



## I. INTRODUCTION

Living conditions in developing and emerging countries have been improved, but still there exists a demand for further developments in some regions of the world. In spite of improvements and success of development programs, millions more may be at risk of falling into poverty as a result of climate change or other severe reasons. In an increasingly competitive global economy and open trading system it is advisable for developing and emerging countries to cooperate in partnerships on a global scale.

### **What steps can be taken towards addressing humanitarian needs that have afflicted humanity for centuries?**

Economic growth is often considered as one of the best pathways for development. Macroeconomic, structural and social policies are usually used to promote broad-based growth. But economic growth alone will not reduce poverty, improve living conditions and address humanitarian needs in the long run unless it is inclusive and sustainable.

To overcome social inequalities and to produce inclusive development, we need partnerships, which lead to a non-discriminatory sharing of the benefits of development and the participation of the society in decision-making processes. To meet the humanitarian needs of current generations without compromising the ability of future generations to meet their own needs, it is our obligation to foster joint actions and cooperation programs for a sustainable development.

### **Development requires access to a range of appropriate technologies**

One of the keys to success for sustainable and inclusive development is the access to a range of technologies. Appropriate technologies promoting steady improvements in living and working conditions, may achieve higher levels of productivity to ensure incomes and food security and improve the health situation.

Thus, science, technology and innovation (STI) may play a crucial role in creating wealth and sustainable growth and is therefore a necessary prerequisite to reduce the vulnerability of developing countries to changing conditions due to its positive effects on food supply, infrastructure, health and water resources.

### **There is a nexus between STI, culture, education and development**

The international community as such as well as Germany and Fraunhofer as Europe's largest application-oriented research organization have a collective responsibility to ensure the provision of appropriate technologies to promote sustainable development.

Thus, Fraunhofer is committed to make STI more participatory and inclusive. Collaborative ventures and alliances with partners in developing countries may contribute to the creation and dissemination of technologies in sectors of importance to solve crucial problems and challenges.

A successful cooperation for development starts with a unanimous notion of the most important and concrete challenges and problems that could be addressed in a technological manner. Pure and direct capacity building cannot be covered by this call. A key success factor for ensuring proper management of development projects and good quality of outputs and results is not only a joint interest in cooperation, but also the involvement of local know-how and manpower right from the beginning.

With this call, partners in developing and emerging countries are the initiators through the problem definition as well as the preparation of potential solutions proposed with consideration of your local know-how.

**You are the ones that know and can formulate as well as prioritize your own problems best.**

## II. CALL FOR CHALLENGES, PROBLEMS AND IDEAS

This broad and open call invites institutions and individuals in developing and emerging countries to sketch challenges, problems and first ideas, which a specific country or region is currently facing or might be in the near future. Applicants shall demonstrate them in their proposals.

Please use the following guideline to create and develop your description of the challenge, problem or idea:

- a) Present a brief overview of you or your institution. Don't forget to include your full name and your contact information.
- b) Give your challenge, problem or/and idea a specific title. In addition to the title, you may create a subtitle.
- c) Describe, in relative detail, the features of your challenge or problem. Explain what problems or challenges have to be solved, and why they are worth solving. Keep the following questions in mind:
  - What is the history of the challenge or problem?
  - Why is this challenge or problem important?
  - When and why does the challenge or problem occur?
  - Does this challenge or problem occur also elsewhere?
  - You may also include some illustrations, photos or visualizations.*This section should be no more than two pages.*
- d) Optional: In case you have an idea, how this problem you raised could be solved, please describe it by writing a few short paragraphs or bullet points on your overall approach to solve the problem. Are you using or extending current tools, approaches or projects tackling the challenge or problem? If so, reference and explain them very briefly.  
*This section should be no more than one page.*
- e) Describe potential obstacles of the implementation of a possible solution. What will be the most difficult issues and challenges within the implementation process?  
*This section should be no more than a half page.*
- f) Summarize the challenge or problem, your motivation, the proposed solution and possible local partner, in case there is one. If there are already any publications on this topic, please mention them.  
*This section should be no more than a half page.*

The recommended lengths of sections are given assuming a document length of 2 to 5 pages maximum. In case you need assistance to prepare your proposal, please send an e-mail to [info@waitro.sirim.my](mailto:info@waitro.sirim.my)

## III. SUBMISSION

The submission deadline is **11-March-2016 (12:00 CET)**.

Proposals should be submitted in PDF format and in English (only).

WAITRO and Fraunhofer will only accept completed proposals by email at [f4d@izb.fraunhofer.de](mailto:f4d@izb.fraunhofer.de)

Only in case you have no access to the internet, you can send your documents

- by fax to +49-2241-142288
- or in written form to  
Zentrale der Fraunhofer-Gesellschaft  
Schloss Birlinghoven  
P5 – International Business Development  
53754 Sankt Augustin  
Germany

Any document received after the deadline will not be accepted for this call. No modification to the application is allowed once the deadline for submission has elapsed. Please note that incomplete applications will not be considered.

The Applicant may not submit more than **one application** under this call for challenges, problems and ideas.

Please take note that Fraunhofer and WAITRO reserve the right to publish your summary for publication and dissemination purposes.

**We certainly appreciate your active participation in this  
call for challenges, problems and ideas  
and are looking forward to receiving your application!**

#### **IV. PROCEDURE AND EVALUATION**

After challenges, problems and ideas are identified, as a follow-up, there will be a matching with potential solutions and an assessment of already proposed solutions within the Fraunhofer-Gesellschaft (call for solutions and technologies). For that purpose, technologies and competencies in Fraunhofer institutes will be considered. In total, Fraunhofer has got a workforce of 24,000. Most of them are scientists and engineers.

For planning purposes, you should take into account that the evaluation and the selection of the proposals as well as the call for solution and technologies will take some time after the submission deadline. Successful proposals will be notified as soon as possible (see also timeline below).

Selected institutions and/or individuals will be asked to develop full proposals in the next stage together with matched Fraunhofer institutes. Information on the quality of the actions (objectives, relevance, expected results) as well as the quality of the project approach (development of a work plan) are among the decisive factors of full project proposals. Full project proposals are the basis for ensuring proper project management and good quality outputs and results and furthermore serve as a guideline for (future) project evaluation. A presentation of the project proposals will take place at a special event (25<sup>th</sup> of October, 2016) organized by Fraunhofer, where potential sponsors will be invited to.

Please note that full or partial cost coverage to realize chosen projects cannot be guaranteed by Fraunhofer.

#### **TIMELINE**

<b>Date and time / indicative period</b>	<b>Stages</b>	<b>Description</b>
Jan-15-2016 - Mar-11-2016	Call for challenges, problems and ideas	Identification of problems, challenges and ideas in developing and emerging countries
Mar-2016	Selection of proposals	Proposals will be evaluated by an evaluation committee of WAITRO and Fraunhofer.
Apr-2016	Call for solution and technologies	Identify existing technologies most suitable for addressing relevant problems/ideas
May-2016 - Aug-2016	Matchmaking and Proposal building	Projects with the highest likeliness to maximize knowledge transfer are identified

Aug-31-2016	Deadline for project outline	The deadline for handing in project outlines is August, 31 <sup>st</sup> , 2016
Sep-28-30-2016	Presentation of project outlines	Compiled project outlines are presented at WAITRO Congress
Oct-25-2016	Presentation to sponsors	Proposals are presented to potential donors/sponsors
Jan-2017	Start of projects	Projects selected by sponsors start

## V. ABOUT FRAUNHOFER AND WAITRO

**Fraunhofer** is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people's needs: health, security, communication, energy and the environment. As a result, the work undertaken by our researchers and developers has a significant impact on people's lives. We are creative. We shape technology. We design products. We improve methods and techniques. We open up new vistas. In short, we forge the future.

As one of the world's largest organizations for application-oriented research, the Fraunhofer-Gesellschaft contributes sustainable solutions for maintaining the Gesellschaft's future competitiveness. This doesn't just mean technological innovations, because the established concepts of sustainability demand that environmental, economic and social aspects should be considered equally and in relation to each other. This manner of thinking is reflected in our system approaches. We develop solutions that go beyond the requirements of the present and enrich the lives of future generations.

The **World Association of Industrial and Technological Research Organizations (WAITRO)** is an independent, non-governmental and not-for-profit association established in 1970 to promote and encourage co-operation among industrial and technological research and development organizations (RTOs). It was founded under the auspices of the United Nations system and has consultative status with many of its specialized agencies. The Association currently has 157 members in 74 countries and co-operates with over 500 other institutes and international agencies worldwide.

WAITRO aims to be an enabler for developing action oriented partnerships among member organizations for sustainable development. WAITRO fosters links between member organizations through the following objectives:

- To encourage and facilitate transfer of research results and technical know-how
- To promote exchange of experience in research and technology management
- To enhance capabilities in management of research and technological organizations
- To identify and promote fields of research suitable for international collaboration, new opportunities and markets
- To promote technological research and capability building in the developing countries