

# Department of Science & Technology



## WTI Call 2021

on



## Desalination Technologies

### Call for Proposals under Water Technology Initiative (WTI) for RD & D activities in the area of Desalination, efficient desalination systems and Test Beds & Pilot-scale demonstrations for emerging & futuristic technologies.

#### 1. Preamble:

Water Technology Initiative is a demand-oriented user-centric initiative that includes development research in laboratories as well as application led research in the field. The scope of initiative covers the entire value chain of R&D right from water-oriented applied research, pre-competitive technology development, technology-based classification & assessment of technology options, pilot-demonstration of technology leads from laboratories and academic institutions to evolve a basket of technology options and mounting of technically, socially, environmentally and eventually affordable convergent solutions suited to socio-economic context.

Desalination is a tool for communities to find new sources of water to meet their needs today and in the future. Based on stakeholders' consultation, it is being inferred that there is a need to promote research for desalination and keeping in view, the large coastal line of the country, it is further felt that investments are needed in desalination research to make it more affordable and energy-efficient, giving beneficiary communities access to reliable, potable and drought-resistant water supplies. There is a palpable need to reduce the cost, energy requirements and environmental impacts in treating these sources of unusable water in the country.

Department of Science and Technology- Water Technology Initiative (DST-WTI) aims to work with academicians, researchers and stakeholders to develop more innovative, cost-effective, and technologically efficient ways to desalinate water. The goal of the initiative is to increase water supplies by reducing cost, energy consumption and environmental impacts of treating impaired and otherwise unusable waters. DST envisages to deliver the funding to researchers as they take an idea from the lab to a real-world demonstration, which yields products that serve the water treatment community. DST-WTI is interested in research where the benefits are widespread and where research has a national significance.

DST-WTI is broadly looking to support new technologies or processes to:

- To develop and disseminate appropriate technology options for processing of seawater/ saline/ brackish water to be made safe for human, agricultural and industrial consumption.
- Reduce costs, energy usage, and/or environmental impacts of seawater desalination, including intakes and/or outfalls.
- Treat brackish groundwater in a less energy-intensive way than currently available.
- Improve the efficiency of the water treatment process—either by improvements to pre-treatment, post-treatment, monitoring, sensors, or other innovative process/ technology.
- To commission testbeds/ pilots in order to explore the feasibility of renewable energy as a power source for seawater desalination. To develop energy-efficient alternatives to conventional desalination technology.

## **2. Objective of the Call :**

The vision and purpose of the call is to identify future needs and gap areas for Desalination Technology development in the country. The directions will be implemented in the form of study, research, innovation and technology proposals to explore, understand and address possible R & D areas in Desalination pertaining to Membrane-based Desalination Systems, Thermal Desalination systems and any other disruptive or emerging technology regarding reliable availability of water for drinking, municipal, industrial and agricultural requirements. The present call would support thematic Research Development and Demonstration (RD&D) on disseminating best practices regarding appropriate technology options for processing of seawater/ saline/ brackish water to contribute significantly to ensuring a safe, sustainable, affordable and adequate water supply for the country. The topics could broadly include:

- Membrane desalination
- Thermal desalination
- Alternative desalination technologies
- Hybrid desalination systems coupled with hybrid sources of energy
- Energy issues and renewable energy integration
- Operation and maintenance issues
- Environmental issues
- Intakes and outfalls
- Assessment studies

**Table I: Thematic areas and sub-areas: for proposals to be submitted under the Applied Research, Technology Assessment, Convergent Solution and Centre of Excellence (CoE) stream:**

S. No.	Priorities Research & Development Area	Applied Research	Technology Assessment / Convergent Solution	Centre of Excellence (CoE)
1.	Improved pre-treatment Technologies	Develop more robust, low on chemicals, environmentally safe, cost-effective, processes to obtain Silt Density Index- (SDI) < 3 for pre-treatment and related solutions using both conventional (flocculation, coagulation, chlorination, dechlorination, physical separation, etc.) and advanced (microfiltration, ultrafiltration, nanofiltration membrane systems) methods.		
2.	Membrane desalination System	Develop indigenous corrosion-resistant, high permeability/flux, oxidant resistant, high pH tolerant, high/effective pressure, high temperature sustainable, larger size and longer life seawater/brackish water membranes.  <u>Note:</u> Higher flux at reduced pressure without	<b><u>Convergent Solution:</u></b>  Optimization and Scale-up of the existing indigenous novel, low cost, high throughput and less fouling, High Salt rejection ( $\geq 99.50\%$ ), High/efficient pressure with higher flux (< 600 psi for seawater and < 200 psi for brackish water desalination), longer life (> 10 Years), large size (8/16 inch) membranes and assessment for 1 MLD plant or	<b><u>CoE for Membrane &amp; Brine Membrane Development &amp; Disposal for seawater/brackish water:</u></b>  <ul style="list-style-type: none"> <li>• Coordinated and Synronised Research for conventional thin-film composite and thin-film nanocomposite membranes structure</li> <li>• Development of polyamide, cellulose and other new</li> </ul>

		<p>compromising the product quality</p>	<p>lower at operational environment levels</p>	<p>material based membranes for high salt rejection, high feed water pressure, temperature sustainable, low pretreatment required and high pH tolerance etc</p> <ul style="list-style-type: none"> <li>• Development of different configurations like a spiral wound, hollow fibre, flat-sheet and other innovative configurations etc.</li> <li>• Development of cost-effective sustainable technologies for membrane disposal/utilization for different sources / converting into value-added by-products.</li> </ul> <p><b><u>Brine :</u></b></p> <ul style="list-style-type: none"> <li>• Synchronised research for the development of innovative and smart methods for brine management, spent filter backwash water (from plant pretreatment), spent chemicals and flush water (from periodic membrane cleaning) disposal/management to maintain the aquatic ecosystem</li> <li>• Development of cost-effective recovery of strategic</li> </ul>
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				<p>minerals/materials from the concentrated brine.</p> <ul style="list-style-type: none"> <li>Development of new and emerging brine management methods which are not as widely practised such as (1) spray irrigation; (2) near Zero liquid discharge (nZLD) by concentrate evaporation and salt crystallization; and (3) beneficial use etc.</li> </ul>
2.2	Draw Solutions	<p>a) Indigenous development of new cost-effective draw solutions,</p> <p>b) Development of innovative application/utilisation for draw solutions without regeneration</p>		
2.3	Use of Brine (RO Reject),	<p>a) Innovative and smart methods for brine disposal/management to maintain the aquatic ecosystem</p> <p>b) Development of cost-effective recovery of strategic minerals/materials from the concentrated brine</p> <p>c) Alternative and innovative uses of RO reject brine.</p> <p>d) Development of cost-effective, less heat consuming evaporation</p>	<p><b><u>Technology Assessment:</u></b></p> <p>Deployment and Pilot Scale Evaluation of Indigenous Smart Brine Disposal/Management Systems</p> <p><b><u>Technology Assessment:</u></b></p> <p>Pilot-scale demonstration of Indigenous, cost-effective and environmentally sustainable technologies for the</p>	

		systems, processes and technology development for handling the brine in nZLD technologies.	implementation of nZLD for reject management. .	
2.4	Membrane rejuvenation/restoration and disposal	Development of innovative and sustainable technologies for membrane rejuvenation/restoration and disposal/utilisation for different sources / converting into value-added by-products.	<p><b><u>Technology Assessment :</u></b></p> <p>Pilot demonstration facility for Indigenous, cost-effective, eco-friendly technology for membrane disposal/ converting into value-added by-products to move closer towards the circular economy.</p>	
3.	Thermal Desalination Technologies	<p>a) Studies on New Materials for corrosion and heat transfer enhancement.</p> <p>b) Performance studies related to high heat transfer coefficient materials with thermal / powder coating in plates/tubes in the condenser.</p> <p>c) Development of Indigenous compact and efficient heat exchangers, low energy consuming pumps, vacuum systems and other equipment for efficient desalination systems</p>	<p><b><u>Technology Assessment:</u></b></p> <p>Technological Assessment studies or pilot for evaluation of theoretical similarities through setting up of experimental testbeds (capacity up to 50 m3/day).</p>	

4.	Emerging Future Technologies	Disruptive or emerging technologies or systems at the early stage or concept stage to being taken up for further development.		
5.	Enabling Technologies/Products for Desalination	Development of different types (pre and post) sensors (to detect specific toxic/undesired contaminants, leak detection, consumption pattern, pressure control, quality monitoring etc), Modelling, Simulation and Analytical tools/software, Internet of Things (IoT) and Artificial Intelligence (AI) based systems for desalination.	<p><b><u>Technology Assessment:</u></b></p> <p>Technology Assessment for Software, sensors, data acquisition systems at pilot scale.</p>	
6.	Hybrid Innovative Solutions		<p><b><u>Convergent Solution:</u></b></p> <p>Development of Indigenous, modular, Hybrid desalination solutions, (approx. Capacity = 1 MLD or lower) Energy-efficient (&lt; Rs. 5-8 KWh per m<sup>3</sup>), cost-effective (average levelized cost of treated water less than Rs 20-40/m<sup>3</sup>) desalination units with possibility to direct integration</p>	<p><b><u>CoE for Hybrid Desalination Technologies</u></b></p> <p>➤ The centres are expected to have a research agenda encompassing research, technology innovation and need to strive to address the challenges for hybrid desalination solutions for high water recovery and their</p>

			<p>with renewable (Solar PV/Thermal/Wind/Biomass/Wave etc) energy sources for round the clock operation and demonstration at salinity challenge cluster area</p> <p>Note: The treated water quality shall be the same as per BIS/ CPCB standards.</p>	<p>integration with different renewable energy (Solar PV/Thermal/Wind/Ocean/Wave etc) sources.</p> <ul style="list-style-type: none"> <li>➤ Capacity building of stakeholders.</li> <li>➤ They are expected to be the national and international repository of the knowledge in the thematic area and should provide foresight and vision for action-oriented research.</li> <li>➤ The research agenda should include state of art research goals and focus on specific challenges in the realm of sustainable hybrid seawater and brackish water desalination systems.</li> </ul>
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### 3. Streams

#### 3.1 **Applied Research Stream:** Leading to the establishment of Proof-of-Concept.

**Concept:** The proposal should explore innovative ideas with a view to showcase the unique advantages of the idea over existing alternatives and to demonstrate that their innovative idea has the ability to address a significant end-user need. This has to be substantiated by clear articulation of need supported by a quantitative performance statement from the participating user.

**Eligibility:** The proposals are to be led by faculties/ scientists working in a regular position in recognized Academic Organizations /Public funded R&D Institutions/ Laboratories, Central and state government autonomous organisations state S & T councils.

**Project Cost:** Not exceeding ₹ 1 crore (indicative) where equipment cost is not expected to exceed 30% of the project cost. Overheads are admissible as per DST norms above these costs.

The details of the identified thematic areas and sub-areas under the Applied Research Stream are given in Table I.

#### 3.2 **Technology Assessment Stream:** Leading to Pilot-Scale Demonstration for technology in the field setting.

**Concept:** The stream also includes grants to academic/R&D institute(s), for setting up of pilot demonstration plant, provided the partnering user demonstrates a willingness to validate the technology through providing tangible inputs to the project.

**Eligibility:** The proposals are to be led by faculties/ scientists working in a regular position in recognized academic institutions, public-funded R&D Institution/ Laboratories in partnership with other academic, R&D organisations, DSIR recognized R&D organizations, industries and Users (Utility, Panchayat, Municipal Corporation).

**Project cost:** Not exceeding ₹ 2 crores (indicative) where equipment cost is not expected to exceed 30% of the project cost. Overheads are admissible as per DST norms above these costs

The details of the identified thematic areas and sub-areas under the Technology Assessment Stream are given in Table I.

### 3.3 Convergent Solution Stream:

**Concept:** Leading to customised sustainable convergent solutions including techno-socio economic environmental assessment for mounting sustainable solution for a population of approx. 10,000.

This stream envisages-

- Customised convergent technological solutions to address prevalent and emerging water challenges in selected clusters having clearly identified seawater or brackish-water salinity challenges amenable to technological solutions.
- Techno-socio-economic environmental assessment of technology options in clusters of credible population size (say 10,000 or more). Also, up-scaling of convergent solutions successfully demonstrated under various research, development and demonstration programmes for a larger population (say 1,00,000 or above). For upscaling, successful demonstration needs to be proven.

**Eligibility:** The proposals have to be submitted in the consortium mode only. The consortium is expected to be led by faculties/ scientists working in a regular position in recognized academic institutions, public-funded R&D Institution/ Laboratories, state S&T councils in partnership with other academic/ R&D organisations, state line departments, S&T based voluntary organisations etc. Participation of industries/ start-ups is also welcome, wherever applicable. The consortium should essentially include at least a user having an interest in the intervention, a solution designer and a solution provider. The role of solution designer and provider can be assumed by the same organization if the organization has the required expertise and experience.

**Project cost:** No ceiling.

**Project duration:** 3 years maximum for Applied/ Technology Assessment/ convergent stream

The details of the identified thematic areas and sub-areas under the Convergent Solution Stream are given in Table I.

### 3.4 Centre of Excellence (CoE) for desalination:

**Concept:** Considering the prevalent and emerging desalination challenges in the Indian scenario, Centres of Excellence (CoE) can develop the knowledge base to cater to the various water relevant issues related to desalination technologies and the related gap areas through supporting R & D for identified areas. These centres are expected to nurture knowledge, innovation, expertise through institutional and human capacity building of desalination water researchers, professionals, community etc and to address the gap areas in Desalination Technology research, development, demonstration, adaptation, adoption and commercialization. The aim of these Centres of Excellence (CoE) will be to enable Indian scientists from academia and laboratories to carry out joint research activities by leveraging existing infrastructure and funding through linkages established by a CoE.

- To encourage synergistic joint programme on desalination/brackish water technology, research & innovation through networking of competence, experience and expertise.
- To promote translational research and enabling mechanisms for last-mile connectivity of the desalination research findings into the field.
- To foster stakeholder partnerships by promoting research and innovation for addressing desalination/brackish water challenges.

#### **Eligibility:**

- The consortium of regular faculty researchers from all Science, Technology and Engineering disciplines working at Indian research institutions from academia, public-funded R&D laboratories and DSIR recognized in house R&D institutions.
- The consortium should be led by academic or public-funded R&D institutions
- Minimum of 4 Indian institutional partners having adequate demonstrable experience, expertise and achievements in addressing desalination challenges. Participation of stakeholders is encouraged.
- All partners need to have a tangible and distinct intellectual and financial stake in the CoE activity by contributing towards the research programme.

## **Thrust Areas:**

- The centres are expected to have a research agenda encompassing research, technology innovation and need to strive to address challenges in the area of desalination technologies through technology solutions as well as capacity building of stakeholders. They are expected to be the national and international repository of the knowledge in the thematic area and should provide foresight and vision for action-oriented research.
- The research agenda should include state of art research goals and focus on specific challenges in the realm of sustainable seawater and brackish water desalination technologies.

The details of the identified thematic areas and sub-areas under the Centre of Excellence (CoE) Stream are given in Table I.

***Duration:*** 5 years

***Project Cost:*** Up to ₹ 7 Crores,

**Ceiling on number of Centres:** Two

## **4.0 Call Dates:**

**Call Opening Date: 16<sup>th</sup> July 2021**

**Call Closing Date: 16<sup>th</sup> September 2021**

## **5.0 Proposal Formulation:**

The call has been formulated and evolved through phase-wise consultation with stakeholders to identify current & emerging challenges and gaps on the identified topics in the area of desalination technologies. The relevance of the research proposed should be based on the identified need. The formulation exercise would typically involve collecting site-specific conditions and assessing holistic water requirements of the region and identifying salinity issues. The strategy for sustainability of intervention post-intervention also needs to be explicitly stated. The applicants are advised to indicate the TRL level of the technology proposed at the onset and end of the project.

## **6.0 Criteria for evaluation:**

The proposals would generally be evaluated based on the following criteria. However, the weightage of each of these criteria will vary depending upon the anticipated output of each stream:

- (i) Relevance with the Call
- (ii) Demand or need of proposed work
- (iii) Credibility Track Record and commitment of Project Team
- (iv) Novelty, feasibility and scientific merit of proposed work
- (v) The superiority of proposed work over existing alternatives. (not applicable for applied research stream)
- (vi) Proposed formulation with a clear definition of problem proposal is going to solve, why it is an important, clear articulation of methodology and delineation of roles and responsibilities.
- (vii) Potential, Technical, social, environmental and economic viability of proposed work.

**DST at the behest of the Expert Panel may introduce any other criteria considered to be critical for successful implementation of the project.**

**7.0 Proposal Formats and Submission:** Proposals may be submitted at e-PMS (<https://onlinedst.gov.in/Login.aspx>) in the prescribed format of Individual proposal along with other requisite documents before the closing date of the call.

**7.1** List of supporting documents to be submitted along with the application by the applicants for online submission at DST e-PMS:

- (i) Completed Full Project Proposal (as per the stream) along with all annexures (signed and stamped by Authorized signatory) and attachments as mentioned in project guidelines.
- (ii) Biodata of each Partners (max size 800KB) **[as per Format enclosed]**
- (iii) Certificate from Project Investigator(s) (max size 800KB) **[as per Format enclosed]**
- (iv) Endorsement from Head of the Partnering Organisation (on letter head) (max size 800KB) **[as per Format enclosed]**
- (v) Declaration regarding Conflict of Interest (max Size 800KB) **[as per Format enclosed ]**

## **7.2 Submission of Application**

- The Project Investigator (PI) need to visit the DST “DST e-PMS Portal” website <https://onlinedst.gov.in/>.
- Log on onlinedst.gov.in to access the home page of the “DST e-PMS Portal” and register. After registration, login and submit the project proposal in the prescribed format.
- Before filling up the form, Indian applicants are advised to carefully go through the relevant call document and guidelines at the DST Website (<https://dst.gov.in/>) and also available under Proposal Formats in the e-PMS Portal after logging in to the portal site.
- To save time and avoid data loss, please download the appropriate proposal format and fill all the information required as per the format as a Word and PDF file and then keep it ready for upload during submission of mandatory documents.
- Click on the “**Submit proposals**” link which would take to a page seeking multiple information starting with – General information, Principal investigator etc.:
- After filling in all the above particulars, there is a provision to preview your details before the final submission of the application form by clicking on the “Preview” button. The preview page will display all facts/particulars that have been mentioned on entry time. If the applicant is sure with filled details then click on the “**Submit**” button to finally push data into the server.
- Applicants are advised to carefully fill in and verify the details required for the online application themselves, as no change will be possible/ entertained after clicking the **FINAL SUBMIT BUTTON**.

## 8.0 Contact Persons:

- (1) **Dr. Sanjai Kumar**, Scientist 'D'  
Technology Mission Division (E&W),  
Department of Science & Technology (DST),  
Technology Bhavan,  
New Mehrauli Road, New Delhi- 110016  
Email: [sanjai.k@gov.in](mailto:sanjai.k@gov.in)  
Phone: 011- 26590270
  
- (2) **Dr. Neelima Alam**, Scientist 'F',  
Technology Mission Division (E&W),  
Department of Science & Technology (DST),  
Technology Bhavan,  
New Mehrauli Road, New Delhi- 110016  
Email: [neelima.alam@nic.in](mailto:neelima.alam@nic.in)  
Phone: 011-26590467

**\*\*\*\* Note \*\*\*\***

### **Instructions to Project Investigator (PI)**

- ❖ PI need to submit consolidated budget table for all the collaborating partners.
- ❖ They also need to submit detailed budget table for each of the collaborating partners.
- ❖ Details and Justification of proposed expenditure should be provided for each head.
- ❖ All figures must be in Indian Rupees.
- ❖ Save the complete application form (consolidated proposal and other requisite information) as a single pdf file and upload it in e-PMS (<https://onlinedst.gov.in/>).
- ❖ PI is requested to **kindly Note the TPN Number**, which is autogenerated after uploading the proposal on e-PMS portal.
- ❖ In addition to above, save the budget form (Excel file) and fill up the endorsement and contribution letters (scanned copy) and email to Technology Mission Division (E&W), DST at [desalinationmission@gmail.com](mailto:desalinationmission@gmail.com)

## WTI Call 2021 on Desalination Technologies

COMPONENT/ STREAM APPLIED FOR:

*(Tick the most appropriate one)*

Applied Research stream	
Technology Assessment	
Convergent Solution Stream	
Centre of Excellence	

FORMAT FOR SUBMISSION OF  
PROPOSAL FOR SUPPORT



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## I. Proposal Summary

<b>S.</b>	<b>File No.</b>	<i>DST/TMD/EWO/WTI/DM/2K21/</i>		
<b>No.</b>		<b>(TO BE FILLED BY DST)</b>		
I	Title			
II	Project cost	<i>(Amount in lakhs)</i>		
III	Duration	<i>(in months)</i>		
III	PI Details	Name	Date of Birth	Category (General/SC/ST/Others etc)
IV	Co-PI Details	Name	Date of Birth	Category (General/SC/ST/Others etc)
V	Lead Organisation			
VI	Lead Organisation Status	Govt. Organisation/ Statutory body/ Registered society (NGO)/ Registered society (autonomous body)/Trust /Govt. autonomous/ Govt. aided institute/ Private sector company/others <i>(Tick Any)</i>		
VII	Partner/Collaborator Organisation (CO)			
VIII	Partner/CO Status			
IX	Objectives			
X	Methodology			
XI	Deliverables	<i>New/Upgraded Product; New/Upscaled Process; New/Upgraded System; Services (including software); Feasibility analysis; report; mention any other in bullet form</i>		

**Note: Restrict the above information to a single A4 page size**

<b>File No.</b>	<i>DST/TMD/EWO/WTI/DM/2K21/</i>
	(TO BE FILLED BY DST)

**II. Financial requirements:**

*(Break-up of cost)*

Sl no.	ITEM	Description	Individual sub-head cost	Total Amount (All figure in lakhs)
1	<b>MANPOWER</b>  <i>( mention Posts with gross emoluments)</i>  <i>( Refer Annexure –viii )</i>			
2	<b>PERMANENT EQUIPMENT LIST</b>  <i>(mention cost of the individual item)</i>	Indigenous		
		Foreign		
3	<b>OTHER COST</b>			
4	<b>CONSUMABLES</b>			
5	<b>TRAVEL</b>			
6	<b>CONTINGENCIES</b>			
7	<b>OVERHEADS CHARGES</b>			
<b>GRAND TOTAL</b>				

Grand Total :

*DST Share:*

*Collaborator share (if any) (Mention the Item & its amount):*

**Note: Kindly restrict the information to a single A4 page size**

### III. CORE PROPOSAL FORMAT

*(Applied Research/ Technology Assessment/Convergent Solution Stream)*

**1. Project Title**

**2. Principal Investigator (PI)**

Name:

Designation:

Complete Address *(with city pin code)*:

Telephone & Mobile No. :

E-mail:

**3. Co-Principal Investigator (Co-PI)**

Name:

Designation:

Complete Address *(with city pin code)*:

Telephone & Mobile No. :

E-mail:

**4. Name:**

Designation:

Complete address *(with city pin code)*:

Telephone & mobile No. :

E-mail:

**5. Collaborating Agencies/Industries *(If any)***

**6. Target Beneficiaries**

**7. Objectives of the Proposal *(Precise and quantified, use Bullet Form)***

**8. Critical Review of Status Identifying Gaps *(include references)***

i) National Status Review

ii) International Status Review

**9. Outline of the Project *(with schematics, where possible)(Define the problems and give technical details)***

**10. Deliverables of the project *(brief description)***

i) *New/Upgraded Product*

ii) *New/Upscaled Process*

iii) *New/ Upgraded System*

iv) *Services (including software)*

v) *Feasibility analysis*

vi) *Any other*

**11. Methodology**

*(Please highlight how success in the project execution will be ensured)*

**12. Milestones with Months, Work Elements & Responsible Organisation for each Work Element**

S. No.	Milestone	Target Month	Work Elements	Responsible Organisation
			1. 2. 3.	
			1. 2. 3.	
			1. 2. 3.	

**13. Work Plan**

*(Attach bar chart giving project activities and milestones. Highlight Milestones)*

**14. Names of 5 Experts/Agencies/ Institution working in the similar area**

*(Please give complete Name, Designation, Address with pin code, telephone numbers & e-mail addresses)*

**15. Salinity related water challenges in the Identified site** *(for Solution Streams Only)*

**16. Role of the Solution designer and Solution provider in the deployment of Convergent Solution** *for Solution Streams Only)*

**17. Role of User/Utility Partner/Other Stakeholders in the consortia** *(for Solution Streams Only)*

**18. Details of Beneficiaries** *(for Solution Streams Only)*  
*(in terms of Category (General/SC/ST/OBC/Others etc) or benefit for Specific Geographical Region)*

**19. Any other information relevant to the Project proposal/ execution of the project**

#### IV. CORE PROPOSAL FORMAT (*Centre of Excellence*)

1.	<b>Name of Centre</b>	
2.	<b>Focus Area of the Proposed Centre</b>	
3.	<b>Nodal host Institution for the Centre</b> ( <i>Address of the Institution</i> )	
4.	<b>Status of the Institute</b>	
5.	<b>Principal Coordinator</b> ( <i>with phone, fax, e- mail, cell-numbers</i> )	
6.	<b>Collaborators Partners</b>	
7.	<b>Co-PIs/Collaborators</b> ( <i>if any, along with phone, fax, e- mail, cell-numbers</i> )	
8.	<b>Executive Summary</b>	
9.	<b>Background and introduction of the subject area including the state of the art in India. Current status of research on the focused theme globally</b> ( <i>with recent references</i> )	
10.	<b>Aims and Targeted Objectives of the Centre</b>	
11.	<b>Specific activities to be undertaken in the proposed period</b> ( <i>plan of work, experimental methods, activities to be undertaken by the collaborators, proposed dates/ duration of visits etc</i> )	
12.	<b>Novelty and relevance of the proposed R&amp;D regarding the existing state-of-the-art knowledge in literature. How will the proposed R&amp;D close the gap between national and global capabilities, or enhance the national advantage, in R&amp;D on the focused theme?</b>	
13.	<b>Brief outline of the methodology, schedule and milestones to achieve each of the objectives/deliverables</b> ( <i>inter-institutional or industrial links, if any, may also be highlighted</i> )	
14.	<b>R &amp; D work on the proposed research topics already done by the investigator(s)</b> ( <i>with published references to demonstrate their ability to carry out the proposed research work</i> )	
15.	<b>Manpower, facilities and infrastructure already available for establishing the Centre</b> ( <i>Separately for Host &amp; Partners</i> )	

	<i>Institutions)</i>																																					
16.	<b>Built-up area (in sq.mt./sq. ft.) will be made available for CoE?</b> <i>(Please enclose the Layout of the proposed space).</i>																																					
17.	<b>Additional manpower available/to be hired (posts available or not)/to be absorbed after the project.</b>																																					
18.	<b>Consolidated and Synchronised proposed research activities in the identified area of desalination in the Centre</b>																																					
19.	<b>Work package wise envisaged activities and expected deliverables of the Centre</b>																																					
20.	<b>Expected Outcome</b> <i>(in terms of Technology developed, deployed, capacity building, and leveraging industrial interface for technology commercialisation and other follow-ups etc.)</i>	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Outcomes</th> <th>1<sup>st</sup> Year</th> <th>2<sup>nd</sup> Year</th> <th>3<sup>rd</sup> Year</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S.No.	Outcomes	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	1.						2.						3.						4.						5.					
S.No.	Outcomes	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total																																	
1.																																						
2.																																						
3.																																						
4.																																						
5.																																						
21.	<b>Beneficiaries of the Centre</b> <i>(in terms of Category Category (General/SC/ST/OBC/Others etc) or benefit for Specific Geographical Region)</i>																																					
22.	<b>Proposed Sustainability model of the CoE after DST support</b>																																					

**V. Proforma for Bio-Data of Principal Investigator (PI) and Co-Principal Investigator (Co-PI)**

1. Name
2. Gender
3. E-mailID
4. Qualifications

S.No.	Degree	Institution	Year	Division/Class

**4. Employment Experience**

S.No.	Position & Organisation	Nature of Job	Period

**5. List of Publications** (*For last 5 years only*)

5.1 Journal Publications

5.2 Conference Presentations

6. *Patents filed/Granted with details*

**7. Books Published /Chapterscontributed**

**8. Sponsored Research Projects**

S. No	Title	Sponsoring Agency and Officer Concerned	Period	Amount	Achievements

**9. Consultancy Projects**

S. No	Title	Sponsoring Agency	Period	Amount

**10. Sponsored Research/Consultancy Projects submitted for approval**

S.No.	Title	Agency to whom submitted	Duration	Amount



## VI. BUDGET ESTIMATES

### 1. Break-up of Total Budget

(All Amount in Lakhs)

S.No	Item		1 <sup>st</sup> Year		2 <sup>nd</sup> Year		3 <sup>rd</sup> Year		Total	
			DST	Collaborator*	DST	Collaborator*	DST	Collaborator*	DST	Collaborator*
1.	Manpower									
2.	Permanent Equipment	Indigenous								
		Foreign								
3.	Other Costs (Outsourcing, Fabrication, Testing and patents etc)									
4.	Consumables									
5.	Domestic Travel									
6	Contingencies									
7	Overhead Charges									
	<b><u>Total</u></b>									

Grand Total (DST + Collaborator)

\* Give financial contributions of Each Collaborator Separately, if any.

**Note: Kindly prepare the budget outlay for each partnering Organisation/Institution wise also**

**Note: For Centre of Excellence (CoE) stream kindly prepare the budget outlay for 5 years using the similar format.**

**2. Itemised Budget**

*(Please provide justification)*

**2.1. Manpower**

**Budget for Salaries (To be borne by DST )**

Designation	Qualification	Salary per month	No. of Persons	Amount Rupees in Lakh	Justification

**Budget for Salaries (To be borne by Collaborator(s), if any)**

Designation	Qualification	Salary per month	No. of Persons	Amount Rupees in Lakh	Justification

## 2.2 Equipment\*

### Budget for Permanent Equipment (To be borne by DST)

Description of Equipment	Foreign/Indigenous	Unit Landed Price (CIF + Custom Duty + others )	Nos. of Equipment	Total Rupees	Justification in relation to project requirement

### Budget for Permanent Equipment (To be borne Collaborator (s), if any)

Description of Equipment	Foreign/Indigenous	Unit Landed Price (CIF + Custom Duty+ others)	Nos. of Equipment	Total Rupees	Justification in relation To project requirement

\* A List of equipment and facilities available to the investigators and relevant to the project may also be provided, separately.

**2.3. Other Costs (Outsourcing, Fabrication, Testing and Patenting etc.)**

**Budget for Other Costs (To be borne by DST)**

Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	Justification including basis of cost estimates/quotations
Outsourcing					
Fabrication					
Testing					
Patenting					
Others					

**Budget for Other costs (To be borne Collaborator (s), if any)**

Item	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	Justification including basis of cost estimates/quotations
Outsourcing					
Fabrication					
Testing					
Patenting					
Others					

**2.4 Consumables**

**Budget for Consumable Materials (To be borne by DST)**

1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	Justification including basis of cost estimates/ quotations

**Budget for Consumable Materials (To be borne by Collaborator (s), if any)**

1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	Justification including basis of cost estimates/quotations

## 2.5. Domestic Travel\*

### Budget for Domestic Travel (To be borne by DST)

1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total Rupees	Justification; indicating (journeys, mode and class of transport

### Budget for Domestic Travel (To be borne Collaborator (s), if any)

1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total Rupees	Justification; indicating journeys, mode and class of transport.

(\*) No foreign travel is generally not permitted under DST grants. Class and mode of transportation should be as per the entitlement of the concerned staff in the institute. Travel component of PRC visits would be added by DST separately in the project cost).

**2.6 Contingencies**

**Budget for Contingencies (To be borne by DST)**

1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	Justification including basis of cost estimates/quotations

**Budget for Contingencies (To be borne Collaborator (s), if any)**

1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total	Justification including basis of cost estimates/quotations

**2.7** Designation of the officer in the organization who is vested with financial power:

Proposal if approved, Payment shall be made in favour of .....

- i. Bank AccountNo.
- ii. IFSC Code.
- iii. MICR Code.
- iv. Bank BranchAddress

*( This will facilitate in the fast electronic transfer of funds)*

**2.8** Mention HRA % applicable to Research fellow in your institute and the classification category of your city/town:.....

*(Please ensure to fill in all the above details otherwise it shall be considered as **NIL** )*



**UNDERTAKING FROM THE INVESTIGATOR(S)/ CO-INVESTIGATOR (S)**

***Project Title:***

1. I/We have carefully read the terms and conditions of the Water Technology Initiative Programme and I/We agree to abide by them.
2. I/We have not submitted this or a similar Project proposal elsewhere for financial support.
3. I/We have explored and ensured that the equipment and the basic facilities described in the Research Proposal, will actually be available as and when required for the purpose of the Project. I/We shall not request financial support under this project, for procurement of these items.
4. I/We undertake that spare or idle capacity of the permanent equipment procured under the Project will be made available to other legitimate users from parent and other organisations.
5. I/We have enclosed the following :
  - a. Endorsement from the Head of the Institution (on letterhead)
  - b. Undertaking from the Collaborator(s)

Name and signature of the Investigators

Date

Place

**ENDORSEMENT FROM THE HEAD OF THE LEAD/PARTNER ORGANISATION**

*(To be typed on the letter-head of the organization)*

***Project Title***

1. Certified that the organization welcomes the participation of Dr/Mr/Mrs.....as the PI and Dr/Mr/Mrs.....as the Co-PI for the project and that in the unforeseen and legitimate event of discontinuation by the PI, the Co-PI will assume full responsibility for completion of the project. Information to this effect, endorsed by me, will be promptly sent to the DST
2. Certified that the equipment, other basic facilities and other administrative facilities as per the terms and conditions of the award of the Project, will be extended to the investigator(s) throughout the duration of the project
3. The Organization shall ensure that financial and purchase procedures are followed as per the prevailing norms of the organization, within the allocated budget.
4. The Organisation shall provide timely the Statement of Expenditure and the Utilisation Certificate of the grant as required by the DST in the prescribed format.
5. The grant for the proposal, if approved may be made in favour of, Payment shall be made in favour of.....
  - i. Organisation Name as per Bankrecords:
  - ii. Bank AccountNo.:
  - ii. IFSC Code:
  - iii. MICRCode:
  - iv. Bank Name:
  - v. Bank Branch Address

**(Head of the Institute)**

**Seal/Stamp**

**Date**

**Place**

**Endorsement from Stakeholders/User/Collaborating Industry/ Non-Academic Partners/Voluntary Organizations etc (if any)**

*(On the official letterhead)*

I have gone through the Project proposal entitled.....submitted by.....(*Name of PI*).....of.....(*Name of the Institute*) for DST funding and noted the obligations and responsibilities indicated in our name which are as below : (Tick, as applicable)

1. Contribution in financial terms (*mention amount in Rs.*)
2. Contribution in Kind (*list activities*):

**2.a Pre-implementation of the project:**

- 2.a.1 Land approvals and acquisition
- 2.a.2 Commitment towards technical/human resources.
- 2.a.3 Legal clearances
- 2.a.4 Sharing of data – technical designs & drawings.
- 2.a.5 Undertaking to maintain the assets.
- 2.a.6 Providing data as required
- 2.a.7 Sharing preliminary work done so far on similar activities.
- 2.a.8 Any other, please specify.

**2.b During the implementation of the project:**

- 2.b.1 Coordination and partnership with the consortium.
- 2.b.2 Depute a dedicated manpower team for the project.
- 2.b.3 Community mobilization and engagement, group-creation, capacity building, training, orientation and awareness etc.
- 2.b.4 Any other, please specify.

**2.c Post project:**

- 2.c.1 Undertaking for taking over of the project & ensuring the sustainability of the intervention.
- 2.c.2 Generation and analysis of data from the intervention.
- 2.c.3 Any other, please specify.

I hereby affirm that my organization/industry is committed to participate in the Project to the full extent as indicated including financial liabilities accruing therefrom as detailed above. A brief profile of my organization is summarized below:

Name of Organisation

Line of Business/ Service

No. of employees

Annual Turn over (if industry)

The Annual Report for the last 3 financial years is enclosed (if industry)

*(Head of the Organisation)*

**Seal/Stamp**

**Date  
Place**

**Terms & Conditions of the Grant**

1. Approval of the Research Proposal and the grant released for it is for the specific Project sanctioned and the released grant should be exclusively spent on the Project within the stipulated period. The Institution may use funds obtained from any other Organisation with the concurrence of DST, for the Project. **Any unspent balance out of the amount sanctioned must be surrendered to the Government of India through a crossed Cheque/ Demand Draft drawn in favour of Drawing & Disbursing Officer, DST.**
2. For permanent, semi-permanent assets acquired solely or mainly out of the project grant, an audited record in the form of a register shall be maintained by the Institute. The term "Assets" include (a) the immovable property acquired out of the grant, and (b) movable property of capital nature where the value exceeds Rs 1000/-. The Institute is required to send to the Department of Science & Technology a list of Assets acquired from the grant. The grant shall not be utilised for the construction of any building unless a specific provision is made for that purpose. Full infrastructural facilities by way of accommodation, water, electricity, communication, etc. for smooth implementation of the project shall be provided by the Institute.
3. All the Assets acquired from the grant will be the property of the Government of India and should not be disposed of or encumbered or utilised for purposes other than those for which the grant had been sanctioned, without the prior sanction of the DST.
4. At the conclusion/ termination of the project, the Government of India will be free to sell or otherwise dispose off the Assets which are the property of the Government. The Institute shall render to the Government necessary facilities for arranging the sale of these assets. The Government of India has the discretion to gift the Assets to the Institutions or transfer them to any other Institution if it is considered appropriate.
5. The Institution/ PI will furnish Six Monthly Progress Report (Annexure- V) (5 copies) of the work on the Project on a half-yearly basis (i.e. if the date of start of a project is 12.09.07 the first Six Monthly Technical Progress report shall be for the period 12.09.07 to 31.03.08, the next will be from 01.04.08 to 30.09.08 and so on). In addition, the DST may designate a Scientist/ Specialist or an Expert Panel to visit the Institution periodically to review the progress of the work being carried out and to suggest suitable measures to ensure the realisation of the objectives of the Project. During the implementation of the Project, the Institution will provide all facilities to the visiting scientist/ specialist or the Expert Panel by way of accommodation, etc. at the time of their visit. In case of exceptional circumstances, a request for an extension for time period must be submitted to DST six months prior to the approved date of completion of the project (Annexure-VII). On completion of the project, submit the final statement of Expenditure (Annexure-II) along with utilization certificate (Annexure-III) and ten copies of the self-contained Project Completion Report (Annexure-VI) as per DST format.
6. At the time of seeking further instalment of the grant, The Institution/ PI has to furnish the following documents:
  - a) Statement of Expenditure (SE) (Annexure-II) and Utilisation Certificate (UC) (Annexure-III) for the financial year up to 31<sup>st</sup> March (in original or copy if sent earlier)
  - b) An authenticated up-to-date Statement of Expenditure (annexure-II ) including Committed Expenditure for the Project on the date of seeking further instalment.
7. Request for specific approval of the Department to **carry forward** the unutilised grant to the next financial year for utilisation for the same Project should be sent along with SE & UC, after completion of the financial year.

8. The Comptroller & Auditor General of India, at his discretion, shall have the right of access to the books and accounts of the Institution maintained in respect of the grant received from the Government of India.
9. The Institution will maintain separate audited accounts for the Project. If it is found expedient to keep a part or whole of the grant in a bank account earning interest, the interest thus earned should be reported to the DST and should be reflected in the Statement of Expenditure. The interest thus earned will be treated as a credit to the Institution to be adjusted towards the further instalment of the grant.
10. The Institution will not entrust the implementation of the work (except the out-sourced part as approved) for which the grant is being sanctioned to any other institution nor will it divert the grant receipts to other institutions as assistance. In case the Institution is not in a position to implement or complete the Project, it should, forthwith, refund to the DST the entire grant received by it or the balancing grant with it in favour of DDO, DST.
11. All the personnel including Research personnel appointed under the project, for the full/ part duration of the project, are to be treated as temporary employees and will be governed by the Administrative rules/ service conditions (for leave, TA/DA etc) of the implementing Institute. They are not to be treated as employees of the Government of India and the DST will have no liability, whatsoever, for the project staff after the completion of the Project duration.
12. For the expeditious implementation of the research Project, the PI will take the assistance of the Institution in the process of selection and appointment of staff and payment to them. Scale and emoluments for the posts not covered under DST's OM are governed by the norms prevalent in the implementing Institution or as agreed upon in consultation with the DST.
13. The DST reserves the right to terminate the project at any stage if it is convinced that the grant has not been properly utilised or satisfactory progress is not being made.
14. **The Project becomes operative with effect from the date on which the Draft/ Cheque is received by the implementing institution. This date should be intimated by the Institution authorities/ Principal Investigator to the DST. It will, in no case be later than one month after the receipt of the draft/ cheque by the Institution.**
15. If the Principal Investigator (PI) to whom a grant for a project has been sanctioned wishes to leave the institution where the project is based, the PI/Institution will inform the DST of the same and in consultation with the DST, evolve steps to ensure successful completion of the Project, before the PI is relieved.
16. The data pertaining to the project should be systematically collected, scientifically documented and submitted to DST which later would be placed in the public domain. This clause would not be applicable for the projects where legal protection of the know-how generated is felt necessary.
17. Investigators wishing to publish technical/ scientific papers based on the research work done under the project should acknowledge the assistance received from the DST, indicating the scheme. Investigators are expected to publish some of the research papers emerging out of the Project work in leading Indian Journals.
18. If the results of the research are to be legally protected, the results should not be published without securing legal protection for the research results. For projects identified to have a distinct potential for generating know-how, in the form of product/ process, that could be protected through patenting, copyrights etc., the PI should carefully follow the **"Guidelines/ Instructions for Technology Transfer and Intellectual Property Rights"** provided in the **Guidelines for Implementing Research Projects** booklet issued by the DST. [<http://www.tifac.org.in>] For further information/ clarification on this subject- The Director, Technology Information, Forecasting and Assessment Centre (TIFAC), Patent Facilitating Cell, Vishwakarma Bhawan, Shaheed Jeet Singh Marg, New Mehrauli Road, New Delhi- 110016, E-mail:[tifac@nda.vsnl.net.in](mailto:tifac@nda.vsnl.net.in), may be contacted.

## Annexure – V

### Information about DST funding: maximum budget and what costs can be reimbursed

- (a) Maximum budget from DST: The projected budget by the Indian PI will be reviewed by Indian members of the advisory committee and will undergo financial due diligence as per DST processes, which will take into account the cost needed for the projected activities, matching efforts and conformity to DST guidelines.
- (b) Heads wise break up of cost (*Break- up of cost*)

<b>A. Non-recurring cost: Permanent Equipment as per quotations and GeM module will be permitted to procure.</b>			
<b>B. Recurring costs</b>			
1	<b>MANPOWER:</b>		
S.No.	Manpower Position	Monthly Emoluments	Essential qualifications & age limit, Selection Process & Service Conditions for Scientific/Technical Manpower
1	Research Associate – I	Rs. 47,000/- + HRA	As per <b>DST OM. No. SR/S9/Z- 08/2018</b> dated 30 <sup>th</sup> January 2019 or as per the norms of the Institute undertaking such projects if they have a different structure than that defined in the above-mentioned OM.
	Research Associate – II	Rs. 49,000/- + HRA	
	Research Associate – III	Rs. 54,000/- + HRA	
	Junior Research Fellow (JRF)	Rs. 31,000/- + HRA	
	Senior Research Fellow (SRF)	Rs. 35,000/- + HRA	
2	Scientific Administrative Assistant/Fieldworker, Project Associate-I, Project Associate-II, Senior Project Associate, Principal Project Associate, Project Scientist-I, Project Scientist-II, Project Scientist-III, Project Scientist B, Project Scientist C, Project Scientist D, Project Coordinator-II, Project Coordinator-III, Project Manager	As per DST OM. No. SR/S9/Z-05/2019 dated 21.08.2019	As per <b>DST OM. No. SR/S9/Z-05/2019</b> dated 21 <sup>st</sup> August 2019

2	<b>OVERHEADS CHARGES</b>  <i>DST OM: SR/S9/Z11/2013 dated 24 February 2015</i>	As per DST norms and conditions: Towards meeting the cost of academic expenses including infrastructural facilities, an amount of: a) For project costing up to Rs.1 crore, 10% of the total cost for educational institutions and NGOs and 8% for laboratories and institutions under Central Government Departments/Agencies; b) for projects costing more than Rs.1.0 crore and up to Rs.5.0 crore, overheads of Rs.15.0 lakh or 10% of total cost whichever is less; c) for projects costing more than 5.0 crore and up to Rs.20.0 crore, Rs.20.0 lakh will be provided as overheads; and d) for projects costing more than Rs. 20 crore, the quantum will be decided on a case to case basis.
3	<b>CONSUMABLES</b>  <i>DST OM: SR/S9/Z11/2013 dated 24 February 2015</i>	Amount as per project requirement (justification through DST processes)
4	<b>CONTINGENCIES</b>  <i>DST OM: SR/S9/Z11/2013 dated 24 February 2015</i>	Contingency can be utilised for stationery, accessories, software, printer cartridges, the printing of reports and publicity materials etc. The contingency amount may also be used for paying Registration Fees for attending international conferences etc.
5	<b>TRAVEL</b>  <i>DST OM: SR/S9/Z11/2013 dated 24 February 2015</i>	The budget allocated for travelling can be used for attending review meetings, conferences, workshops and training programmes. Travelling expenses for collection of data, survey and visits to other centres in the multi-partners study can be budgeted. Amount as per project requirement (justification through DST processes), to be provided where the research work involves fieldwork or/and project has many investigators/institutions and large manpower. Travel will include both national and international travel between the two collaborating countries. International travel of PI/Co-PIs and coordinators will be admissible only based on reciprocity. One way travel is not encouraged. The maximum period of stay of faculty will be 3 months and for students, it will not exceed 12 months. Travel costs should not exceed 20% of the total budget (excluding overheads)
6	<b>OTHER COST</b>	May include knowledge sharing and research uptake activities such as costs towards Subcontract work like fabrication, testing/standardization, renovation and small civil work and other works like the publishing of joint (only) research outputs, filing of patents, technology transfer, stakeholders meet or awareness camps etc.
<b>GRAND TOTAL</b>		Approx. <b>Rs.</b> per project (The amount will be the maximum cost admissible under the call. The actual amount may vary depending on the level of activities proposed in the programme. )

**DEPARTMENT OF SCIENCE AND TECHNOLOGY**

**POLICY ON CONFLICT OF INTEREST FOR APPLICANT**

Issues of Conflicts of Interest and ethics in scientific research and research management have assumed greater prominence, given the larger share of Government funding in the country's R & D scenario. The following policy pertaining to general aspects of Conflicts of Interest and code of ethics are objective measures that are intended to protect the integrity of the decision making processes and minimize biases. The policy aims to sustain transparency, increase accountability in funding mechanisms and provide assurance to the general public that processes followed in the award of grants are fair and non-discriminatory. The Policy aims to avoid all forms of bias by following a system that is fair, transparent and free from all influence/ unprejudiced dealings, before, during and after the currency of the programme to be entered into with a view to enabling the public to abstain from bribing or any corrupt practice in order to secure the award by providing assurance to them that their competitors will also refrain from bribing and other corrupt practice and the decision-makers will commit to preventing corruption, in any form, by their officials by following transparent procedures. This will also ensure a global acceptance of the decision-making process adopted by DST.

**Definition of Conflict of Interest:**

Conflict of Interest means "any interest which could significantly prejudice an individual's objectivity in the decision-making process, thereby creating an unfair competitive advantage for the individual or to the organization which he/she represents". The Conflict of Interest also encompasses situations where an individual, in contravention to the accepted norms and ethics, could exploit his/her obligatory duties for personal benefits.

**1. Coverage of the Policy:**

- a) The provisions of the policy shall be followed by persons applying for and receiving funding from DST, Reviewers of the proposal and Members of Expert Committees and Programme Advisory Committees. The provisions of the policy will also be applicable to all individuals including Officers of DST connected directly or indirectly or through intermediaries and Committees involved in the evaluation of proposals and subsequent decision-making process.
- b) This policy aims to minimize aspects that may constitute actual Conflict of Interest, apparent Conflict of Interests and potential Conflict of Interests in the funding mechanisms that are presently being operated by DST. The policy also aims to cover, although not limited to, Conflict of interests that are Financial (gains from the outcomes of the proposal or award), Personal (association of relative / Family members) and Institutional (Colleagues, Collaborators, Employer, persons associated in a professional career of an individual such as PhD supervisor etc.)

**2. Specifications as to what constitutes Conflict of Interest:**

- Any of the following specifications (non-exhaustive list) imply Conflict of Interest if,
- (i) Due to any reason by which the Reviewer/Committee Member cannot deliver a fair and objective assessment of the proposal.
  - (ii) The applicant is a direct relative or family member (including but not limited to a spouse, child, sibling, parent) or personal friend of the individual involved in the decision making process or alternatively if any relative of an Officer directly involved in any decision-making process / has influenced interest/ stake in the applicant's form etc.
  - (iii) The applicant for the grant/award is an employee or employer of an individual involved in the process as a Reviewer or Committee Member; or if the applicant to the grant/award has had an employer-employee relationship in the past three years with that individual.
  - (iv) The applicant to the grant/award belongs to the same Department as that of the Reviewer/Committee Member.



- (v) The Reviewer/Committee Member is a Head of an Organization from where the applicant is employed.
- (vi) The Reviewer /Committee Member is or was, associated with the professional career of the applicant (such as PhD supervisor, Mentor, present Collaborator etc.)
- (vii) The Reviewer/Committee Member is involved in the preparation of the research proposal submitted by the applicant.
- (viii) The applicant has joint research publications with the Reviewer/Committee Member in the last three years.
- (ix) The applicant/Reviewer/Committee Member, in contravention to the accepted norms and ethics followed in scientific research has a direct/indirect financial interest in the outcomes of the proposal.
- (x) The Reviewer/Committee Member stands to gain personally should the submitted proposal be accepted or rejected.

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# The Term "Relative" for this purpose would be referred to in section 6 of Companies Act,1956.

**3. Regulation:**

The DST shall strive to avoid conflict of interest in its funding mechanisms to the maximum extent possible. A self-regulatory model is however recommended for stakeholders involved in scientific research and research management, on issues pertaining to Conflict of Interest and scientific ethics. Any disclosure pertaining to the same must be made voluntarily by the applicant/Reviewer/Committee Member.

**4. Confidentiality:**

The Reviewers and the Members of the Committee shall safeguard the confidentiality of all discussions and decisions taken during the process and shall refrain from discussing the same with any applicant or a third party unless the Committee recommends otherwise and records for doing so.

**5. Code of Conduct**

- (a) The applicant must refrain from suggesting referees with potential Conflicts of Interest that may arise due to the factors mentioned in the specifications described above in Point No. 2.
- (b) The applicant may mention the names of individuals to whom the submitted proposal should not be sent for refereeing, clearly indicating the reasons for the same.

**6. Final Appellate authority:**

Secretary, DST shall be the appellate authority in issues pertaining to conflict of interest and issues concerning the decision making process. The decision of Secretary, DST in these issues shall be final and binding.

**7. Declaration**

**I have read the above "Policy on Conflict of Interest" of the DST applicable to Applicant and agree to abide by provisions thereof.**

I hereby declare that I have no conflict of interest of any form pertaining to the proposed grant \* I

hereby declare that I have a conflict of interest of any form pertaining to the proposed grant \*

\* & # (Tick whichever is applicable)

**(Name /Signature with date)**