The International Training workshop on Big Data for Science and Sustainability in Developing Countries (Data\_SSDC)

**March 17-19, 2016**

**Hyderabad, India**

Workshop Guide

Organizer:

Committee on Data for Science and Technology (CODATA) Task Group on Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD)

Osmania University, Hyderabad, India

**Workshop Guide**

The Task Group on Preservation of and Access to Scientific and Technical Data in Developing Countries (PASTD) was approved by the Committee on Data for Science and Technology (CODATA) to be established in 2002, it has provided a much-needed focus on the data preservation and archiving practices of developing countries. The objectives of Task group are: (1) Promote a deeper understanding of the needs of developing countries with regard to long-term preservation, archiving, and permanent access to scientific and technical (S&T) data. (2) Advance the development and adoption of improved S&T data archiving procedures, technologies, standards, and policies, with special attention to these efforts in developing countries. (3) Provide an interdisciplinary forum and mechanisms for exchanging information about S&T data archiving requirements and activities, with particular focus on the concerns and needs of developing countries. Publish and disseminate broadly the results of these efforts; The Task Group, through its sub-groups, including Show Cases and Best Practices System Sub-group (SCBS),Policy and Capacity Building Sub-group (PCBS) and members, will continue to work on crucial issues of archiving and preservation of digital resources.

Over the past decade, the PASTD has focused on promoting and enhancing the worldwide cooperation in ICTs and research data and in developing open knowledge environments for international science and sustainability in developing countries. Several international workshops and training sessions toward these goals in many areas of the developing world had been held, including in Brazil, South Africa, China, Mongolia, Cuba and Kenya, including many regional country participants. PASTD is organized under the Committee on Data for Science and Technology (CODATA) and the International Council for Science (ICSU), both located in Paris, France.

In order to promote capacity building for preservation of and open access to research data in developing countries, a training session of the International Workshop on Big Data for Science and Sustainability in Developing Countries will be held along with other programmers of IGU conference from 17-19 March 2017 in Hyderabad, India.

The training course aims to cultivate big open data publication and sharing idea and policy, and analysis and application abilities of young data scientist. The objective of training course is to introduce the idea, policy and specification of open data publication, and to develop data management, sharing and interoperability, as well as data reuse and analysis capabilities of trainees with support of shared data and information, cases knowledge and practical operation.

1. Workshop information
* Date: 17th-19th March 2017
* Venue: Dr. Marri Channa Reddy –HRD Institute, Jubilee Hills, Hyderabad
* Workshop location: ICT Lab
1. Workshop co-chairs and trainers

**Co-chairs:**

**Professor Yunqiang ZHU**

Director of Department of Geo-data Science and Sharing, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

Co-chair of Capacity Building Sub-Group of CODATA PASTD

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Dr. B. Srinagesh

Associate Professor & Convener

Department of Geography

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Trainers:

**Professor Xiang ZHOU**

Director of Major Special Project Office Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

Co-chair of CODATA Task Group on Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (CODATA PASTD)

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**Professor R.B. Singh**

Vice President: International Geographical Union (IGU)

Springer Series Editor: Advances in Geographical and Environmental Sciences

Coordinator-UGC SAP DRS III: Department of Geography, Delhi School of Economics,

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**Professor Chuang Liu**

Editor-in-Chief, Global Change Data Publishing and Repository

Chair of Data Publishing sub-group, CODATA-PASTD

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

**Dr. B. Srinagesh**

Associate Professor, Department of Geography, Osmania University, Hyderabad

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**Dr. Jia Song**

Assistant professor, Department of Geo-data Science and Sharing, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

1. Academic information
2. Training description

The training workshop will focus on knowledge spread and experience exchanging on three certain domains in 2-day courses. Training course mainly consists of a series of lectures and practical exercises cover following themes:

* Open Big Data Discovery
* Data Publication & Sharing
* Data Reuse and Analysis

The Training courses will not only introduce how to discover the open big data around the world, the key points involved in the idea, policy and specification of data publication and sharing; also include introduction of the methodology of data interoperability, reuse and analysis, show cases of data discovery and publication, discussion and practical exercises on data applications.

1. Trainee Recruitment

Training courses will recruit 30 trainees, 10 of them are selected from workshop participants; the other 20 trainees will be students from Osmania University.

1. Program

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| **Friday, 17 March 2017** |
| **Registration** | 9:30-12:00 | Trainee On-site Registration  | **Ms. Xiaoxuan Wang** |
| **Opening Ceremony** | 14:00-14:20 | Opening Remarks | **Prof. Xiang Zhou**,Co-Chair of CODATA-PASTDDST Official Representative**Professor R.B. Singh,**Vice President of International Geographical Union (IGU) |
| 14:20-14:45 | Training WorkshopIntroduction | **Prof. Yunqiang Zhu** |
| 14:45-15:00 |  **Group Photo** |
| **Open Big Data Discovery** | 15:00-16:20 | Application of earth observation data from open source  | **Prof. Xiang Zhou** |
| 16:20-16:40 | **Tea break** |
| 16:40-18:00 | **Hands-on Training1-** Cases of application of earth observation data from open source | **Prof. Xiang Zhou** |
| **Saturday, 18 March 2017** |
| **Data Publication & Sharing**  | 9:00-10:00 | Global change research data publication-idea, policy and methodology  | **Prof. Chuang Liu** |
| 10:00-11:00 | Global change research data publication-specification and software system | **Prof. Yunqiang Zhu** |
| 11:00-11:20 | **Tea Break** |
| 11:20-13:00 | **Hands-on Training 2-** Cases of global change research data publication | **Prof. Yunqiang Zhu** |
| **13:00-14:00** | **lunch** |
| **Data Publication & Sharing** | 14:00-15:20 | Research data interoperability and sharing | **Dr. Jia Song** |
| 15:20-15:40 | **Tea Break** |
| 15:40-18:00 | **Hands-on Training 3-** Cases of data interoperability and sharing | **Dr. Jia Song** |
| **Sunday, 19 March 2017** |
| **Data Reuse & Analysis**  | 9:00-10:00 | Geospatial data infrastructure in India | Prof. R.B. Singh |
| 10:00-11:00 | **Hands-on Training** | Dr. B. Srinagesh / Prof Kalpana Markandey |
| 11:00-11:20 | **Tea Break** |
| 11:20-12:30 | Discussion | **Dr. B. Srinagesh** |
| 12:30-13:00 | Certification and Closing Remarks | **Prof. Xiang Zhou** |

**Annex**

**Workshop participants:**A total of 40 participants will be selected from all over India, few including foreign participants. 10 participants will be from the host University. The rest 30 from other places.

**Workshop lecturers:** Experienced staff from India and foreign experts will be engaged for the course.

**Contact Information:** Dr. B. Srinagesh, geosri74@gmail.com

Prof. Yunqiang Zhu, zhuyq@igsnrr.ac.cn

Budget:

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| --- | --- | --- | --- |
| Travel for out station participants | 20 | 2500 | 50000=00 |
| Registration & Local Hospitality | 40 | 2500 | 100000=00 |
| Resource persons | 10 | 5000 | 50000=00 |
| Total |  |  | 200,000=00 |

 Dr. B. Srinagesh

Convener