers play a very significant role in improving soil fertility by fixing atmospheric nitrogen, solubilising insoluble soil phosphates and finally producing the plant growth substances in the soil. The long-term use of bio fertilizers is economical, eco-friendly, more efficient, productive and accessible to marginal and small farmers over chemical fertilizers. Enrichment of vermicompost along with bio fertilizers or nutrients could also be a viable technology for organic farming. But the general awareness is the main constraint of popularizing bio fertilizers among farming community.

There are several strategies of soil carbon sequestration which can be adopted at farm level. One of the recent developments is the conversion of crop residue biomass into bio char and using the char as a soil amendment rather than directly using the crop residues. Bio char has

a long life in soil and is more effective in sequestering carbon besides improving other soil properties like water holding capacity and nutrient availability. Bio char has the potential to increase conventional agricultural productivity and mitigate greenhouse gas emissions from agricultural soils.

**Cultivation and preservation of indigenous plant varieties** has also a good scope and may be a unique activity for the farmers through Plant Variety Protection Act. This, on the other hand, will serve for germplasm conservation; like there are several indigenous rice varieties which are nutritionally rich and diversified, but getting suppressed and endangered by the high-yielding varieties. **Biofortification of food crops** with improved agronomic practices through modern biotechnology without sacrificing any characteristic is preferred by farmers as well as consumers.

**Horticulture** and **Sericulture** are also the good areas for rural entrepreneurship. **Apiary** can be a good option for side-business along with horticulture. Techniques have been developed in modern apiary for easy honey collection without harming the bees.

**Oil seed extraction** is another potential sector for the farming communities, especially, the palm oil industry which has a good potential in West Bengal as well as in India.

Local **medicinal plant cultivation** also has enormous potential to thrive, especially within the tribal communities who are already enriched with the indigenous knowledge. This will in turn check the bio-piracy of the wild resources of the State.

**Mushroom cultivation** would also be a good income generating activity and would be helpful in poverty alleviation.

Modern trends in **pisciculture** have been developed in the form of **aquaponics** in combination with vegetable farming also in the form of **bio-floc** techniques. Cultivation of ornamental fishes is also a promising sector. Mass cultivation of potential **microalgae** and cyanobacteria for biotechnological exploitation in biorefinery mode including health, food and bioenergy production leading to biofertilizer, poultry feed, fish feed formulation and pollution removal with spent biomass.

Biotechnology can improve genetic resources, ensuring livestock and poultry health, providing veterinary care, better management of feed and fodder and providing improved mechanism for collection, processing and management of **livestock, poultry and dairy products**.

In addition to the production of organic crops, **Post-harvest Management** and development of processed **value-added products** are one of the most important techniques which can bridge between the rural fields and the urban market. There are various methods of preservation of food including thermal processing, fermentation, pickling, dehydration, freezing etc. The technology for preservation also varies with type of products and targeted market. Therefore, food processing and horticulture industries can help farmers to get assured income for their produce and also avoid market glut.

**Suggestive Marketing Channels:** Department of Agricultural Marketing, GoWB has amended in 2014 the Agricultural Produce Marketing (Regulation) Act 1972 making

marketing more remunerative to farmers. Farmer Producer Organizations (FPOs) are being encouraged to be formed and FPOs as aggregators of produce from member farmers with higher bargaining power with FPOs, are selling to Sufal Bangla outfits. Direct purchase of such produce to private markets is also now allowed over and above APMC Mandies. National Electronic Agricultural Markets e-NAM is being linked to such “Krishak Bazars” formed by Agricultural Marketing Department to facilitate better marketing through price discovery and realization on pan India basis.

### 3. Objectives of the Eol:

The Government of West Bengal is intending to bring in different biotechnologies, through the Department of Science & Technology and Biotechnology (DSTBT, GoWB), to the common people, especially in the rural and tribal areas of this State, through skill development for self-employment and income generation. Such lab-to-land programmes will be conducted through a core system of adaptability chain (Traditional > Improved > Advanced) as per suitability for the beneficiaries.

### 4. Eligibility:

Entities such as Academic Institutions / Colleges / Universities / Research Institutions / Scientific Organizations / Private Agencies which are willing to transfer different biotechnologies directly to the beneficiaries.

**Pre-qualification Criteria:** Following will be the minimum pre-qualification criteria. Each eligible applicant should possess all the following pre-qualification criteria. Responses not meeting the minimum pre-qualification criteria will be rejected and will not be evaluated.

Sl. No.	Pre-qualification criteria	Supporting compliance documents
1	<ul style="list-style-type: none"> <li>The applicants shall be an Academic Institution / College / University / Research Institution / Scientific Organization / Private Agency.</li> <li>Private Agencies/ company registered under the Indian Companies Act, 2013 or Society registered under Society Act and who have their registered offices in India.</li> </ul>	<ul style="list-style-type: none"> <li>For Academic Institutions / Colleges / Universities / Research Institutions / Scientific Organizations - letter of consent from the Head of the Institution.</li> <li>For Private Agencies - Certificate of Registration or Trade License.</li> <li>Documents related to exclusivity of knowledge such as IPR etc.</li> </ul>
2	<p>The applicant submitting Eol for lead should have:</p> <ul style="list-style-type: none"> <li>At least 3 years of experience in the particular domain.</li> <li>Preferably an Autonomous body with strong provincial and national presence.</li> <li>Permanent Staff of more than 5.</li> </ul>	<p>Certificate of incorporation, balance sheet and other relevant documents.</p>

	<ul style="list-style-type: none"> <li>• Considerable amount of experience in technology transfer and commercialization, hand-holding start-ups and executing lab-to-land programmes.</li> <li>• Financial Statements of last 3 years showing self-sustenance.</li> </ul>	
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## 6. Roles & Responsibilities and Terms of Reference (ToR):

Following are the broader roles and responsibilities:

1. To transfer different biotechnologies to the common people (beneficiaries) through skill development / hands-on-training, for their self-employment and income generation.
2. To conduct capacity building programs.
3. To guide the beneficiaries on different funding mechanisms and schemes of Central / State Govt. Departments or Private Agencies, suitable for the beneficiaries.
4. To provide the required resources for IP protection and commercialization.
5. To provide post training hand-holding support to set up the businesses by the beneficiaries.
6. To provide post set-up hand-holding support on packaging, branding and marketing.

The organizations selected for support are expected to provide all round support in the area of technology transfer and to set up businesses by the beneficiaries.

## 7. Expected Deliverables:

The following are anticipated deliverables considered in addition to the performance indicators:

- Submission of Annual Update report to DSTBT, GoWB of the current status of the programme detailing the milestones achieved and capacities built.
- Technologies transferred to make the beneficiaries sustainable and self-sufficient.
- Impact outcome w.r.t. start-ups / business developed by the beneficiaries.
- List of entities to be mentored and details of mentoring extended.
- Performance indicators may include number of technologies transferred, training & mentoring support provided, and other related parameters as decided by the Department time to time.

## 8. Financial support:

The Department of Science & Technology and Biotechnology, Govt. of West Bengal (DSTBT, GoWB) will provide the Grant-in-Aid for fulfilling the project. The Terms of Reference of Grant-in-aid will be shared with successful applicants. The proposed budget is to be submitted in Proforma-3, in Envelope-B.

**9. Time Frame:** The project support will be maximum for 5 years with annual evaluation or assessment from the date of MoU.

**10. Eol Processing Fees:** The Eol processing fee is NIL.

**11. Validity of Offer:** The offer for Eol as per this document shall be valid for a period of three (3) months initially which may be extended further, if required by DSTBT, GoWB.

**12. Instructions to applicant:** The Expression of Interest (Eol) is to be submitted in the manner prescribed below:

All information as detailed below are to be submitted in duly signed hard copy in sealed envelopes and one soft copy to email: [wbbiotech@gmail.com](mailto:wbbiotech@gmail.com)

- a) Applicant's Letter showing Expression of Interest (in Envelope-A).
- b) Proposal - Technical details as per Proforma-1 (in Envelope-A).
- c) Organizational Details as per Proforma-2 (in Envelope-A).
- d) Financial requirement (proposed Budget) as per Proforma-3 (in Envelope-B).

**13. Evaluation Criteria and Method of Evaluation:**

- Existing channels of "Farm to Fork" must be known to the applicants.
- Screening of Eols shall be carried out as per eligibility conditions mentioned in this document and based on verification of testimonials submitted.
- Eol will be evaluated for short listing inter alia based on their past experience of handling similar type of work/project, strength of the area of work / project, strength of their manpower, financial strength of applicant and presentation of proposal to the Selection Committee whose decision will be final.
- Condition under which Eol is issued: The Eol is not an offer and is issued with no commitment. DSTBT, GoWB reserves the right to withdraw Eol and or vary any part thereof at any stage. DSTBT, GoWB further reserves the right to disqualify any applicant, should it be so necessary at any stage.
- The suggestive evaluation criteria are given below:
  - ✓ Technology to be transferred.
  - ✓ Objectives of the programme.
  - ✓ Modus operandi of the programme, with monitorable timeline.
  - ✓ End products from the technologies to be transferred.
  - ✓ Strength of technical knowledgebase.
  - ✓ Institutional and manpower strength.
  - ✓ Target location of the proposed programme.
  - ✓ Land / space and infrastructural facility available to the applicant for training and trials.
  - ✓ Strength of the institutional linkage with the market (buyers) and stakeholders.
  - ✓ Proposed budget along with the cost share of the applicant.

The applications would be evaluated by an Expert Committee duly constituted for this purpose. The evaluation can be further substantiated based on below mentioned break-up



score assigned against each evaluation criteria. Intending to provide further clarity, each criterion is described in detail as below in table:

**Table: Evaluation of proposal - scoring against criteria**

Sl. No.	Description of evaluation Criteria	Maximum marks with Break-up
1	Understanding of ToR, Methodology and Work Plan: <ul style="list-style-type: none"> <li>• Understanding and adherence of ToR- 10 marks</li> <li>• Approach and Methodology-20 marks</li> <li>• Work plan and time schedule – 10 marks</li> </ul>	40 marks
2	Enumerate & detail the existing resources, infrastructural facilities, manpower, policies, systems and process, experience related to technology transfer	20 marks
3	Network – State, National and International: Detail & type of agreement entered with various stakeholders	10 marks
4	Profile of applicant & past experience of similar nature as detailed in operational history as elaborated in the below table	20 marks
5	Presentation & interaction	10 marks
	<b>Total</b>	<b>100 marks</b>

Financial bids (Proforma-3) of those applicants, who will secure 50 marks or above on technical evaluation of proposal (Proforma 1 & 2), will only be considered further.

The bidders could be called for presentation on its proposal covering experience/technical competencies including implementation methodology, resources, work schedule and activity schedule etc before the Expert Committee.

In the evaluation of EoI relative importance of quality criteria vis-à-vis cost aspects will be 70:30 and the proposals with highest weightage combined score will be given preference.

**14. Last date of submission of EoI:** The last date of submission of EOI is **30<sup>th</sup> September 2021**.

EoI Documents have been hosted on the websites [www.dstbt.bangla.gov.in](http://www.dstbt.bangla.gov.in) and [www.vigyansathi.in](http://www.vigyansathi.in) and may be downloaded from the websites. The applicants are expected to examine all instructions, forms, terms and other details in the EoI document carefully. Failure to furnish complete information as mentioned in the EoI document or submission of a proposal not substantially responsive to the EOI documents in every respect will be at the applicant's risk and may result in rejection of the proposal.

## APPLICANT'S EXPRESSION OF INTEREST

To  
Administrative Officer  
West Bengal State Council of Science & Technology  
Department of Science & Technology and Biotechnology  
Government of West Bengal  
Vigyan Chetana Bhavan, 26/B DD Block,  
Sector I, Salt Lake, Kolkata-700064.

**Sub:** Submission of Expression of Interest (Eoi) for Technology Transfer

Sir,

In response to the Invitation for Expressions of Interest (Eoi) published on 29.08.21 for the above purpose, we would like to express interest for Technology Transfer. As instructed, we attach the following documents in sealed envelopes and one soft copy (to wbbiotech@gmail.com):

1. Technical Details (PROFORMA-1) - in **Envelope-A**.
2. Organizational Details (PROFORMA-2) - in **Envelope-A**.
3. Financial requirement (Proposed Budget) (PROFORMA-3) - in **Envelope-B**.

Sincerely Yours,

Date:

Place:

Signature of the applicant  
(Full name of applicant)  
(With Seal)

Encl.: As above.

(Note: This is to be furnished on the letterhead of the organization)

**PROFORMA– 1**  
**(to be submitted in Envelope A)**

Sl. no.	Technical Details	
1	Broad fields of technology intended to transfer	
2	Objectives of the programme	
3	<i>Modus operandi</i> of the programme	
4	Work plan and schedule (with monitorable timeline)-use Annexure to details	
5	End products from the technologies to be transferred	
6	Manpower, skill set, team composition & deployment	
7	Strength of technical/research knowledgebase	
8	Target location of the proposed programme (largely in quantitative terms)	
9	How many persons/families will benefit including geographical area if land based	
10	Expected quantitative/% enhancement due to application of technology to the intended source/product	
11	Cost comparison from the current to the final achievement in terms of investment and returns	
12	Net IRR or per capita enhancement in return on application of the proposed technologies.	
13	Is any part of the activity insurable? If so, details thereof.	
14	Available land / space and infrastructural facility to the applicant for training and trials.	
15	How strong is the institutional linkage with the market (buyers) and stakeholders for the technology intended to transfer?	
16	Contact Person with telephone no. & e-mail ID	

**PROFORMA- 2**  
**(to be submitted in Envelope A)**

Sl. no.	Organizational Details	
<b>Part – 2a</b>		
1	Name of the Organization	
2	Address of registered office with telephone no., fax and e-mail ID	
3	Year of incorporation	
4	Type of Organization (Academic Institution / College / University / Research Institution / Scientific Organization / Private Agency – Firm/ Company/ Partnership Firm)	
5	Registered under ..... Act.	
6	For profit/Not for profit?	
7	Statements of last 3 years showing self-sustenance (please attach separate sheet)	
8	Grant/fund/subsidy received so far from Govt./Private agencies	
9	Whether the organisation has been blacklisted by any Central Govt. / State Govt./PSU/ Govt. Bodies / Autonomous? If yes, details thereof.	
<b>Part – 2b</b>		
10	Main areas of business	
11	Key technologies/products available to your organisation	
12	Technologies patented at National or International level	
13	Technology transfer and Capacity building programs already conducted (year-wise)	
14	Technologies represented at different international forums/platforms/invention shows, etc.	
15	Letter of Intent received (State Level / National / International) (year-wise)	
16	Activity network (State level/National/ International)	
17	Number of industries working with (year wise name and number)	
18	Institutional and manpower strength (including Administrative Staff)	
19	Do you have the capacity to conduct training/skill development programmes within this State?	
20	Details of revenue generated from technology licensing.	
21	Facilities/supports required (if any)	

**PROFORMA- 3**  
(to be submitted in Envelope B)

<b>A. Non-Recurring (e.g., Equipment, accessories, infrastructure etc.)</b>					
Name of Equipment	Year 1	Year 2	Year 3	Total	
<b>Total (A)</b>					
<b>B. Recurring</b>					
<b>B.1. Manpower</b> (please provide required qualification and experience in separate sheet)					
Designation (No.)	Consolidated pay/person/month*	Year 1	Year 2	Year 3	Total
<b>Total (B.1)</b>					
<b>B.2. Consumables</b>					
Item	Year 1	Year 2	Year 3	Total	
<b>Total (B.2)</b>					
<b>B.3. Travel, Contingency &amp; Other Item</b>					
Item	Year 1	Year 2	Year 3	Total	
<b>Total (B.3)</b>					
<b>B.4. Workshops, training and capacity building</b>					
Item	Year 1	Year 2	Year 3	Total	
<b>Total (B.4)</b>					
<b>Total (B)</b>					
<b>Grand Total (A+B)</b>					
<b>Justification against each head must be given in separate page</b>					

## Submission process

**Subject: "Eol for transferring Biotechnologies for Societal Welfare"**  
**Name of the Organization:**

**Envelope - A**  
**(Content: Eol Cover Letter + Proforma - 1 & 2)**

**To**  
**The Administrative Officer**  
**West Bengal State Council of Science & Technology**  
**Government of West Bengal**  
**Vigyan Chetana Bhavan, 26/B DD Block,**  
**Sector I, Salt Lake, Kolkata-700064**

**From**  
.....  
.....

**Subject: "Eol for transferring Biotechnologies for Societal Welfare"**  
**Name of the Organization:**

**Envelope - B**  
**(Content: Copy of Eol Cover Letter + Proforma - 3)**

**To**  
**The Administrative Officer**  
**West Bengal State Council of Science & Technology**  
**Government of West Bengal**  
**Vigyan Chetana Bhavan, 26/B DD Block,**  
**Sector I, Salt Lake, Kolkata-700064**

**From**  
.....  
.....