

**MEMORANDUM OF UNDERSTANDING
ON
COOPERATION IN
SCIENCE, TECHNOLOGY AND INNOVATION
BETWEEN
THE GOVERNMENTS OF
THE FEDERATIVE REPUBLIC OF BRAZIL,
THE RUSSIAN FEDERATION,
THE REPUBLIC OF INDIA,
THE PEOPLE’S REPUBLIC OF CHINA
AND
THE REPUBLIC OF SOUTH AFRICA**

PREAMBLE

The Government of the Federative Republic of Brazil, The Government of the Russian Federation, The Government of the Republic of India, The Government of the People’s Republic of China, and The Government of the Republic of South Africa (hereinafter referred to as the "Parties");

REAFFIRMING the overarching vision embodied in the BRICS Summit Declarations, including the 2011 BRICS Sanya Declaration which identified the need “to explore cooperation in the sphere of science, technology and innovation, including the peaceful use of space”;

NOTING the recommendations of the First, Second and Third BRICS Science, Technology and Innovation Senior Officials Meetings, held respectively in Dalian, China, in September 2011 Pretoria, South Africa, in November 2012, and New Delhi, India in December 2013;

HARNESSING potential bilateral synergies and other forms of multi-country frameworks of cooperation amongst Brazil, Russia, India, China and South Africa in science, technology and innovation;

DESIROUS to further strengthen cooperation in the fields of science, technology and innovation for accelerated and sustainable socio-economic development amongst the five countries;

RECOGNIZING the importance of cooperation based on the principles of voluntary participation, equality, mutual benefit, reciprocity and subject to the availability of earmarked resources for collaboration by each country;

RECOGNIZING the variable geometry of the research and development systems of the BRICS member countries;

HEREBY AGREE as follows:

ARTICLE 1 Competent Authorities

The competent authorities responsible for the implementation of this Memorandum of Understanding will be the following designated organisations:

- (a) For the Federative Republic of Brazil, the Ministry of Science, Technology and Innovation (MCTI);
- (b) For the Russian Federation, the Ministry of Education and Science (MES);
- (c) For the Republic of India, the Department of Science and Technology (DST, India);
- (d) For the People's Republic of China, the Ministry of Science and Technology (MOST);
- (e) For the Republic of South Africa, the Department of Science and Technology (DST, South Africa).

ARTICLE 2 Objectives

The main objectives of this Memorandum of Understanding are:

- (a) To establish a strategic framework for cooperation in science, technology and innovation amongst the BRICS member countries;
- (b) To address common global and regional socio-economic challenges in the BRICS member countries utilising shared experiences and complementarities in science, technology and innovation;
- (c) To co-generate new knowledge and innovative products, services and processes in the BRICS member countries utilising appropriate funding and investment instruments;
- (d) To promote, where appropriate, joint BRICS science, technology and innovation partnerships with other strategic actors in the developing world.

ARTICLE 3 Areas of Cooperation

The main areas of cooperation under this Memorandum of Understanding shall include but not be confined to:

- (a) Exchange of information on policies and programmes and promotion of innovation and technology transfer;
- (b) Food security and sustainable agriculture;
- (c) Natural disasters;
- (d) New and renewable energy, energy efficiency;
- (e) Nanotechnology;
- (f) High performance computing;
- (g) Basic research;
- (h) Space research and exploration, aeronautics, astronomy and earth observation;
- (i) Medicine and biotechnology;
- (j) Biomedicine and life sciences (biomedical engineering, bioinformatics, biomaterials);
- (k) Water resources and pollution treatment;
- (l) High tech zones/science parks and incubators;
- (m) Technology transfer;
- (n) Science popularization;
- (o) Information and communication technology;
- (p) Clean coal technologies;
- (q) Natural gas and non-conventional gases;
- (r) Ocean and polar sciences;
- (s) Geospatial technologies and its applications.

ARTICLE 4

Mechanisms and Modalities of Cooperation

The principal mechanism for cooperation shall be this Memorandum of Understanding. The Parties or their designated institutions may enter into sub-agreements which shall be governed by the terms of this Memorandum of Understanding.

The modalities of cooperation under this Memorandum of Understanding and sub-agreements arising there-from between the Parties in the fields of science, technology and innovation shall take the following forms:

- (a) Short-term exchange of scientists, researchers, technical experts and scholars;
- (b) Dedicated training programmes to support human capital development in science, technology and innovation;
- (c) Organization of science, technology and innovation workshops, seminars and conferences in areas of mutual interest;
- (d) Exchange of science, technology and innovation information;
- (e) Formulation and implementation of collaborative research and development programmes and projects;

- (f) Establishment of joint funding mechanisms to support BRICS research programmes and large-scale research infrastructure projects;
- (g) Facilitated access to science and technology infrastructure among BRICS member countries;
- (h) Announcement of simultaneous calls for proposals in BRICS member countries;
- (i) Cooperation of national science and engineering academies and research agencies.

ARTICLE 5

Governing Structures

The main structures governing cooperation under this Memorandum of Understanding shall include:

- 1. BRICS Science, Technology and Innovation Ministerial Meeting**
 - 2. BRICS Science, Technology and Innovation Senior Officials Meeting**
 - 3. BRICS Science, Technology and Innovation Working Group**
1. The BRICS Science, Technology and Innovation Ministerial Meeting (comprising Ministers responsible for science, technology and innovation in Brazil, Russia, India, China and South Africa) shall convene at least once every year during the presidency of a member country. The main responsibilities of the BRICS Science, Technology and Innovation Ministerial Meeting will include:
 - (a) Providing an overarching vision and advice on institutional and financial frameworks for major BRICS science, technology and innovation programmes and initiatives;
 - (b) Facilitating linkages between the BRICS science, technology and innovation working group and other BRICS sectoral working groups or BRICS expert groups to ensure the effective implementation and realisation of the objectives of this Memorandum of Understanding;
 - (c) Setting priorities for cooperation and joint action in science, technology and innovation amongst BRICS member countries for a given period of time, taking into account the priority areas indicated in Article (3) above.
 2. The BRICS Science, Technology and Innovation Senior Officials' Meeting will constitute Directors-General (or equivalent) of BRICS member countries as the leaders of delegation, BRICS science, technology and innovation country coordinators, focal points, scientists, experts and other relevant officials.

The BRICS Science, Technology and Innovation Senior Officials' Meeting will meet annually in the country where the BRICS Summit is hosted.

Responsibilities of the BRICS Science, Technology and Innovation Senior Officials' Meeting will include:

- (a) Exchanging information on recent science, technology and innovation developments as well as identifying common policy challenges in BRICS member countries;
 - (b) Supporting the implementation of strategic decisions related to science, technology and innovation taken by the BRICS Summits, as well the high-level decisions emanating from BRICS Science, Technology and Innovation Ministerial Meetings;
 - (c) Facilitating BRICS science, technology and innovation cooperation mainly through the prioritisation of the thematic areas identified in Article (3) of this Memorandum of Understanding;
 - (d) Configuring appropriate funding mechanisms and instruments to support BRICS science, technology and innovation cooperation;
 - (e) Harnessing synergies in respect of science, technology and innovation priority directions at bilateral, multilateral and poly-lateral levels within BRICS;
 - (f) Approving 3-5 year cycles for BRICS science, technology and innovation initiatives and programmes;
 - (g) Reviewing periodically progress in terms of implementation with respect to science, technology and innovation cooperation under this Memorandum of Understanding, as well as identifying new areas, activities and cooperation modalities of mutual interest;
 - (h) Providing recommendations for consideration by the BRICS Science, Technology and Innovation Ministerial Meeting to enhance effective implementation of this Memorandum of Understanding;
 - (i) Considering other agenda matters deemed appropriate by the BRICS member countries.
3. The BRICS Science, Technology and Innovation Working Group will constitute the five BRICS science, technology and innovation country coordinators whose responsibilities will include:
- (a) Fulfilling the function of Secretariat for the BRICS Science, Technology and Innovation SOM (developing the agenda and annotations for the BRICS science, technology and innovation SOM; recording proceedings of the SOM etc.);
 - (b) Convening Science, Technology and Innovation Working Group meetings between sessions of the Science, Technology and Innovation SOM.

ARTICLE 6

Funding Mechanisms and Instruments

Science, technology and innovation cooperation under this Memorandum of Understanding will be supported by appropriate BRICS country funding mechanisms, instruments and national rules.

The key objectives of the BRICS science, technology and innovation funding mechanisms and instruments shall be:

- (a) To establish R&D programmes in frontier and priority research areas in support of sustainable development in BRICS member countries;
- (b) To promote the co-generation of new knowledge and innovative products, services and processes;
- (c) To co-invest in large scale research infrastructure projects;
- (d) To facilitate technology and knowledge transfer and implementation;
- (e) To facilitate policy development in science, technology and innovation;
- (f) To facilitate linkages with various forums dealing with business, academia, research and development centres, government agencies and institutions.

ARTICLE 7

Management of Intellectual Property Rights

1. The parties will ensure adequate and effective protection and fair allocation of intellectual property rights of a proprietary nature that may result from the cooperative activities under this Memorandum of Understanding, according to their respective national laws and regulations and their international obligations.
2. The condition for the acquisition, maintenance and commercial exploitation of intellectual property rights over possible products and/or processes that might be obtained under this Memorandum of Understanding will be defined in the specific programmes, contracts or working plans of the activities of cooperation.
3. The specific programmes, contracts or working plans relating to the activities of cooperation mentioned in Paragraph 2 of this Article will set out the conditions regarding the confidentiality of information whose publication and/or disclosure might jeopardize the acquisition, maintenance and commercial exploitation of intellectual property rights obtained under this Memorandum of Understanding. Such specific programmes, contracts or working plans related to the activities of cooperation will establish, where applicable, the rule and procedures concerning the settlement of disputes on intellectual property matters under this Memorandum of Understanding.

ARTICLE 8

Final Dispositions

1. This Memorandum of Understanding will come into force on the date of signature and will remain valid for five (5) years. Thereafter, this Memorandum of Understanding shall be renewed automatically for successive equal periods, unless one of the Parties notifies the others in writing its intention to terminate this Memorandum of Understanding.

2. The present Memorandum of Understanding may be amended at any time, by mutual consent of the Parties, through diplomatic channels.
3. Any Party may, at any time, notify the others of its intention to terminate the present Memorandum of Understanding. Termination will be effective six (6) months after the date of the notification and will not affect the ongoing activities of cooperation, unless otherwise agreed by the Parties.
4. Any dispute related to the interpretation or implementation of the present Memorandum of Understanding will be settled by direct negotiations between the Parties, through diplomatic channels.

IN WITNESS WHEREOF the undersigned, being duly authorized thereto by their respective Governments, have signed this Memorandum of Understanding in five originals, in Portuguese, Russian, Hindi, Chinese and English languages, all texts being equally authentic. In case of any divergence of interpretation, the English text will prevail.

DONE at.....on this.....day of.....2015

FOR THE GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL

FOR THE GOVERNMENT OF THE RUSSIAN FEDERATION

FOR THE GOVERNMENT OF THE REPUBLIC OF INDIA

FOR THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA

FOR THE GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA