

SYNCHRONISER

EU - India Policy Dialogue

Position paper on

International Cooperation

in the Common Strategic Framework

May 18th, 2011

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1. Introduction. Background and objectives EU-India relations and cooperation

EU-India relations and cooperation in research is substantially progressing since the signing of the Science & Technology (S&T) Cooperation Agreement in 2001. India has become a valuable partner with the EU in major international projects. The strong partnership between the EU and India, their great traditions in science and technology as well as the recent political impetus provided by the EU-India Science Conference, are now being translated into ambitious, high quality, mutually beneficial, co-operative programmes, projects and dialogues.

Additionally, a Joint Working Group (JWG) on ICT was established in 2004 under an institutional agreement between the European Union and the Government of India's Department of Information Technology (DIT). The JWG is mainly comprised of policy-makers and concerned ministers from both regions including few researchers and stakeholders.

2. The Synchroniser EU-India Policy Dialogue

The JWG meetings are inter-governmental, closed-door meetings which follow a top-down approach, comprising policy-makers from both regions and very few researchers and stakeholders. In this scenario, actors ("key actors in the research arena") from the two regions have difficulties to meet in a common platform to discuss JOINT research Priorities. SYNCHRONISER aims to fill this gap by **bringing together the 'gurus' of the research and stakeholder communities of both regions on a common platform as "analyzers of these joint research priority areas", thus providing a more practical, consultation approach to boost the impact of policy dialogues on joint research priority areas.** The project has initiated an open support body, 'by the (research) community and for the (research) community' which provides structured inputs to JWG meetings. This open support body is the SYNCHRONISER Steering Committee (SSC). Summing up, the main objective of the SYNCHRONISER Steering Committee experts is to feed the EU-India policy dialogue meetings held annually by the Joint Working Group on ICT for better focus the research roadmapping for cooperation between Europe and India.

3. Problem statement and apparent reasons for the current scenario

The bilateral trade between Europe and India has increased steadily over the past years with the EU being India's most important trading partner and also the leading investor in the country. India has also emerged as a major investor in Europe having made some

major company acquisitions over recent years. However, there is still too much to do to enhance the cooperation between the two regions in the ICT field.

India has been taking part in the European Framework Programmes since FP5 and participated (through Indian researchers and research organizations) in 80 proposals during the 6th Programme (FP6), spanning from 2002 to 2006, of which 20 fell into the category “sustainable development, global change and ecosystems”. The 7th Programme (FP7) covers the period 2007-2013. During the last six calls, 108 proposals with Indian partners have been submitted; a total of 14 have been retained for funding.

These figures seem to be under the expectations of both regions and clearly bellow the real existing potential for cooperation. Some reasons for this situation could be:

- a. Lack of awareness that Indian scientists and R&D organizations have regarding FP7 opportunities.
- b. Lack of intensive Networking between Indian and European Researchers.
- c. Lack of national preparation of Indian researchers to participate in the International research programmes, like the European FP.
- d. Stringent evaluation processes of European Framework Programmes vis-a-vis those of domestic public R&D funding schemes in India and some bi-lateral funding.
- e. Perceived IPR ownership/sharing issues.
- f. Lack of intense participation of Indian researchers and Indian Associations during the preparation process of the European FP work programme, thus, not bearing in mind possible research priorities from Indian interests.

Besides those issues, the competition on FP7 is becoming tougher and tougher. Only extremely well focused projects with very high quality contents and driven by consortiums with top nutch entities having complementary skills can succeed. Preparatory work for future research projects shall start well in advance. The definition of common interest between partners and a strong collaboration effort are the keys to success.

In addition, when approaching joint projects, other problems such as accounting and auditing, reporting the results, etc. arise as a consequence of the different cultures and policies. These difficulties need to be considered and tackled appropriately when encouraging cooperation between the two regions and defining joint policies.

Since both regions share common values, societal challenges and beliefs that make them natural partners in the modern inter-connected world, a major cooperation in ICT field will give even greater substance to this vital strategic partnership and will enable them to get the maximum benefit of research activities.

4. Position about International Cooperation in the Common Strategic Framework (Response to question number 26)

Due to the fact that Europe is currently surveying on the shaping of the future Common Strategic Framework programme, the successor of the current FP7, and noting the fact that the European survey does contemplate questions specific on the International Cooperation aspects of the cooperative research, the SSC decided to issue a position paper expressing his views on this important subject. The views and considerations of the Policy Council are here commented

In this consultation, **the SSC would like to express its views specifically on the question number 26** which calls for comments on:

How can EU support for international cooperation with non-EU countries in research and innovation contribute best to the objectives of Europe 2020 and the EU's external policies? How can EU-based research and innovation become more attractive to partners from around the world? What conditions should be placed on funding non-EU partners? How should cooperation with Member States be reinforced in such international collaborations?

The comments from the SSC are here below provided.

5. How can EU support for international cooperation with non-EU countries in research and innovation contribute best to the objectives of Europe 2020 and the EU's external policies?

In the FP7 Interim Evaluation Report by the Expert Group has given ten recommendations, and the tenth recommendation stresses on 'opening of FP7 to international cooperation' and asked for the review of current strategy towards international cooperation. Further, it has stated that to meet the global need for innovative solutions to Grand Challenges (viz., Science for Science, Science for Competitiveness, and Science for Society) the European Research and innovation must link up with other regions that are rapidly strengthening their research infrastructure (and Asia being most notable example).

In order to enhance cooperation between Europe and India in the ICT, the SCC identified several categories of priorities. All the experts agreed on the need of approaching short term objectives as a first step, but also define long term objectives and strategies for the future. The definition of the European FP8 is an opportunity for Indian contribution to shape priorities which would be suitable for enhancing the cooperation of European and Indian researchers.

Short-term recommendations

A wider publicity of FP7 WP2011-12 and 2013 work programme is needed in India to accelerate formulation and submission of R&D projects within the existing FP7 framework. Multiple ways of building higher awareness amongst R&D communities from both sides were suggested, such as:

- Creation of web-site for dissemination of information on EU calls with information bullets specific to Indian audience.
- A directory of potential EU partners willing to collaborate with India and Indian partners willing to collaborate with EU, including their project ideas.
- Organization of workshops in India to present and brainstorm project ideas with participation of EU organizations.
- Organization of awareness & problem solving workshops to demystify EU FP processes in major Indian towns. This could immensely help in breaking notional barriers as well as understanding ground level difficulties faced by stakeholders on the two sides.

Medium-term recommendations

Concurrently, SSC experts recommend studying in detail the already established Joint Calls between Europe and other countries such as Brazil and Russia. The rules and

governance of such joint calls will be extremely useful in defining a **co-funding scheme between Europe and India**. The main objective of this co-funding approach is to create win-win cooperation between both countries around the commonly agreed joint priorities.

Other documents, such as the *EC-Australia S&T COOPERATION ROADMAP 2009-2010*¹ or the *EU-Latin America Strategic Research Agenda*³ can serve as references to define a **common Research Roadmap for Cooperation between EU and India**. This Cooperation Roadmap could include the development of a Work Programme in which the common priorities in the ICT field for both regions are clearly explained. According to the priorities stated in that Work Programme, new project proposals for cooperation between EU and India should be submitted for a co-funded scheme.

Due to the high expenses that travels from/to each region may imply, under this co-funded initiative, it is suggested to **allocate part of the budget for pre-proposal interaction and physical networking**. It is undoubtedly demonstrated that cooperation is more effective when partners meet face to face and joint interests are shared. Personal relationships are key amongst researchers and we need to encourage events and exchanges to foster these contacts. In addition, workshops focused on specific domains and information dissemination infrastructure (e.g. web-sites, newsletters, workshops, etc.) should be supported to create awareness about ICT needs and available resources (R&D capabilities and technology solutions).

In addition, **collaboration with ETPs and ETPs initiatives** is suggested. ICT-related ETPs address complementary technology fields. Each ETP (NEM for electronic media, NESSI for Software & Services, eMobility (renamed Net!Works) for mobile applications, ISI for Satellite communications, etc) has its own Strategic Research Agenda (SRA) that defines short, medium and long-term research challenges and identify future important trends in their specific technological fields. The cross-European Technology Platforms (X-ETPs) Group has also a SRA that takes as starting point the X-ETPs Future Internet (FI) Vision Document (VD). This SRA reflects a comprehensive collection of active and upcoming developments in the Future Internet research world, while clearly aiming towards the realization of the FI Vision. The main objective of this SRA is to provide a well structured and consistent publication that reflects and covers a broad set of FI aspects.

ETPs are also cooperating in addressing general ICT innovation issues towards the European Commission. ETPs are discussing a cross-ETP initiative (similar to the Future

¹ http://ec.europa.eu/research/iscp/pdf/australia_ec_roadmap_2009-2010.pdf

³ <http://www.salamas.eu>

Internet cross ETP initiative that has led to the EFII spin-out) so that the ETPs messages on innovation become stronger if shared by the ICT ETPs in a "cross ETP innovation initiative".

An interesting opportunity for India and EU is to use the ETPs as an instrument to produce a roadmap for cooperation between EU and India, both in specific technology fields and also in ICT innovation issues. If successful, possible promotion of Indian technology platforms should be part of the future work in order to enhance the cooperation India-Europe (Following the example of other regions where Technology Platforms have been already implemented adapting the European model and success cases).

Long-term recommendations

The IST Advisory Group (ISTAG) has been set up to advise the European Commission on the overall strategy to be followed in carrying out the IST thematic priority under the European framework programme for research. The ISTAG reflects and advises on the definition and implementation of a coherent policy for research in ICT in Europe. This policy should ensure the mastering of technology and its applications, and should help strengthen industrial competitiveness and address the main European societal challenges.

SSC experts considered that **reinforcing the ISTAG, by involving Indian gurus** (members of the SYNCHRONISER & EIS expert groups and visionaries) could be another tool to promote EU-India cooperation. Moreover, the formation of an EU-India ISTAG was suggested.

5.1 Disseminating European technologies and prepare market for European industries

International cooperation is mandatory as far as it is one efficient way to disseminate European technologies and to prepare market for European industries. However, the process should be based always on reciprocity. A clear European strategy for international cooperation should be defined, in order to maximize its effectiveness and impact of collaboration, including:

- Identification of consistent **strategic objectives**.
- **Instruments** must be identified in order to get a clear return on investment. Any instrument able to define project with at least 3 EU countries involved with a clear way to introduce a product, system or service into the non-EU countries markets must be used.
- **Reciprocity (including on IPR aspects)**: international rules must be implemented in order to have a real industrial trade providing the same opportunities to compete to

any company in the world

- **Cooperation with Member States**: harmonization of national programmes to support R&D efforts, make those national R&D programs more efficient by exploiting synergies
- Measurement of the effectiveness of the collaboration both in the short and long term.

Following aspects should also be taking into account:

- **Potential new markets opened by the cooperation.**
- Establishing win-win relationships
- **Involvement of key players**: private industry, public authorities, research institutes, academic community, financial community, civil society, users and consumers from Member States including New Member States and Associate Candidate Countries.
- Promotion of roadmaps for technological cooperation between European and other areas of the world.
- Alignment of strategic research agendas and work programs

In this regards, ETPs should help in that field as far as they are already establishing strong liaison with non European countries. It is key for the European industry to export their technologies and to compare their vision. It is also a mean to share priorities and to identify common interest in specific projects.

6. India as a Priority Area of Strategic Interest for EU

India must NOT be clubbed among other non-EU countries, nor viewed as one of the countries of Asian region. Sooner EU gets out of these generalities and focuses its energy on establish strategic links with India, it is better. In this decade, EU should take *special pro-active effort* to develop *strong technical link with India* as it wants to increase its *long term technical competitiveness at global level*, and *also to meets social challenges*.

6.1 India as Natural Partner of EU for Grand Challenges

India has very large technical manpower covering all aspects of the ICT field, having extremely good educational and management institutes in large number, a rapidly growing economy, and a country of 1.2 billion people. As India's almost all elite educational institutes, R&D labs, as well as innovation infrastructure is strongly supported / funded by state, it would be natural and easier for EU, a public funded organization to, to interface with India. The policy influence on science and technology development has been demonstrated huge in India; for that reason **it is important to keep one or two members of SSC from the Science and Technology Policy area that will add further dimensions to the policy dialogue of EU-India.**

The Indian companies have won a reputation of low cost, high quality, software delivery. There is a strong need of collaboration between India and EU in the following areas:

- Capability building in hardware
- Capability building in software
- Capability building in peripherals
- Capability building in training
- Investment in electronic components and in industrial R&D

Further, India is too large a country for any of EU member state. EU should realize that India, in spite of continuous US effort to integrate it with their global strategic economic and political goals, has pursued its own independent democratic course with strong social commitment, similar to their own. Further, EU like India, is also a multi-state, multi-cultural, multi-lingual organizations. It is right time for EU and India to come closer, and develop a symbiotic relation for long lasting interest.

6.2 Positive Role the Indian Government can Play

In India, private sector has rarely shown interest in 'investing' in any research initiative in collaborative mode with elite educational institutions or R&D labs, not even for short-term. Though in recent past, very many large multi-national companies have set up their own research labs in India, these in-house labs have no relation with any Indian educational or research institutions. They mostly serve to their parent companies' primary research centres, and are usually indulged in research works that of short-term in nature.

And hence, they may not be interested in EU programs which are geared towards long-term grand challenges, and that also to be shared along with other participating institutions.

As EU programs expect around 50% contribution of any research initiative from other sources, for any EU-Indo research initiative, Govt. of India can always provide the remaining 50% contribution, as Indian Govt. is committed for innovative research, and has a long-term cultural tradition of the same.

6.3 Role of Entrepreneurs and SMEs in Sunrise Industries

In EU programs, strong stress has been given to encourage Small and Medium Enterprises (SMEs) as it feels that SMEs have a greater role to play in innovation. For SMEs, it is ready to fund far more than 50% (say even around 80-90% of project cost), and some segments are even reserved for SMEs.

In contrast, in India almost all state funding is given to educational and research institutes that are public institutions. Private institutions are NOT eligible for this support. Though there are some small initiatives for ‘start-ups based on innovation’, but no specific role, in R&D or innovation, has been identified for Indian SMEs. In India, R&D activities are done either in state funded educational and R&D institutions, or in large private sector (local or multi-national) in-house R&D labs.

Consequently, *in the sun-rise industries like IT, Bio-technology, Green technology etc.*, where innovation has a great role to play, and there is large volume of *researchers / innovators* in these fields in India, their *entrepreneurial energy and knowledge are not being utilized for social benefits*, depriving India of its technical competitiveness in long run.

EU-Indo program may function as catalyst to un-lease the innovative potential lying dormant among individual researchers and entrepreneurs.

6.4 Prospective Indian Research Groups

Presently, India’s high technical brain power is being used in subservient manner for (i) State’s strategic / bureaucratic goals in state R&D institutions, and (ii) corporate strategic market goals in multi-national / private sector in-house labs. *Its innovative and creative potential to meet the Grand Challenges remain completely un-nurtured and un-utilized.*

In India, the experience of sixty years of bureaucratic rule, and the earlier two hundred years of colonial rule, has taught that rarely decision in India is taken on ‘objective basis’,

nor there is any confidence about 'fair play' in public life. And having this experience and perception, no researcher / research group would take extra effort to submit proposal (even for EU), and pursue the same, as s/he does not know any one in the decision making body, a priori.

As inquisitiveness and innovation are inherent characteristics of human endeavour, in spite of these social constraints, there are many sincere groups, inside as well as outside the large research institutions, who are pursuing their own endeavour in the frontier areas of research and development, and they can be the prospective collaborators of EU institutions in FP 7 & FP 8 programs.

6.5 Proposed Alternate Approach for EU to Pursue

The present approach followed by EU to tap research and innovative ideas through web portal have not been effective at all with India. Having an annual seminar in different, once a year, have not given result either! The present statistics is sufficient to show the complete failure of these approaches. It has to follow **a match making process**, described below, through an EU funded organization.

Identification of Indian Research Groups: As pro-active approach has to be taken from EU side, the *match maker organization* should first through study, identify those groups in India who are active in those fields which are under focus of EU's FP7 and FP8 programs.

Spreading Awareness about Indian Research Groups in EU: The match maker organization should then do a seminar or conference for EU research groups where Indian technical capabilities are projected, mainly to identify those EU institutions and groups that are convinced of positive outcome of their future association with Indian research institutions. If there is no EU institution who is convinced of this then it would be a non-starter.

Match Making Efforts: In case, one or few EU group are identified, then the match maker organization should approach the corresponding Indian research groups, encouraging them to have collaborative arrangements with their EU counter part. As India has enormous dormant technical brain power waiting for challenging opportunities, any research group can be expanded in very short period to cover the additional challenge.

7. How important are the aspects covered in this question? [Very important, Important, Of some importance, Unimportant, Don't know]

	Very important	Important	Of some importance	Unimportant	Don't know
wider publicity of WP2011-12	X				
co-funding scheme between Europe and India	X				
collaboration with ETPs and xETPs	X				
reinforcing the ISTAG, by involving Indian gurus		X			
Disseminating European technologies and prepare market for European industries		X			
priority areas of strategic interest		X			
instruments	X				
reciprocity (including on IPR aspects)		X			
cooperation with Member States	X				