2010 India-European Union Call for Proposals in Solar Energy Systems
Published in India on August 6,2009 & in European Union on July 30,2009)

1. Expected Impact & Deliverables

Pursuant to the scope of India-EU Science and Technology Cooperation Agreement & Reinforcing the international dimension of European research within the European Commission's Seventh Framework of Research , the 2009 India-EU Call on Solar Energy System will facilitate India-EU Project mode partnerships supported by two-way mobility of researchers with a view to :

- Catalyzing emergence of solar power as an economically viable, commercially attractive, environment friendly and sustainable energy option;
- Advancing the transition to clean energy technologies (such conversion of solar radiation into electricity using ST,CSP/SPV)) that are sustainable, affordable ,add to energy security and have no adverse impact on climate;
- Building institutional tie-ups with EU partners to incubate feasibility of and/or scaling up of research, pilot scale production and creation of new knowledge with output in the form of joint patents and co-authored publications;
- Achieving cost reduction , higher efficiency & reliability of solar photovoltaic devices and systems;
- Improving design ,fabrication and demonstration of innovative solar thermal power generating technology .

2. Eligible Research Topics & Topic Description

a) Development of novel materials and device structure and fabrication methods suitable for thin film solar cells and TCOs including Organic Photovoltaics.

Content/scope: The conventional thin film solar cell technologies (Si-based, CdTe, CIGS) have recently made significant progress towards industrial production, at the same time the organic photovoltaics have demonstrated their potential for the future. However further research and development work is needed with the aim to increase the photovoltaic conversion efficiency, enhance the long term performance stability of devices, and decrease the production cost of solar modules. Research and in-depth investigations on innovative materials, inexpensive and low temperature processing routes and alternative device structures should be performed with objective to reduce optical losses and maximize the use of solar spectrum for efficiency enhancement. This later could be achieved by improving element properties of thin layers and interfaces in thin film solar cells and TCO layers.. It is also important to develop low cost and large area scalable inexpensive deposition

technologies for the development of highly efficient solar cells, which optimise material utilization during processing without sacrificing cell performance

Expected Impact: At the end of the project the new developments in the thin film solar cell materials/devices/processing should result in higher efficiency and stable (as demonstrated by accelerated lifetime testing) devices.

Funding Scheme: Collaborative Project

b) **Development of new concentrator modules and field performance evaluation of CPV systems**

Content/scope: Multi-junction solar cells have achieved over 40% efficiency under concentrated light. PV systems using these high efficiency cells and operating in the high concentration range between 200 – 1000 are under field evaluation. Further research is needed to improve first the optical efficiency of the systems and, the tracking system performance; and second , to assess the reliability and efficiency of the module assembly in terms of electrical insulation and stability and durability of materials. At the end of the project the overall module efficiency should improved to 30-35 %,with the aim to further reduce the cost of electricity generation from CPV systems.

Research and in-depth investigations on primary and secondary optics, efficient heat dissipation techniques and improved and cost effective tracking arrangements should be performed in the project. New materials and new concepts should be explored. In parallel to these development two systems of at least 25 – 50kW capacity each should be designed and installed in an appropriate location in India and in Europe respectively. Module indoor rating as well as, system's field performance evaluation and comparison should be carried out. Modelling of the system's technical performance should help the development of good practice techniques for CPV with special attention to the spectral effects and device temperature on the average energy production.

Expected Impact: At the end of the project a new module and CPV system should be developed and demonstrate the required reliability according to the current qualification standards. The targeted efficiency should be demonstrated by the system installed in India and Europe. The project should also deliver a manufacturing cost analysis and the generation cost assessment for the 50 kWp systems.

Funding Scheme: Collaborative Project

c) Small scale steam engine powered by Linear Fresnel Reflector (LFR) system- Development of prototype

Content/ Scope: Research and development on a decentralized small (< 1MW) solar steam system based on a steam engine and a simple Linear Fresnel Concentrator for

decentralized heat and power applications should be performed in the project. Focus is on the development of components for the Linear Fresnel System as well as on a high efficiency small scale steam engine with respect to robustness and autonomous operation. . The research work is needed to develop cost effective mirror/ reflectors, minimizing the shading effects and exploratory use of alternative materials in the LFR system. The project should include a small industrial scale prototype suitable for local Indian conditions.

Expected Impact: An autonomous system for heat and power supply in the MW scale based on robust technology and easy to manufacture would not only decrease the dependency on fuel and grid capacity but would also increase productivity of industrial sector, making it more independent of grid blackouts

Funding Scheme: Collaborative Project

3. Proposed approach

a) **Indicative Budget Allocation**: € 5 M from EC & a similar budget in Rupees from India (DST)

b) **Maximum Number of Projects to be funded**: Three (3)

c) **Eligible Applicants & Project Partnership Requirements**: A balanced participation of partners from Europe and India is required.

As far as European partners are concerned there must be at least 3 independent legal entities, each of which is established in a Member State or Associated Country, and no two of which are established in the same Member State or Associated Country.

Similarly as far as Indian partners are concerned, a minimum number of participating legal research entities is 3 from different institutions, preferably from different Indian states .Eligible partners can be legal research entities from academic institutions, research institutes , national laboratories, R&D laboratories in public and private sector /SMEs* as per domestic norms in EU and India.

Special features:

To ensure a project implementation that reflects a more genuine EU-India cooperation, proposals must show a balanced effort in terms of research work to be carried out in India and EU .

The projects should also clearly detail the coordination of research activities including plans for the exchange of researchers and details of the funding of such an exchange.

In addition to these two aspects, the active participation of relevant industrial research centres/and or companies is deemed necessary for achieving the expected impact.

The proposals should take into account that any accommodation (board and lodging) of the Indian researchers in Europe should be paid by the European host partner, whereas that of the European researchers in India will be paid by the Indian host partner.

d) Application format: The proposals shall be submitted on a common application form (Part B of the Proposal together with Draft Coordination Agreement) by the prescribed closing date of the Call : **Nov.30,2009** by the Indian and EU Project Coordinator respectively to their counterpart funding agencies concurrently , namely, Department of Science & Technology (International Cooperation Division) , New Mehrauli Road New Delhi 110016 India (Email: srelia@nic.in) and EC Directorate General Research, Brussels Belgium ((Maria.Getsiou@ec.europa.eu)

- Even if the administrative forms to be used are those required by DST and EC respectively, the Part B Proposal Form and Coordination Agreement Form (**Annex.1**) presenting similar scientific and technical content, should be common.

- The evaluation criteria and sub-criteria, together with the eligibility, selection and award criteria to be applied to this call are given in this announcement.

- Forms of grant and maximum reimbursement rates for projects funded through the cooperation work program also finds a suitable mention in the proposal submission form **Annex.I**

A Coordination Agreement should be provided alongwith the Part B of the Proposal on or before the closing date of the Call

e) Scientific Evaluation procedure (including criteria & minimum thresholds for the proposals:

The evaluation shall follow a single step procedure. The proposals will be evaluated by a single panel including both European and Indian experts. The proposals are evaluated on the basis of the following three criteria, also taking into account the Special Features outlined in section C:

1 S/T quality; 2. Implementation; 3. Impact.

For each criterion marks from 0 to 5 will be given, with the possibility of half-point scores. Successful proposals must pass the minimum thresholds as follows:

Evaluation Criteria	Minimum threshold
S/T quality will subsume: S&T excellence,Relevance.	**3/5**
Implementation will subsume: Quality of Consortium including their complementarity, balance in distribution of research activities across both sides.	**3/5**
Impact will subsume: Financial, Innovation, Competence building- cultivating critical mass of researchers , Exploitation of results, Joint knowledge creation	**3/5**
Overall threshold required	**10/15**

India-EU research projects, recommended by single panel including both European and Indian experts, will be processed for necessary approvals and clearances respecting (a) domestic regulations/requirements of respective co-sponsoring agencies as well as (b) requirements stipulated in the India-EC S&T Agreement.

f) Funding System:

India-EU Collaborative projects will be co-sponsored by the Department of Science and Technology (DST) Government of India and European Commission (EC). Cooperation with Indian research teams is essential. Proposals which do not include Indian partners will be considered ineligible

Funding Norm: The co-sponsors will fund their respective scientific institutions/scientists engaged in jointly approved India-EU research projects. Funding will be under following budget heads:

1. Direct Cost

i. **Manpower** (according to the respective norms of the sponsoring Parties) Manpower cost is to be calculated in terms of person months.

ii. **Equipment** (according to the respective norms of the sponsoring Parties) Only incremental equipment as would be necessary for pursuing collaborative work will be allowed.

iii. **Consumable** (according to the respective norms of the sponsoring Parties) As essential for collaborative work

iv. **Mobility of scientists :** To be undertaken for joint project related work and given in terms of number of persons and mandays of stay in India/Europe

For Indian project staff visiting EU collaborating institute:

(Number of Indian scientists to undertake project work related visit & man-days of stay in Europe will have to be stated for each year)

- Sending Indian institution takes care of its project staff's return international travel cost (economy excursion class) between place of work in India and place of institution being visited in European country as well as medical insurance (silver class); and
- Receiving European institution takes care of accommodation cost (board and lodging) of the incoming visiting Indian project staff for the actual period of stay in Europe (as per EC norms).

For EU project staff visiting Indian collaborating institute:

(Number of European scientists to undertake project work related visit and & man-days of stay in India will have to be stated for each year)

- Sending European institution takes care of its project staff's return international travel cost between place of work in European country and place of institution being visited in India as well as medical insurance and

Receiving Indian institution takes care of accommodation (in Guest House or up to 3-star hotel) and subsistence cost of the incoming visiting European project staff for the actual period of stay in India (Per diem of Rs.1000/day for Experienced Researcher or Rs.20,000 per month for Early Stage Researcher)

2. Indirect Cost (according to the respective norms of the sponsoring Parties) e.g Overhead expenses payable to collaborating institutes

g) Indicative timetable:

Publication of Call in India & EU	In EU July 30,2009 In India August 5,2009
Closing Date for Submission of India-EU Proposals in India & EC	Nov.30,2009
Evaluation of India-EU Proposals (Consensus and Scientific Evaluation Panel Meetings -in Brussels)	January 2010
Intimation of selected India-EU research projects (that has qualified the scientific evaluation stage.)	March ,2010
Grant Negotiations with successful project consortia (in parallel by the DST and EC)	March-April 2010
Issuance of grant letter for approved India-EU Research Projects (to Indian & EU Project Coordinators by DST and EC respectively preferably around the same time)**:**	June 2010 onwards.

ANNEX.I

CONTENT OF COMMON PROPOSAL SUBMISSION FORM W.R.T 2010 INDIA-EUROPEAN COMMISSION COORDINATED (JOINT) CALL FOR PROPOSAL IN SOLAR ENERGY SYSTEMS

Collaborative Project:

A1: GENERAL INFORMATION

Call Identifier Code:

Proposal Number (Not to be furnished by the applicant)

Proposal Title
Proposal Acronym
Duration in months
Topic (out of the menu given in the Work Program)
Keywords
Abstract (max 2000 characters)

A 2 PARTICIPANTS

From EU	From India
1. Project Coordinator Name: Position in the Organization: Organization Legal Name/Short Name Organization Address: Country Contact Phone/Fax/Email: Organization Type : (*Academic Institution/Higher Education Establishment /Research Organization/Institute Undertaking of Firm/SME in conformity with EC norms*)	1. Project Coordinator Name: Position in the Organization: Organization Legal Name/Short Name Organization Address: State Contact Phone/Fax/Email: Status of Organization : (*Academic Institution/Higher Education Establishment /Research Organization/Institute Undertaking of Firm/SME in conformity with Indian norms*)
2. Other Project Partner Name: Position in the Organization: Organization Legal Name/Short Name Organization Address: Country Contact Phone/Fax/Email: Organization Type :	2. Other Project Partner Name: Position in the Organization: Organization Legal Name/Short Name Organization Address: State Contact Phone/Fax/Email: Status of Organization : (*Academic Institution/Higher Education*

(*Academic Institution/Higher Education Establishment /Research Organization/Institute Undertaking of Firm/SME in conformity with EC norms*)	*Establishment /Research Organization/Institute Undertaking of Firm/SME in conformity with Indian norms*)
3. Other Project Partner Name: Position in the Organization: Organization Legal Name/Short Name Organization Address: Country Contact Phone/Fax/Email: Organization Type : (*Academic Institution/Higher Education Establishment /Research Organization/Institute Undertaking of Firm/SME in conformity with EC norms*)	2. Other Project Partner Name: Position in the Organization: Organization Legal Name/Short Name Organization Address: State Contact Phone/Fax/Email: Status of Organization : (*Academic Institution/Higher Education Establishment /Research Organization/Institute Undertaking of Firm/SME in conformity with Indian norms*)

A 3 BUDGET

Budget Head	For EU Participants (in Euros)	For Indian Participants (in Rupees)
Direct Costs **Manpower Cost** *(Limited to hired project staff. To be calculated in terms of person months).* *For EU: by way of Early Stage Researcher, Experienced Researcher with 4-10 years experience, Experienced Researcher with more than 10 years experience.* *For India: by way of Junior Research Fellow-JRF/JRF(Professional), Senior Research Fellow-SRF/SRF(Professional), Research Associate-RA. Research Scientist (emoluments will be worked as per DST OM No. A.20020/11/97-IFD dated August 6,2007)* **Equipment Cost** : *(Only incremental equipment as would be necessary for pursuing collaborative work will be allowed. DST will fund such requirement of Indian project partners and EC will fund that of European project partners) .* **Consumables Cost**: *(As essential for*		

collaborative work. DST will fund such requirement of Indian project partners and EC will fund that of European project partners) **Mobility of scientists** *(For Indian project staff visiting EU collaborating institute: Number of Indian scientists to undertake project work related visit and & man-days of stay in Europe will have to be stated for each year)* ➢ *Sending Indian institution takes care of its project staff's return international travel cost (economy excursion class) between place of work in India and place of institution being visited in European country as well as medical insurance (silver class); and* ➢ *Receiving European institution takes care of accommodation cost (board and lodging) of the incoming visiting Indian project staff for the actual period of stay in Europe (as per EC norms).* *For EU project staff visiting Indian collaborating institute: (Number of European scientists to undertake project work related visit and & man-days of stay in India will have to be stated for each year)* ➢ *Sending European institution takes care of its project staff's return international travel cost between place of work in European country and place of institution being visited in India as well as medical insurance and* ➢ *Receiving Indian institution takes care of accommodation (in Guest House or up to 3-star hotel) and subsistence cost of the incoming visiting European project staff for the actual period of stay in India (Per diem of Rs.1000/day for Experienced Researcher or Rs.20,000 per month for Early Stage Researcher)*		
Indirect Cost *(e.g Overhead expenses payable to institute* *For EU Project Partners (as per EC norms)* *Indian norms for Indian partners: Indian norms for*		

Indian partners: 20% of the total project cost with an upper limit of Rs. 5.0 lakhs for educational institution and Rs.3.0 lakhs for national research laboratories and institutions under S&T Agencies/Departments . On projects costing more than Rs.50 lakhs, the quantum will be decided on a case to case basis		
Total Cost		
Admissible Cost demanded from EC/DST *(For European & Indian Project Partners in relation to the type of their organization. Under FP7 rules, EC grant value varies for different type of research entities engaged in the collaborative projects, as given below:* ➢ *Industry partner is entitled up to 50% of the total direct & indirect costs required from EC;* ➢ *University partner is entitled up to 75% of the total direct & indirect costs required from EC;* ➢ *SME partner is entitled up to 75% of the total direct & indirect costs required from EC;* *Indian standard grant is up to 100% to public funded academia and research laboratories & funding to industry is by way of soft loan up to 50%).*		

PART B OF PROPOSAL

(Part B, consequent to joint selection, will be transformed into Technical Annex.)

Proposal Full Title

Proposal Acronym:

Type of Activity: Collaborative Project- Small or Medium scale focused Research

Project

Work Program Topic Addressed

(if more than one, indicate their order of importance to the project. Please note that topics indicated here should agree with the topics selected on Form A.1.In case of ambiguity the proposal will be deemed to address the topics selected on Form A1)

Participants:

Participant Number	Participant Organization Name	Country
1.(Coordinator-EU)		

2.		
3.		
4. (Coordinator-India)		
5.		
6.		

Scientific Goals of Project

Scientific and or / Technical Quality, relevant to the topics addressed by the Call

Concept & Objectives

Progress beyond the state-of-the-art

S/T Methodology and associated work plan

Overview

Detailed Work plan broken down into work packages (WPs), deliverables, list of milestones. This write up should follow logical phases of implementation of project .It should describe the overall strategy of work plan too.

Work Package No.	Work Package Title	Type of Activity	Lead Participant No.	Person-months	Start month	End month
	Total					

Listing of Deliverables

Deliverable No.	Deliverable Name	WP No.	Nature*	Dissemination Level **	Delivery Date

**Nature of deliverable using one of the following codes: R=Report P= Prototype D= Demonstrator O= Others*

*** Dissemination Level to be indicated using one of the following codes: PU=Public; PP= Restricted to other program participants; RE= Restricted to a group specified by the consortium; CO= Confidential, only to the members of the consortium*

Work Package Description

For Each Work Package:

Work package number			Start date or starting event				
Work package title							
Activity type							
Participant number							
Person-months per participant							

Objectives

Description of work (possible broken down into tasks) and role of participants

Deliverables (brief description and month of delivery)

Summary of Staff Effort /Two way Mobility required vis-à-vis Workpackages

Participant No./Short Name	WP1 (Work package leader)	WP2	WP3	Total person-months devoted to joint project		Mobility required between EU project site and Indian project site	
				By EU partners	*By Indian partners*	*<u>From Europe to India</u> No. & Duration in man days*	*<u>From India to Europe</u> No. & Duration in man days*
1.							
2.							
3							
4							
5							
6							
Total							

List of milestones

Milestone	Milestone	Work	Expected	Means of

number	name	Package(s) involved	date	verification

Implementation
Management structure and procedures
Individual participants
Consortium as a whole
Resources to be committed

Impact
Expected impacts listed in the work programme
Dissemination and/or exploitation of project results, and management of intellectual property (**as per the IPR Annex of Nov.30,2007 India-EU S&T Cooperation Agreement**)

Ethical Issues that may arise in the proposal. In particular explain the benefit and burden of their experiments and the effects it may have on the research subjects

Consideration of gender aspects

Partnership

Participant No.	Participant Organization Name	Organization Type	Role

Estimated Budget

Budget Head	For EU Participants (in Euros)	For Indian Participants (in Rupees)

Direct Costs **Manpower Cost** (Limited to hired project staff. To be calculated as per person months requirement. For EU: by way of Early Stage Researcher, Experienced Researcher with 4-10 years experience, Experienced Researcher with more than 10 years experience. For India: by way of Junior Research Fellow-JRF/JRF(Professional), Senior Research Fellow-SRF/SRF (Professional), Research *Associate-RA, Research Scientist (emoluments will be worked as per DST OM No. A.20020/11/97-IFD dated August 6,2007)* **Equipment Cost** : *(Only incremental equipment as would be necessary for pursuing collaborative work will be allowed. DST will fund such requirement of Indian project partners and EC will fund that of European project partners) .* **Consumables Cost**: *(As essential for collaborative work. DST will fund such requirement of Indian project partners and EC will fund that of European project partners)* **Mobility of scientists** *(For Indian project staff visiting EU collaborating institute: Number of Indian scientists to undertake project work related visit and & man-days of stay in Europe will have to be stated for each year)* ➢ *Sending Indian institution takes care of its project staff's return international travel cost (economy excursion class) between place of work in India and place of institution being visited in European country as well as medical insurance (silver class); and* ➢ *Receiving European institution takes care of accommodation cost (board and lodging) of the incoming visiting Indian project staff for the actual period of stay in Europe (as per EC norms).* *For EU project staff visiting Indian collaborating institute: (Number of European scientists to undertake project work related visit and & man-days of stay in India will have to be stated for each year)*		

➢ *Sending European institution takes care of its project staff's return international travel cost between place of work in European country and place of institution being visited in India as well as medical insurance and* *Receiving Indian institution takes care of accommodation (in Guest House or up to 3-star hotel) and subsistence cost of the incoming visiting European project staff for the actual period of stay in India (Per diem of Rs.1000/day for Experienced Researcher or Rs.20,000 per month for Early Stage Researcher)*		
Indirect Cost *(e.g Overhead expenses payable to institute .* *For EU Project Partners (as per EC norms)* *Indian norms for Indian partners: 20% of the total project cost with an upper limit of Rs. 5.0 lakhs for educational institution and Rs.3.0 lakhs for national research laboratories and institutions under S&T Agencies/Departments . On projects costing more than Rs.50 lakhs, the quantum will be decided on a case to case basis*		
Total Cost		
Admissible Cost demanded from EC/DST *(For European & Indian Project Partners in relation to the type of their organization. Under FP7 rules, EC grant value varies for different type of research entities engaged in the collaborative projects, as given below:* ➢ *Industry partner is entitled up to 50% of the total direct & indirect costs required from EC;* ➢ *University partner is entitled up to 75% of the total direct & indirect costs required from EC;* ➢ *SME partner is entitled up to 75% of the total direct & indirect costs required from EC;* *Indian standard grant is up to 100% to public funded academia and research laboratories & funding to industry is by way of soft loan up to 50%).*		

Signatures of India-EU Research Project Partners and their corresponding Heads of Institution with seal of organization and date

Collaborative Project:Small or Medium scale focussed project

COORDINATION AGREEMENT (CooA) **{**Final Draft Coordination Agreement to be submitted along-with the India-EU Research Project Proposal – Form Part A & B by the closing date of Coordinated (Joint) Call}

The Coordination Agreement Format

1. INTRODUCTION

This document provides non-binding guidance to participants in India-EU Coordinated (Joint) Call projects regarding the issues they may wish to address in their Coordination Agreement (hereinafter "CooA").

CooA is an agreement between the European & Indian Project partners to govern implementation of India-EU Research Project including appropriate arrangements for technical workplan execution,tasks of each partners, reporting of technical progress and management of intellectual property rights ((respecting the appropriate provisions of the Nov.30,2007 S&T Agreement concluded between the European Community and India

The European Commission and the Department of Science & Technology as funding agency are not a party to any CooA and do not establish the terms and conditions of the CooA. However non-binding guidelines in the form of a checklist is given below to highlight some of the main issues and the way they could be addressed by participants.

2. PARTIES

- identifies each party to the CooA (i.e. participants to the India-EU Research Project Proposal)

3. PREAMBLE

- summarizes the context and the purpose of the CooA (including the titles and acronyms of the India-EU Research Project Proposal).

4. DEFINITIONS

- defines the important terms used throughout the CooA .

5. SUBJECT

- Describes the subject of the CooA with reference to the India-EU Research Project Proposal in question including:
  - the preliminary technical specifications;
  - the desired technical results;
  - the work to be accomplished;
  - the contribution of each party;
  - the (maximum) effort expected.

6. TECHNICAL PROVISIONS

This section can be used to defined the technical details necessary for the proper coordination of the projects

6.1. Tasks of each party

- gives a definition of the tasks that each party intends to carry out as precisely as possible (possibly referring to India-EU Research Project Proposal)
- outlines the relationship between the tasks of the parties and any inter-dependence.

6.2. Non-financial resources made available

- gives a detailed overview of the non-financial resources, such as: human resources (number of persons, key players or exhaustive list if possible,
- equipment and facilities (number, nature, place, etc);

- background or other information (such as plans, manuals, calculations, prototypes and also intellectual property rights pertaining to such information);
- contributions of sponsors or any other third party (such as subcontractors or affiliates).

6.3. Project schedule

- sets out the production schedule for inter-related tasks and for planning purposes (i.e. when, where and how the resources will be made available).
- It is recommended that in their own interests the parties should not establish irrevocable schedules unless they are absolutely sure that these can be met, and to include instead contingency plans for delays or missed deadlines.
- An irrevocably accepted production schedule could be considered to be a guaranteed commitment and may involve payment of indemnities if not met.
- On the other hand minimum compliance with deadlines can be guaranteed by other methods, as discussed in the section on Managerial Provisions.

6.4. Changes

- Sets out provisions for dealing with changes to the project. The Coordination Agreement may have to be adjusted or even discarded altogether as the work progresses, depending on the situation.
- To deal with highly volatile situations, it is advisable to provide a very flexible procedure for making changes to the initial specifications. This could go as far as including the termination of certain tasks, the withdrawal of certain parties, the inclusion of new partners etc.
- To avoid disputes, the conditions and procedure should be clearly indicated.

7. COORDINATION AND MANAGERIAL PROVISIONS

- describes the provisions dealing with the coordination and management of the India-EU Research Project (e.g. management bodies and the decision making process).

7.1. Co-ordination and management

Establishes a co-ordination structure (may be called steering committee, liaison committee, management committee, and can be broken down into different sub-groups such as financial, technical, legal, etc) with among others the following tasks:

- to define, divide and develop the tasks;
- to check the progress of the work;
- to co-ordinate the research teams;
- to co-ordinate the preparation of the reports (technical, financial, etc.);
- to advise and direct the partners on the developments necessary for the project;
- to permit formal exchanges of information between the partners.

The work of this steering committee is frequently translated into daily management and representation duties by a coordinator(s) selected from among the parties. Other committees can be created as necessary and should report to the steering or co-ordination committee. Provision should be made for their creation when necessary.

7.2. Powers and responsibilities

With regard to any body which is established or any person entrusted with certain tasks, the CooA should carefully define:

- the powers and responsibilities thereof;
- the operating procedures (preparation of agenda, meetings, decisions, chairmanship, minutes, votes, etc.);
- in the case of bodies, their organization (composition, powers of each party), decision making method possible depending

on nature of issue (unanimously, majority agreement, voting and veto rights etc.);
- to avoid cumbersome procedures the parties could foresee a simplified approval process depending on the nature of the decision envisaged.

7.3. Follow-up and Supervision

Describes how the follow-up and supervision of the projects will take place. Each consortium undertakes to follow the production schedule in the technical provisions of the India-EU Research Project proposal. In view of the evolving character of projects, these production timetables are generally subject to change. To limit the risk, it is desirable to provide for a strict and effective supervision system managed by the coordination structure (see point 7.1) including:

- frequent progress meetings (ranging from once a month to once per quarter);
- frequent technical and financial progress reports (actions completed and results obtained);
- optional extraordinary meetings as soon as agreed estimated deadlines have been overrun,
- including the right for the parties to review their position within the co-operative venture based on clearly stated reasons.

8. FINANCIAL PROVISIONS

(beyond those already included in the EC & DST grant agreement/sanction letter)

8.1. Financial plan

To be defined by the parties if necessary.

8.2. Mutual payments

Deals with mutual payments and common costs of more than one party (if applicable). Under certain circumstances, two or more

parties may incur common expenses (personnel, equipment, etc.). It is desirable to provide for the procedure governing the payment of this type of expense by each party in the CooA and to clearly identify its reporting to the Commission and DST , particularly as regards the following:

- reimbursable advance to a participant and method of reimbursement
- terms of payment with regard to mobility of researchers into EU partner lab /into Indian partner lab
- identifies management activity costs beyond those foreseen by the EC/DST grant agreement/sanction letter, etc.

8.3. Costs to be claimed under the coordination activities

Determines the costs which relate to the coordination of the projects, e.g. costs related to coordination meetings.

8.4. Changes

Sets out provisions for dealing with changes to the financial aspects of the project.

9. PROVISIONS REGARDING INTELLECTUAL PROPERTY RIGHTS (IPR) MANAGEMENT, DISSEMINATION AND USE

To be elaborated in keeping with factors and guidelines stipulated in IPR Annex of Nov.30,2007 India-EU S&T Agreement)

10. GENERAL PROVISIONS

10.1. Entry into force

Determines the effective date of entry into force of the CooA (on a strict condition that all the India-EU project partners are signatory to the final project grant linked documents of EC and DST such as Technical Annex & CooA).

10.2. Duration / Termination

Deals with the duration of the CooA and with the causes of early termination and addresses issues such as:

- the duration of the CooA vs. duration of the EC/DST grant agreement (e.g. 6 months longer, etc);
- the possibility of tacit renewal and extension;
- the automatic termination after full completion of the project;
- the termination prior to full completion or upon early Termination of the EC/DST grant agreement;
- the termination due to breach;
- the consequences of different reasons of termination (e.g. return of documents).

10.3. Amendments to the CooA

Provides simple and clear conditions and procedures for the amendment or revision of the CooA.

10.4. Confidentiality

Determines the confidentiality obligations and limits thereof, such as:

- what information is considered confidential (i.e. scope and exceptions3);
- what steps /procedures must be taken to mark and transfer confidential information;
- to whom the confidential information may be divulged and under which conditions;
- the period during which the confidentiality obligations must be respected (See also under the heading "Survival" below).

10.5. Breach / non-compliance and associated liability, indemnification or penalties

Sets out what constitutes a breach of the obligations under the CooA and its consequences, i.e.:

- what constitutes a breach and the procedure to be followed (including for example, a requirement to give notice

identifying the breach and providing for the possibility of the defaulting party to rectify such a breach within a given period);

- liability (and possible limitations/ force majeure) for damage caused and indemnification thereof;
- possible penalties or liquidated damages for non-compliance (the conditions under which they are due should be clearly stipulated (e.g. regarding amounts, the procedure, the interest in case of delay of payments, etc);

10.6. Survival

Sets out which provisions survive the duration of the CooA, such as those regarding:

- confidentiality and, if applicable, classification;
- applicable law and jurisdiction;
- access rights provisions;
- use of project Acronym (especially if this sign is protected as a trademark or a domain name for this sign has been registered).

10.7. Partial invalidity

Deals with the consequences of invalidity of certain provisions of the CooA.

10.8. Communication

Sets out how notices and other communication under the CA must be made (the way this is done may differ according to the aim pursued).

10.9 Applicable law and jurisdiction

Will be guided by the provisions under Article 11 (e) of the Nov.30,2007 India-EU S&T Agreement.

10.10 Signatures of India-EU Research Project Partners and their corresponding Heads of Institution