**BRICS WORKING GROUP ON RESEARCH INFRASTRUCTURE AND MEGA-SCIENCE PROJECTS**

**2nd Meeting: CAMPINAS-BRAZIL, March 01-02, 2018**

**CONCEPT NOTE**

**1. Background Information:**

BRICS nations, in spite of their different developmental pathways, face common concerns like improved quality of life, inclusive economic growth, employment and a sustainable development pathway. Science, Technology and innovation (STI) has emerged as a primary mechanism for addressing these concerns. A collaborative BRICS effort utilizing its combined strength in STI can provide a platform for sustained growth for BRICS and a model for the world; an effective BRICS synergy can deliver what a single nation may find difficult, or long time, to achieve. Past performance shows that BRICS has this potential.

Since its inception BRICS has been quite successful in scientific collaborations among the member nations, as evidenced by scientometric analyses. Recent efforts have generated high-quality research collaborative proposals among BRICS countries in challenging and priority areas. Similarly, the BRICS Young Scientists’ Forum organized at Hangzhou, China in 2017 saw active and enthusiastic participation of many bright young scientists, indicating feasibility for sustained efforts in cutting-edge Science and Technology. There is therefore potential and readiness in BRICS to generate transformative S&T solutions for rapid economic and social developments with global impact.

To be effective, the S&T driven Innovations need a very strong research infrastructure and support mega science projects. In this sense, it is important and strategic to find paths to: (i) promote cooperation within large-scale research infrastructure; (ii) establish research mobility instruments to allow quick and easy access to research infrastructures within BRICS; (iii) develop of a framework on intellectual property rights for joint R&D within BRICS GRAIN; (iv) identify research infrastructure projects that may be submitted to the New BRICS Development Bank; (v) support entrepreneurship and innovation from the mega science projects; (vi) stablish a common and efficient platform to facilitate the communication and interaction between partners; (vii) stimulate international cooperation among BRICS countries through sharing of research infrastructure; and others.

**2. 1st Meeting of BRICS WG:**

The 1st Meeting of the BRICS Working Group on Research Infrastructure and Mega-Science Projects was kindly held in Joint Institute for Nuclear Research (JINR), Dubna (Moscow Region), on 15-16 May 2017. Representatives of the five member countries (Brazil, Russia, India, China, South Africa) were present. The Meeting was hosted by Russia and co-chaired by China. Several issues were discussed, for example: (i) BRICS national policies on global research infrastructure; (ii) Terms of Reference with defined background, goals and tasks, function, memberships, mode of operation and reporting mechanism for the WG; (iii) Country presentations on national infrastructures; (iv) issue of accessibility of BRICS global research infrastructures; and (v) Date and venue of the 2nd WG Meeting.

**3. Sirius Project – The** **Most Complex Brazilian Scientific Infrastructure:**

2018 will be a very important year to the Brazilian System of Science, Technology and Innovation due to the launch of the new Brazilian Synchrotron Light Source (Sirius). Sirius will be the largest and most complex scientific infrastructure ever built in the country and one of the first 4th-generation Synchrotron Light Sources in the World. It is planned to put Brazil in a leading position in the production of Synchrotron Light and is designed to be the brightest of all the equipment in its energy class. Synchrotron Light Sources are the most sophisticated example of an open and multidisciplinary research infrastructure and is a key tool for the resolution of issues important to the Brazilian academic and industrial communities. The versatility of a Synchrotron Light Source enables the development of research in strategic areas such as energy, food, environment, health, defense and many others.

**4. Program for the 2nd Meeting of BRICS WG:**

The Program will consist of four technical sessions in which participants will exchange experiences of the five countries concerning their Research Infrastructure and Mega-Science Projects, as shown below:

**Session I:** Presentation of Brazilian facilities with potential to compose the BRICS Platform of Sharing Infrastructures.

**Session II:** Presentation of BRICS facilities selected or with potential to compose the BRICS Platform of Sharing Infrastructures.

**Session III:** Technical Visit to the CNPEM facilities.

**Session IV:** Definition of the Operating Model of the Platform and its characteristics.

**Session V:** (i) Presentation of the 05 facilities available to compose the BRICS Platform of Sharing Infrastructures; (ii) Coordination of these facilities; and (iii) How to articulate the BRICS Mega-Science Projects.

**Session VI:** Strategies to articulate the Working Group with other areas of BRICS.

**Session VII:** Elaboration and Approval of the WG Statement (Conclusions) and Indications to the next meeting.

**5. Attendance:**

Representatives, experts and government officials, from each of the BRICS countries working on Research Infrastructure and Mega-Science Projects are welcome to join this discussion. In order to stimulate a very productive discussion, it is expected delegations with, at least, three experts from each country. Travel and accommodation expenditures to be defrayed by participating country and additional practical information will be provided soon.

**6. Date and Venue of the 2nd Meeting of the WG:**

**Date:** March, 01-02, 2018

**Venue:** Brazilian Center for Research in Energy and Materials (CNPEM), an institute of Brazilian Ministry of Science, Technology, Innovation and Communication (MCTIC).

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