

## Press Release:

# International Workshop on Open Data for Science and Sustainability in Developing Countries

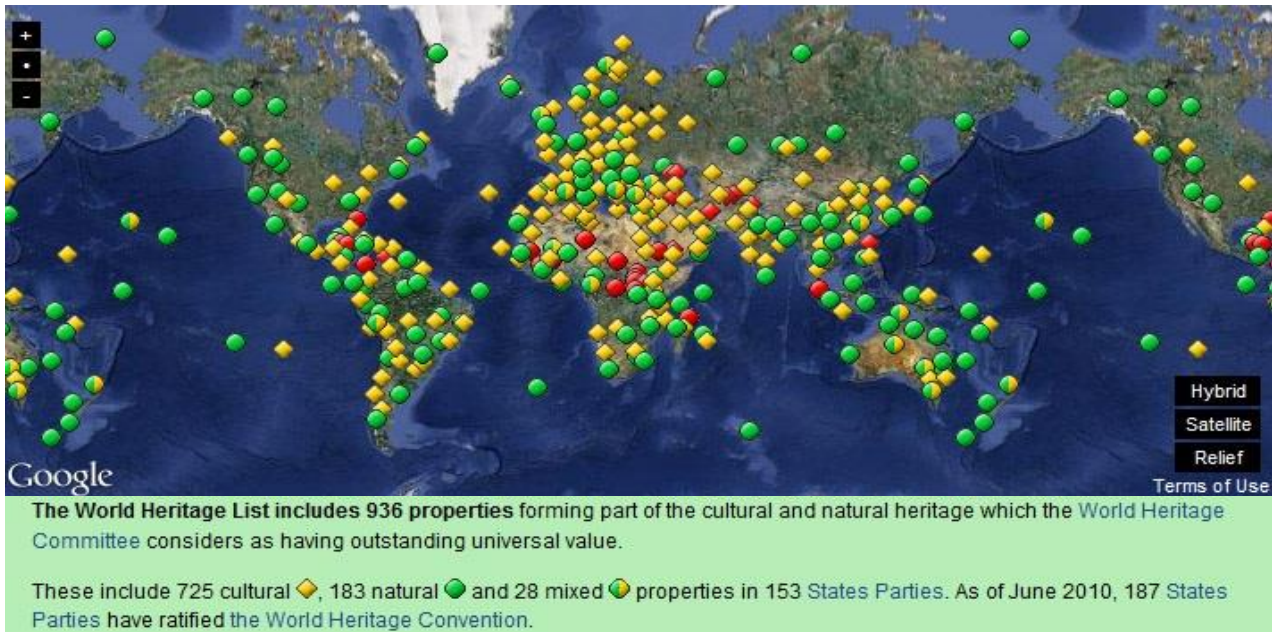


Image source: UNESCO World Heritage Center Interactive Map (<http://whc.unesco.org/en/254/>)

## The United Nations Educational, Scientific and Cultural Organization (UNESCO) will be hosting an International Workshop on Open Data for Science and Sustainability in Developing Countries

**Location:** Conference Room No 3, United Nations Offices at Nairobi, Kenya

**Date:** 6-8 August, 2014

The workshop is organized in collaboration with the Jomo Kenyatta University of Agriculture and Technology (JKUAT) and Task Group on Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD), established by the Committee on Data for Science and Technology (CODATA). Workshop will offer a notable opportunity to present the accomplishments in improving access to and use of research data and in reducing the digital divide since the *World Summit on Information Society (WSIS)*, held in Geneva 2003 and Tunis 2005, as well as the programs of each of the partners.

In line with UNESCO's mandate, the objectives of the workshop will be to:

- 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;
- 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;
- 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; and
- Publish and disseminate broadly the results of these efforts.

Furthermore, *Guidelines of Implementation of Data Sharing Principles for Sciences and Sustainability in Developing Countries* ("Nairobi Data Guidelines") will be discussed during the workshop. The workshop was preceded by a 2-day technical training session (4-5 August 2014) for young scientists in good data management practices, in order to promote capacity building for preservation of and open access to research data in developing countries. The training session focused on the policies and practice of Open Data; data centre and network management; methodologies relating to particular case studies and best practices for data applications; and the skills necessary for data scientists was held at Jomo Kenyatta University Juja campus in Nairobi, Kenya.

### Background

Over the past decade, the CODATA PASTD Task Group 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 have been held in many areas of the



developing world, including in Brazil, South Africa, China, Mongolia and Cuba, and included many participants from these countries. The Task Group has provided a much-needed focus on the data preservation and archiving practices of developing countries.

#### **About UNESCO and World Summit on Information Society (WSIS)**

WSIS is an UN summit held in 2003 and 2005. The Summit provided a forum in which multiple stakeholders including international organizations, governments, the private sector and civil society could discuss the opportunities of the new information and communication environment, and also address challenges such as the inequality in access to information and communication that is called the 'digital divide'. The World Summit was an important stage in international action to promote and take advantage of ICTs for advancing the global development agenda, and in UNESCO's work **to build Knowledge Societies**. For more information: <http://www.unesco.org/new/en/communication-and-information/flagship-project-activities/unesco-and-wsis/about/>

#### **About UNESCO and Open Solutions**

UNESCO believes that universal access to information and knowledge is key to the building of peace, sustainable social and economic development, and intercultural dialogue. Through the technical possibilities made available by the increased sophistication of ICTs and user oriented social media, the traditional Free and Open Source software (FOSS) models of effective collaboration and innovative sustainability have now expanded and include highly diverse realms of public domain activity. Open Access (OA), Open Data and crowdsourcing platforms, Open Educational Resources (OER) enable information to be freely and legally shared, providing strategic cross-cutting opportunities to improve the quality of decision-making as well as facilitate policy dialogue, knowledge sharing and capacity building, including for persons with disabilities. For more information: <http://en.unesco.org/themes/open-solutions#sthash.FdGbUJt.dpuf>

#### **About Committee on Data for Science and Technology (CODATA)**

CODATA is an interdisciplinary Scientific Committee of the International Council for Science (ICSU), working to improve the quality, reliability, management and accessibility of data of importance to all fields of science and technology. CODATA is a resource that provides scientists and engineers with access to international data activities for increased awareness, direct cooperation and new knowledge. CODATA was established in 1966 by ICSU to promote and encourage, on a world-wide basis, the compilation, evaluation and dissemination of reliable numerical data of importance to science and technology. For more information: <http://www.codata.org/>

#### **Organizers**

- CODATA Task Group on Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (CODATA PASTD)
- Communication and Information Committee, World Federation of Engineering Organization (WFEO-CIC)
- Ministry of Communication and Information of Kenya(MCIK)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)

#### **Partners**

- Jomo Kenyatta University of Agriculture and Technology, Kenya (JKUAT)
- International Council for Sciences Regional Office for Africa (ICSU)
- World Data System of the International Council for Sciences (ICSU-WDS)
- The Group on Earth Observations (GEO)
- International Cartographic Association (ICA) Commission on Geoinformation (GI) for Sustainability
- International Society for Photogrammetry and Remote Sensing (ISPRS)
- International Society of Digital Earth (ISDE)
- Research Data Alliance (RDA)
- CODATA – China (Chinese Academy of Sciences, Beijing)
- USA National Committee for CODATA

#### **For more information on UNESCO activities related to open data, please contact:**

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# Event Programmes

## International Workshop on Open Data for Science and Sustainability in Developing Countries

Location: **Conference Room No 3, United Nations Offices at Nairobi, Kenya**

Dates: **6-8 August 2014**

The United Nations Educational, Scientific and Cultural Organization (UNESCO) will be hosting an International Workshop on Open Data for Science and Sustainability in Developing Countries in collaboration with the Jomo Kenyatta University of Agriculture and Technology (JKUAT) and Task Group on Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD), established by the Committee on Data for Science and Technology (CODATA).

**Location:** United Nations Offices at Nairobi, Kenya

**Date:** 6-8 August, 2014

<b>Wednesday, 6 August 2014</b>	
<b>Conference Room No 3, United Nations Offices at Nairobi, Kenya</b>	
8:00-9:00	<p><u>Registration</u></p> <p>Mr. David Kirenga (UNESCO) Ms. Jane Mbijiwe (JKUAT, Kenya) Ms. Qihua Qi (PKU, China)</p>
9:00 - 10:30	<b>Session 1: Opening</b>
	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Ke Gong</b>, Scientific Advisory Board of the UN Secretary-General, Vice President of World Federation of Engineer Organization (WFEO), President of Nankai University, China</li> <li>• <b>Mabel Imbuga</b>, Co-Chair of CODATA-PASTD, Vice Chancellor of JKUAT, Kenya</li> </ul>
	<p><u>Welcome from Organizers</u></p> <ul style="list-style-type: none"> <li>• <b>Mohamed Djelid</b>, On Behalf of UNESCO (Director of the UNESCO Regional Office for Eastern Africa)</li> <li>• <b>Xingfa Gu</b>, On Behalf of CODATA-PASTD (Co-Chair of CODATA – PASTD)</li> <li>• <b>Ke Gong</b>, On Behalf of WFEO (Vice President of World Federation of Engineer Organization)</li> <li>• <b>Dr Dr George A. Ombakho</b>, Director of Research Management and Development, Ministry of Education Science and Technology, Kenya</li> <li>• <b>Prof Mabel Imbuga</b>, On behalf of the Local Organizers, Co-Chair of CODATA-PASTD, Vice Chancellor of Jomo Kenyatta University of Agriculture and Technology, Kenya</li> </ul> <p><u>Official Opening</u></p> <ul style="list-style-type: none"> <li>• <b>Fred Matiangi</b>, Cabinet Secretary for Information Communication and Technology, Kenya</li> </ul>
10:00 – 10:30	Group photo and Tea Break
10:30-11:30	<p><u>Keynote Speech</u></p> <ul style="list-style-type: none"> <li>• Jean-Bernard Minster, Chair of Scientific Committee of World Data System, International Council for Sciences (WDS/ICSU)</li> </ul>
11:30-12:30	<b>Session 2: Partners' summary of data policy and management activities in developing countries during the last ten years</b>
	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Xingfa Gu</b>, Co-Chair, CODATA-PASTD, Chinese Academy of Sciences</li> <li>• <b>Prof David Some</b>, Commission for University Education, Kenya</li> </ul>

	<p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Chuang Liu</b>, CODATA-PASTD, China <i>Topic: Summary of CODATA-PASTD Activities since WSIS (Geneva 2003, Tunis 2005)</i></li> <li>• <b>Jaco du Toit</b>, UNESCO <i>Topic: UNESCO Open Solutions for Knowledge Societies programme (open educational resources, free and open source software, open training platforms, open data and open cloud)</i></li> <li>• <b>Jean-Bernard Minster</b>, Chair of Scientific Committee of World Data System, International Council for Sciences (WDS/ICSU) <i>Topic: Summary of WDS Activities in Developing Countries since WSIS</i></li> <li>• <b>Vladimir Tikunov</b>, ICA, Russia <i>Topic: Summary of ICA Activities on Data in Developing Countries since WSIS (Geneva 2003, Tunis 2005)</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Summary of activities in developing countries during the last ten years by the partners</li> <li>• Relevance to the draft Guidelines for Implementation of Open Data Principles for Science and Sustainability in Developing Countries (“The Nairobi Data Guidelines”)</li> </ul>
12:30-13:30	Lunch
13:30-15:30	<p style="text-align: center;"><b>Session 3: Open Data for International Cooperation Programs</b></p> <p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Changlin Wang</b>, Executive Director of International Society of Digital Earth, China</li> <li>• <b>Tumusabyimana Veronique</b>, Vice Rector for Academics, Independent Institute of Lay Adventists of Kigali, Uganda</li> </ul> <p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Ke Gong</b>, Scientific Advisory Board of the UN Secretary-General, Vice Chair of World Federation of Engineer Organization (WFEO), President of Nankai University, China <i>Topic: Introduction to the UN Post-2015 SDGs</i></li> <li>• <b>Jaco du Toit</b>, UNESCO <i>Topic: Introduction to the UNESCO Memory of the World programme</i></li> <li>• <b>Dr Edith Madela-Mntla</b>, Director of ICSU Regional Office for Africa <i>Topic: Introduction to the Future Earth and African Actions</i></li> <li>• <b>Nordin Hasan</b>, Director of ICSU Regional Office for Asia and the Pacific, President of Research Council of Asia, Malaysia <i>Topic: Introduction to the IRDR Program and Asia-Pacific Actions</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Research Data Priorities for International Sustainability Programs in the Next Decade</li> <li>• Research Data Priorities for International Scientific Research Programs in the Next Decade</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>
15:30-15:50	Tea Break
15:50-18:00	<p style="text-align: center;"><b>Session 4: Principles of open data from international organizations</b></p> <p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Mika Odido</b>, Intergovernmental Oceanographic Commission of UNESCO</li> <li>• <b>Amani Uisso</b>, Research Officer of Tanzania Forestry Research Institute ,Tanzania</li> </ul>

	<p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Paul Uhler</b>, Director of CODATA-USA <i>Topic: Development of Open Data and Data Sharing Principles by International Scientific Communities</i></li> <li>• <b>Simon Hodson</b>, Executive Director of CODATA <i>Topic: Development of Open Data Policies and their Implementation by Governments, Research Funders and Intergovernmental Organisations</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Importance of Full and Open Data Principles for Sciences and Sustainability in Developing Countries and Relevance to Draft Nairobi Data Guidelines</li> <li>• Possibility and Critical Issues of Full and Open Data Principles in Developing Countries</li> </ul>
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18:30-20:00	Workshop Reception
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**Thursday, 7 August 2014**  
**Conference Room No 3, United Nations Offices at Nairobi, Kenya**

9:00 - 10:30	<b>Session 5: Guidelines for International Cooperation on Open Data in/for/with Developing Countries</b>
	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Johannes van der Kwast</b>, UNESCO-IHE Institute for Water Education, the Netherlands</li> <li>• <b>Aggrey Bernard Nyende</b>, Professor of JKUAT, Kenya</li> </ul>
	<p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Simon Hodson</b>, Executive Director of CODATA, France <i>Topic: Global Collaboration on Open Data and Data Science: an introduction to CODATA</i></li> <li>• <b>Jean-Bernard Minster</b>, Chair of Scientific Committee of World Data System, International Council for Sciences (WDS/ICSU), USA <i>Topic: How to Contribute to and Benefit from WDS/ICSU</i></li> <li>• <b>Peter Wittenburg</b>, Research Data Alliance, Germany <i>Topic: RDA – A New Data Community</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Guidance on national strategy to join the international data organizations and cooperation</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>

10:30-10:50	Tea Break
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10:50-12:30	<b>Session 6: Guidelines for Regional Networks and Cooperation</b>
	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Waweru Mwangi</b>, Professor of JKUAT, Kenya</li> <li>• <b>Xiang Zhou</b>, Deputy Director of Department of S&amp;T, Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China</li> </ul> <p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Peter Wittenberg</b>, RDA, Germany <i>Topic: EU Methodology for Enhancing Research Data Infrastructure Cooperation with Developing Countries</i></li> <li>• <b>Yunqiang Zhu</b>, Deputy Director of World Data Center on Renewable Resources and Environment, WDS, China <i>Topic: Methodology of World Data System Network in China as well as in the Developing Countries of</i></li> </ul>

	<p><i>Asia</i></p> <ul style="list-style-type: none"> <li>• <b>Noasilalao A. Lucie</b>, African-GEOSS, Madagascar <i>Topic: Mechanism and Progress of African GEOSS</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Key points in building open data regional network in developing countries</li> <li>• Guidelines for developing countries to be involved and to play an active role in a regional data network</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>
12:30-13:30	Lunch
13:30-15:30	<p style="text-align: center;"><b>Session 7: Guidelines for a National Research Data Strategy and Policies</b></p> <p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Paul Uhlir</b>, Director, US CODATA and the Board on Research Data and Information, USA</li> <li>• <b>Paul Laughton</b>, Senior Lecturer, Department of Information and Knowledge Management, University of Johannesburg, South Africa</li> </ul> <p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Dr. Francis Wangusi</b>, Director General, Communications Authority of Kenya <i>Topic: Kenya Data Management Strategy and Policy</i></li> <li>• <b>Josephat Okuku</b>, Kenya National Spatial Data Infrastructure (KNSDI) <i>Topic: Milestones and Journey Ahead, Kenya</i></li> <li>• <b>Dr. Paul Laughton</b>, Senior Lecturer, Department of Information and Knowledge Management, University of Johannesburg, South Africa <i>Topic: South Africa Data Management Strategy and Policy</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Government role in the implementation of open data principles, especially in building a national information infrastructure</li> <li>• Scientific community role in building a national information infrastructure</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>
15:30-15:50	Tea Break
15:50-17:30	<p style="text-align: center;"><b>Session 8: Guidelines for the Re-use of Global Data Resources</b></p> <p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Tomoko Doko</b>, CODATA-PASTD, Japan</li> <li>• <b>Edith Madela-Mntla</b>, Director of ICSU Regional Office for Africa</li> </ul> <p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Harrison Ong'anda</b>, Research Officer, Kenya Marine and Fisheries Research Institute (KMFRI), Kenya <i>Topic: Methodology of integrating world data resources and Local knowledge for scientific discoveries – The African Marine Data Portal example</i></li> <li>• <b>Xuehong Chen</b>, International Society of Photogrammetry and Remote Sensing (ISPRS), China <i>Topic: Methodology of Data Re-Use and Data Quality Control</i></li> <li>• <b>Wenbo Chen</b>, Keio University, Japan <i>Topic: Procedure of re-use of the world's data resources</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Key points of re-using world data resources</li> <li>• Critical issues of data quality control in data re-using</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>

18:30	Workshop Dinner
<b>Friday, 8 August 2014</b>	
<b>Conference Room No 3, United Nations Offices at Nairobi, Kenya</b>	
	<b>Session 9: Guidelines for Research Data Publishing</b>
	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Jean-Bernard Minster</b>, Chair of Scientific Committee of World Data System (WDS), USA</li> <li>• <b>Jeremiah Ombane</b>, Data Officer of International Centre for Environmental, Social and Policy Studies, Kenya</li> </ul>
	<p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Johannes van der Kwast</b>, UNESCO-IHE Institute for Water Education, the Netherlands Topic: Challenges of Data Publishing in Developing Countries</li> <li>• <b>Paul Uhlir</b> (CODATA-USA) Topic: Intellectual Property Rights in the Publishing of Research Data</li> <li>• <b>Chuang Liu</b> (CODATA-PASTD) Topic: Procedures of Research Data Publishing</li> </ul>
	<p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Guidance for Data Publishing and Citation</li> <li>• Key Points for Data Contribution to be Recognized and Rewarded</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>
<b>10:30-10:50</b>	Tea Break
<b>10:50-12:30</b>	<b>Session 10: Guidelines for the Preservation of and Open Access to Research Data in the Age of Big Data</b>
	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Vladimir Tikunov</b>, Professor of M.V. Lomonosov Moscow State University, Russia</li> <li>• <b>Simon Hodson</b>, Executive Director of CODATA, France</li> </ul>
	<p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Xingfa Gu</b>, Co-Chair of CODATA-PASTD, Member of Implementation Plan Working Group of GEO, Deputy Director of Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, China <i>Topic: Methodology and Implementation of GEO Data-CORE (Data Collection of Open Resources for Everyone) and GEO 2025</i></li> <li>• <b>Changlin Wang</b>, Executive Director of ISDE, China <i>Topic: Digital Earth Solution for Supporting Online Data Preservation and Services</i></li> <li>• Corresponding presentation from John Faundeen, U.S. Geological Survey, USA <i>Topic: EROS Data Center/USGS Methodology of Preservation of and Open Access to Landsat Data during the Last 40 Years</i></li> </ul>
	<p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Challenges and Solutions of Long-term Preservation of Data in Developing Countries</li> <li>• Data Center and Cloud Technology Applications of Preservation of and Open Access to Research Data</li> <li>• Relevance to the draft Nairobi Data Guidelines</li> </ul>
<b>12:30-13:30</b>	Posters and Lunch
<b>13:30-15:30</b>	<b>Session 11: Guidelines for Capacity Building in Data Management</b>

	<p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Peter Wittenburg</b>, RDA, Germany</li> <li>• <b>Nordin Hasan</b>, Director of ICSU Regional Office for Asia and the Pacific, President of Research Council of Asia, Malaysia</li> </ul> <p><u>Speakers</u></p> <ul style="list-style-type: none"> <li>• <b>Xiang Zhou</b>, CODATA-PASTD and Chinese Academy of Sciences, China <i>Topic: Summary of the PASTD Training Sessions and Lessons Learned</i></li> <li>• <b>Simon Hodson</b>, Executive Director of CODATA, France <i>Topic: RDA/CODATA Summer Schools in Data Science and Cloud Computing in the Developing World Case Statement</i></li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Courses and open online courses in universities</li> <li>• Training workshops in developing countries</li> <li>• Relevance to draft Nairobi Data Guidelines</li> </ul>
15:30-15:50	Tea Break
15:50-17:00	<p style="text-align: center;"><b>Session 12: Summary and Closing</b></p> <p><u>Co-Chairs</u></p> <ul style="list-style-type: none"> <li>• <b>Chuang Liu</b>, Co-Chair of Workshop Executive Committee</li> <li>• <b>Paul Uhler</b>, Co-Chair of Workshop Executive Committee</li> </ul> <p><u>Issues for Open Discussion</u></p> <ul style="list-style-type: none"> <li>• Summary Report of activities in developing countries during the last ten years from the partners – next steps</li> <li>• Nairobi Guidelines for the Implementation of Open Data Principles for Science and Sustainability in Developing Countries (The Nairobi Data Guidelines) – formal endorsements, online availability, and active dissemination</li> </ul> <p><u>Closing Remarks</u></p> <ul style="list-style-type: none"> <li>• <b>Xingfa Gu</b> (CODATA-PASTD)</li> <li>• <b>Mika Odido</b> (UNESCO)</li> <li>• <b>Mabel Imbuga</b> (JKUAT)</li> </ul>
17:00	<b>Closing</b>