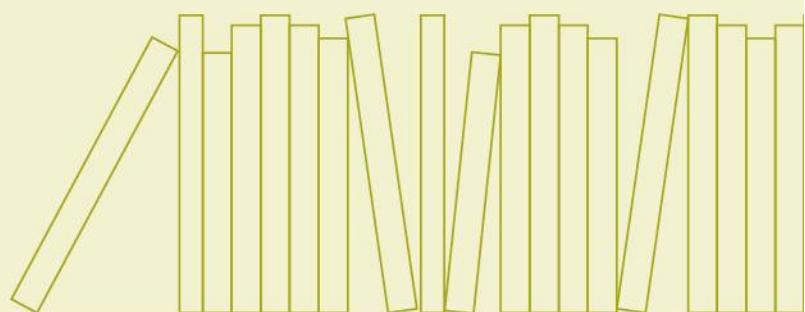


Economic Commission for Latin America and the Caribbean

ECLAC SUBREGIONAL HEADQUARTERS FOR THE CARIBBEAN



Report of the Leaders Activating Research Networks workshop – Caribbean



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Economic Commission for Latin America and the Caribbean
Subregional Headquarters for the Caribbean

Leaders Activating Research
Networks workshop - Caribbean
24 November 2016
Port of Spain, Trinidad and Tobago

LIMITED
LC/CAR/2017/4/Rev.1
8 August 2017
ORIGINAL: ENGLISH

REPORT OF THE LEADERS ACTIVATING RESEARCH NETWORKS WORKSHOP - CARIBBEAN

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CONTENTS

A. CONCLUSIONS AND RECOMMENDATIONS	2
B. ATTENDANCE AND ORGANIZATION OF WORK	2
1. Place and date of the meeting	2
2. Attendance	2
3. Agenda	2
C. SUMMARY OF PROCEEDINGS	3
1. Opening and introduction	3
2. Presentation –The data deluge –the role of research organizations	4
3. Presentation – LEARN project – the story so far.....	6
4. Presentation – Open frameworks for open data.....	7
6. Presentation – Managing research data in the Caribbean: good practices and challenges	10
7. Presentation – Preparing the implementation of policies and strategies for the management of research data in the Caribbean.....	11
8. Closing remarks	13
Annex I List of participants	14
Annex II Provisional programme	17
Annex III LEARN Workshop evaluation	19
Annex IV Selected online resources	22

A. CONCLUSIONS AND RECOMMENDATIONS

1. The ongoing pursuit of academic study, scientific research, and policy development has resulted in an ever-accumulating body of data. Though this data is collected at significant cost, and is potentially of great value, it so often becomes lost or inaccessible upon completion of a research project. Libraries and research institutions face an urgent need for better systems of practice to manage this research data to ensure its availability to current and future scholars. The Leaders Activating Research Networks (LEARN) Project (<http://www.learn-rdm.eu/>) was initiated to educate different stakeholders (librarians, researchers, policy makers, ICT managers, research funders) on the issues and tools associated with the establishment of policy frameworks to support the archiving and dissemination of research data.

2. The moderator requested that consideration be given to including the Caribbean as part of the next LEARN Project. The Chief of the Hernán Santa Cruz Library, ECLAC, noted that this first phase of the project was due to be completed at the end of May 2017, for which he was currently seeking Caribbean data. There was hope for a bigger project in the future, since there was much more work to be done. He briefly shared his experience in leading transformational change in his library's physical space and services. He challenged participants to explore how they could be champions of change in the Caribbean, and encouraged them to use the LERU Roadmap for Research Data as well as the outcomes of the LEARN project.

B. ATTENDANCE AND ORGANIZATION OF WORK

1. Place and date of the meeting

3. The mini workshop entitled, "Leaders Activating Research Networks (LEARN) Workshop - Caribbean" was organized by the ECLAC subregional headquarters for the Caribbean, in collaboration with the ECLAC Hernán Santa Cruz Library and held on 24 November 2016, in Port of Spain. The event was also available for online participation. A programme can be found at Annex II.

2. Attendance

4. Representatives from Barbados, Guyana, Jamaica, Saint Lucia, Trinidad and Tobago, United States of America and Curaçao participated in the workshop. Among them were research, data and knowledge management experts from the government, academia, the private sector, regional and international organizations including ECLAC staff.

5. The total number of participants were forty-three; sixty-two per cent of them being female. Seventeen participants were online.

6. A list of participants is attached at Annex I.

3. Agenda

7. The meeting adopted the following agenda:

1. Opening and introduction
2. Presentation – the data deluge – the role of research organizations
3. Presentation – LEARN project – the story so far

4. Presentation – Open frameworks for open data
5. Presentation – Data for development in the Caribbean – Caribbean open data portal project
6. Presentation – Managing research data in the Caribbean: good practices and challenges
7. Presentation – Preparing the implementation of policies and strategies for the management of research data in the Caribbean
8. Closing remarks

C. SUMMARY OF PROCEEDINGS

1. Opening and introduction

8. The Chief of the Caribbean Knowledge Management Centre (CKMC) of ECLAC subregional headquarters for the Caribbean welcomed participants to the meeting. He thanked the various stakeholders, partners and universities in the Caribbean subregion for their presence at the inaugural Leaders Activating Research Networks (LEARN) Workshop – Caribbean.

9. The participants introduced themselves and shared their interests in and experiences with research data management. Interests of the participants included reusing data, data management systems, data formats, data to drive decision-making in support of governments, data collection and policy responses to human resource issues, data for coherent policy making and the use of data in fostering Caribbean development.

10. The Director of the ECLAC subregional headquarters for the Caribbean delivered opening remarks to the meeting, underscoring the importance of the research data movement and the potential scope of its contribution to Caribbean development. She also highlighted that ECLAC, as a partner institution in LEARN Project, will add to the body knowledge on research data management (RDM). She stated there had been increased awareness of the need to make data available to society for multiple benefits, demonstrating their value in the advancement of knowledge in the strengthening of mechanisms for citizen participation, and in promoting transparency in the assessment and monitoring of public policy.

11. She observed that ECLAC has contributed to the open data movement in various ways, including through the promotion of strategies to strengthen national statistical offices and to develop their capacity to manage large data, as well as through the creation of open platforms for free access to the community, such as with the establishment of the ECLAC Digital Repository and CEPALSTAT.

12. She surmised that research data management had many benefits, including the better use of public and private resources through the reuse of data, and that it facilitated the raising of the standards of research through the replication and validation of its results. The Director also gave the participants a brief introduction to the LEARN Project, which ECLAC joined in June 2015, and which is being funded by the European Union. She stated that the main objective of LEARN is to disseminate knowledge on the topic of research data management and to contribute to the development of policies and good practice within universities and research institutions in all areas of knowledge.

13. The Director also explained that the views and experiences of all participants would contribute to the development of a management policy model and a set of good practices that could be used and

adapted to the unique context of the subregion. She reminded that data access remained a challenge in the Caribbean, and it was important to be aware that the LEARN Project offered an exciting opportunity to address data deficiency in the subregion. She expressed her hope that the event would facilitate the creation of professional networks and alliances that would strengthen efforts to harness the data deluge to the benefit of the Caribbean.

2. Presentation –The data deluge –the role of research organizations

14. The Head of the Department e-Infrastructures at the University of Vienna presented on the role of research organisations in the data deluge. He explained the role of the research organization in the new data management paradigm. Key points shared were that the world was currently experiencing data deluge that was expanding exponentially; that there are different levels of data processing and that existing data need to be structured. Main stakeholders included universities, non-university research institutions and research communities, research funding bodies, research support institutions and services (including libraries, IT services, legal support).

15. In presenting an international perspective on research data, he shared an overview of the national research data survey that was conducted by the Head of e-Infrastructures Austria and published in November 2015. The survey revealed a landscape of research communities; a new ecosystem of services, particularly support services; data types and formats; collaborative data infrastructures; the need for more legal services and also the identification of target groups. It was noted that 54 per cent shared data by email; there was a need to coordinate resources and to conduct dissemination work; there was also a need to increase the use of repositories. He noted that policy was needed to enhance data sustainability and that a system of repositories and services was essential. Findings also highlighted the necessity for the requalification of personnel.

16. The presenter also explained that open science was a motivation to make science research data accessible and that the open science cloud was an important concept. The European Open Science Cloud (EOSC) was created by a community high-level expert group. He shared that EOSC suggests that five per cent of total research spent should be devoted to data stewardship. The key elements of EOSC activities include internationally effective governance; guidance only where guidance is due; rules of engagement for service provision; federation of the gems and amplification of good practice; building on existing capacity and expertise where possible and the optimization of the e-Infrastructures communities.

Discussion

17. The ensuing discussion focused on issues that perpetuated the fear of data sharing. The Chief of the Hernán Santa Cruz Library, ECLAC, sought clarification on the factors that shaped the reluctance of some researchers to share their data. The presenter explained that there were different types of researchers, many of whom connected research to books and may not realize that libraries offer data services. He further proposed that their reluctance was linked to vertical thinking, meaning focus is primarily given to one's own discipline instead of supporting the development of a larger knowledge base and research support systems. Many struggle with developing connections to other disciplines. However, he was optimistic that things were changing.

18. The Head of User Services at the Alma Jordan Library, University of West Indies (UWI), agreed with these proposals based on her professional experience, as well as on recent findings on how libraries can support researchers. She noted that the challenge was not in managing big data but in the fact that many researchers lacked the know-how of proper data management. Some of their deficiencies included: poor back-up practices, uncertainty surrounding constructing critical questions to ask library personnel, and a lack of awareness of how library services could assist them with data management. The presenter

agreed that these issues existed within research communities, and found them to be quite common across countries. He highlighted that these challenges presented similar opportunities and suggested that more regular communication and experience sharing could ultimately change the dynamic of library services. He believed that the library, being a stable institution, could become the custodian of data and be effective in leading data management reform.

19. Chief of the Hernán Santa Cruz Library, ECLAC, explained that these issues were some of the reasons for the development of the LEARN Project. He stated that an appropriate legal framework could assist in the formalization of data management. The Director of the Research and Innovation Department, University of the Southern Caribbean (USC), shared that researchers had a fear of data abuse, and so had little interest in sharing their research. She agreed that through re-training, researchers could be made to appreciate the sanctuary that libraries could provide in respect of data management. The presenter highlighted that the two major challenges researchers faced were data abuse and the inability to delete data after uploading it. He too was convinced that the fear of data abuse could be countered by ensuring the adoption of terms of use, licenses and better regulation of end users and upload users. He also stated that data created in a publicly financed project should be made available for everyone.

20. The Coordinator of the SSDU, ECLAC added another layer to the discussion, suggesting that publicly generated data could be the low hanging fruit for the Caribbean. He noted that the region was known for privately generated data. He agreed that there was difficulty in accessing data generated by public funds. However, he was convinced that universities could lead the discourse on accessibility to publicly-funded data, as these institutions represented stable and safe platforms for data management. The development of Terms of Reference (TORs) for universities as data custodians should therefore be encouraged. He also lamented the lack of protocol guiding student data deposit practices. He, like the presenter, believed that a radical change in thinking was imminent, creating opportunities for public access to research data for public benefit.

21. Senior Policy Analyst, National Institute of Higher Education Research Science and Technology (NIHERST) enquired of the best modality for RDM policy formulation. She queried whether these policies were best placed at the national, international or institutional level, or whether a cross-sectional group might be more appropriate. She informed the meeting that most government bodies had a research unit which informed national policies. In her contribution, she shared that The National Export Facilitation Organization of Trinidad and Tobago held a role in funding research and development facilities in Trinidad and Tobago. She wondered whether the government should hold the responsibility for formulating data access. Going a step further the SSDU Coordinator, ECLAC thought the research society may be best placed to call for significant changes in RDM.

22. The representative of the Internet Society noted that there was a general lack of trust in sharing research and development online. He was uncertain of the degree to which researchers were utilizing such platforms and interfaces. The presenter responded that university teachers showed little concern in sharing their data with students on social media platforms, like Facebook (which are public platforms); whereas the same teachers were afraid to share their research on university platforms, such as Moodle. He noted the irony surrounding data-sharing and confidentiality in this observation. He shared that good policies and good governance would promote trust. He suggested that it may be the ease of navigation on Facebook and YouTube that is the source of their popularity. He urged participants to adapt their internal infrastructures and services to such well developed and user-friendly social media platforms.

23. The presenter informed that policy development, as it relates to research data within any type of institution or government body, ought to be based on the common principles that data should be findable, accessible, interoperable and reusable. To him, the establishment of institutional, national or regional policies can occur once the common principles have been identified.

3. Presentation – LEARN project – the story so far

24. Following the discussion, the Chief of the Hernán Santa Cruz Library made a presentation on the Leaders Activating Research Networks (LEARN) project. He noted that the project involved a series of workshops, with the most recent one being held at the ECLAC headquarters in Santiago, Chile, on 27 October, 2016. Participants ranged from researchers to representatives of funding agencies, the ICT sector, universities and libraries.

25. He shared that the LEARN Project developed a survey to assess institutional readiness for research data management. He invited the meeting participants to complete the survey, which was available on the LEARN Project website < <http://goo.gl/forms/m6PGJ34tGr> >. He noted that the survey can be completed by both individuals and institutions. He underscored the importance of discussing RDM at all levels since we are all data producers and we live in a data society. He noted that it was important to consider what happens to data that is constantly being generated by everyone. He called for the engagement of private sector with the public sector, as well as with similar national and international organisations, to discuss the management of this data.

26. The partners involved in the LEARN Project observed that many universities and research institutes in Europe, Latin America and the Caribbean have no policies and strategies for research data management, hence the need for the workshops organised within the project. He also outlined several barriers to managing and sharing data; including the lack of financial resources and the absence of RDM skills in human resources. He expressed the need to retrain researchers and to establish a legal framework for data-sharing.

27. According to the LEARN Project, research data is “all data which is created by researchers in the course of their work, and for which the institution has a curatorial responsibility for at least as long as the code and relevant archives/record keeping acts require, and third-party data which have originated within the institution or come from elsewhere.” He noted that research data include primary resources or raw data and quantitative or qualitative information.

28. He shared the benefits associated with RDM: accessibility, validation, efficiency, transparency and collaboration. He explained that there was some opposition to open research data; the main concerns were whether it would be used for commercial gains; cost vs value; intellectual property rights; privacy; and confidentiality.

29. He suggested that it was here that the LEARN platform would engage all stakeholders in an effort to achieve the following objectives:

- Outreach and dissemination of League of European Research Universities (LERU)
- Awareness raising about RDM and the need for policies and strategies
- Stimulate research on RDM
- Stimulate the production and implementation of RDM policies at institutional level
- The LEARN project was designed to:
 - Promote the exchange of ideas and experiences
 - Enhance the LERU roadmap with more case studies and best practices
 - Contribute to economic growth
 - Raise awareness on RDM

30. He confirmed that ECLAC’s role in LEARN was to build awareness, create a LEARN community in the region and contribute to ECLAC’s strategy of big data/open data.

Discussion

31. The ensuing discussion began with an exploration of the best formula for the development of a RDM strategy. The presenter reiterated that currently no specific strategy existed, but explained that this was a deficit receiving much attention, as there were many initiatives being explored both within and outside of the research community. He assured the meeting that LEARN Project participants were quite aware of these developments. A meeting participant observed from their experience that outside initiatives were more readily accepted than internal ones. However, the Chief of the Hernán Santa Cruz Library in presenting the RDM's case, advised that emphasis should be placed on data plan, policies and more cooperation rather than focusing the discussion on 'open data'. It was his experience that when addressed in this manner RDM was more readily accepted.

32. The Director of Strategic Initiatives in the Office of the Vice Chancellor, University of the West Indies, enquired whether a draft policy would be available for participants. The presenter explained that presently only donor countries and organizations would have access to the draft policy. He encouraged those interested to make contributions through him. The representative from the University of Trinidad and Tobago mentioned the existence of the T&T Research and Education Network (TRENT), a learning network entity in Trinidad and Tobago that should be involved in this exchange. She promised to share the contact information with ECLAC.

4. Presentation – Open frameworks for open data

33. The Chief Executive Officer (CEO) of BITT, and Open Data and Governance Group Facilitator, Caribbean 2030, presented on the Open Framework for Open Data. He shared the work on open data explored by his organization, informing that they were about to embark on a mapping exercise that would examine existing legislation with the aim of identifying gaps and drafting better or best practices for open data. He noted that in the CARICOM context the legislation was largely outdated, the most recent instrument on computer law being 2003, a document too old to be considered relevant in such a swiftly evolving field.

34. He reiterated the usefulness of open data for microstates such as those in the Caribbean. He introduced the meeting participants to the X-Road programme, a data-sharing and data exchange interface. He was convinced that its versatility was well suited for the Caribbean, [since it was designed to facilitate free and safe data sharing. He stated his organization would continue to build and lead the Caribbean in this area, but stressed that a combined effort was necessary from citizens, governments and researchers.

Discussion

35. When asked about the best way forward for the region in addressing open data, the presenter stated that much of the data generated was in paper format, in which case, legislation should be drafted to address the manner in which the data should be digitized and shared. The next step should involve information sharing, exchanging ideas and capturing data at the point of creation or collection.

36. He stated reform had begun but pointed out that legislative updates were necessary to keep abreast of these new developments. Collaboration with international initiatives was also essential as this exchange was inevitable. Another participant was concerned with the issue of violation - specifically plagiarism - and enquired of the provision X-Road had to offer in this regard. The presenter acknowledged that plagiarism would continue to be an issue, but that responsibility for redress lay outside the ambit of the programme.

37. The representative of the Court Research and Statistics Unit asked about software support for the X-Road and the related costs. The presenter explained the manner in which X-Road operated, utilizing different programmes to “talk to each other”. There were standards his organization had to follow to communicate and facilitate data analysis on common ground. He went on to explain the cost was dependent on the level of complexity which could be millions of dollars, but open mechanisms could use existing data. He suggested that one management system could be built to communicate with various systems.

5. Presentation - Data for development in the Caribbean – Caribbean open data portal project

38. The Secretary- General of the Caribbean Telecommunications Union (CTU) provided an overview of the history and functions of the CTU, the intergovernmental organisation established in 1989 by the CARICOM Heads of Government “to create an environment in partnership with members to optimize returns from information and communications technology (ICT) resources for the benefit of stakeholders.”

39. She noted that all work was carried out on a multi-stakeholder basis and that the organization was now primarily an ICT one, with membership extended beyond CARICOM, to include all Caribbean countries, private sector organisations and civil society. Areas of engagement include harmonization of ICT policy, regional ICT project coordination, ICT capacity development and Caribbean representation. The CTU also operates as an industry watch.

40. Following its success in implementing regional projects, the CTU was asked to coordinate the development of a Caribbean Open Data Portal, a year-long project, which was due to begin in early 2017. Once established, the portal would be managed by the Caribbean Open Data Institute. Two initiatives that will use the Caribbean Open Data Portal are the soon-to-be-established Caribbean School of Data, which is a programme of the Caribbean Open Data Institute; and DevCA, a multi-country open data conference and code sprint, the fifth edition which will be held next year.

41. She defined open data as “the proactive release of data in a format that can be freely use, reused, and redistributed by anyone for any purpose.” She said that there is a need to alert, educate, and inform stakeholders on the value and possibilities of opening data, since there is easy and instant access to the information of the ages.

42. Six key areas that the CTU has been working in regarding open data are as follows:

- Increasing public awareness;
- Formulation of an open data policy framework;
- Capacity building and data management training to support open data software development;
- Establishing and maintaining a sustainable Caribbean open data portal;
- Identification of priorities and opportunities;
- Provision of support to national and regional open data communities and activities.

Discussion

43. The SSDU Coordinator, ECLAC, encouraged participants, particularly those representing universities and research organisations, to support the work being done by the CTU on developing the Caribbean Open Data Portal. The Deputy Dean, Faculty of Science and Technology, UWI shared information on two open data platforms in Trinidad and Tobago, which resulted from their AgriNeTT

project; namely Data.tt , and Maps.tt (for spatial data), which were introduced in 2013. During that period, several workshops were held to increase awareness about open data.

44. During these workshops, policy guidelines and various common license arrangements were also developed, and made available on their website. Data.tt and Maps.tt were developed using the CKAN platform, which the governments of the United Kingdom and the United States also use for creating open data portals, while GeoNode was used to develop the Maps.tt platform.

45. In addition to the data already uploaded by several institutions, scripts to automatically retrieve data from various data sources were written. A number of apps have been built to help farmers use this data. The main concern for open data to move forward in the Caribbean is the need to get apps built, so that data can be used, not only by statisticians and researchers, but also by people in general, so that they can do something useful with the data.

46. The representative of the Caribbean Centre for Human Rights noted that more development can take place when data is interconnected and that there is a gap in both implementation and in understanding how to analyse data in an interconnected way. She also enquired about the creation of sustainable partnerships in the CTU project. The representative of the CTU clarified that many governments, who are their primary clients, have equipment that cannot support the interconnection of data. She stated that governments must be early adopters of technology, since their participation catalyzes a process for other entities to also get involved. She reminded that the work of the CTU is enhanced by strategic partnerships, which advance the success that has been achieved.

47. The Secretary General, CTU, mentioned that the Caribbean Knowledge and Learning Network (CKLN), a project designed to connect national research and education networks, had recently come to an abrupt end. The CTU is therefore looking to institute a new sustainable project, where it can facilitate processes in research and educational activities. Participants recommended in this regard that CTU can collaborate with institutions in Trinidad and Tobago, such as the National Institute of Higher Education, Research, Science and Technology (NIHERST) and the e-Business Roundtable.

48. An online participant asked for more clarity on identifying what are data. The SSDU Coordinator, ECLAC, responded that the definition may depend on the sector to which one is referring. However, he offered that within the business environment and the public sector, data, which may be qualitative or quantitative, are everything that provide information. The representative of the Faculty of Science and Technology, UWI agreed that there are different types of data and added that there are also different ways of analysing data.

49. During the discussion the representative of User Services of the Alma Jordan Library, UWI, agreed that capacity building for research data management was quite significant. She then sought clarification in three areas; the first being on the Caribbean Open Data Institute; and the second on the challenge of finding commonality and interconnectedness amongst the different software being used by various institutions; and the third being that there is a lack of access to Caribbean data that is yet to be digitized.

50. The representative of the CTU explained that the institute is a coalition of individuals and institutions that are committed to advancing data as a catalyst for development. She noted that various initiatives highlight the need for the establishment of synergies and that a culture of collaboration will limit duplication. The CTU hosts a collaboration forum annually to address this issue. She also noted that the topic of digitizing records is on the agenda of the CTU. It was also noted that the Alma Jordan Library, UWI, used Dataverse software, an open source software application developed by Harvard University.

51. An online participant congratulated the CTU on its approach to information sharing and collaboration. She also agreed that it was important to develop a culture of sharing information. The Population Affairs Officer, SSDU, ECLAC, shared that the statistical system does not see researchers as their primary customer, but rather they respond to government needs. He stated that research data management systems can provide very useful services to statistical offices, since they include dissemination activities, which results in service to the research communities. He urged the research communities to collaborate with the government and to make them aware of the services that such communities can provide, including sharing, storing, archiving, disseminating data.

6. Presentation – Managing research data in the Caribbean: good practices and challenges

52. The Strategy Expert of Jamaica explored the good practices and challenges experienced in managing research data in the Caribbean. Sharing his experience in working with doctoral students at UWI and at the University of Technology, Jamaica, he noted that a plethora of data exist, but were hard to find. He pointed out that there were rich data sources that people did not value, and there was need for a realistic view of the environment of the Anglophone Caribbean – one that is seriously resource-constrained.

53. He noted that every dollar of capital had to provide the best return for respective stakeholders. He shared that competition was quite vicious, so rational actors took decisions that emboldened their own advancement; thus were not inclined toward openness, trust, and collaboration. He further noted that people would collaborate once there was something in it for them. He highlighted that there was a need to formulate approaches that took into consideration such factors as issues of openness, access and productivity. According to him, the subregion needed to develop a system that would ensure that there was consistency of data usage and impactful research emanating from such data usage.

54. In exploring the Data Publication Pyramid by the Opportunities for Data Exchange (ODE), the presenter noted that the top two tiers of the pyramid (1. Publications with Data and 2. Processed Data and Data Representations) were well addressed in the Caribbean, and so, he placed emphasis at the base of the pyramid, where there are limitations – that is within raw data and data sets. He illustrated this point through reference to an Omnibus survey that was carried out by UWI across three countries, namely Barbados, Jamaica and Trinidad and Tobago.

55. He noted that the findings revealed inconsistency and gaps in the data. He stated that since some countries and entities gave more care toward data quality than others; cross national comparisons were difficult. He shared that an extensive amount of data cleansing had to be done, which slowed down the research process. He stated that in Jamaica, there are multiple data stores and aggregators; taxonomies were different, many are not user friendly. He also noted that there were inherent problems that will stymie the production of new knowledge.

56. He observed that there was poor data quality across a 20 or 30-year horizon. He informed that the Edward Seaga Research institute had statistics on trade, environmental, labour, health, training, and other areas; but noted that the site was very slow and static. He shared that one had to use various APIs to mine data properly. He concluded that despite the availability of data, it was a turnoff to researchers and students because of the technology being used. He stated that there was a lack of commercial motive to reinvest and keep the technology current.

57. In comparison, he stated that the recently launched Jamaica Open Data Portal was easier to use, but somewhat vacuous in terms of data needed by researchers and policy makers. He shared that it was in the process of being populated and a regulatory framework will be established in the near future.

The presenter stated that UWI and the Mona School of Business and Management (MSBM) created a finance lab in partnership with Bloomberg. Bloomberg provided terminals and raw financial data related to all the markets and policy issues in the region and worldwide to facilitate research by students. He noted that a research ecosystem was created whereby researchers use data to produce research and validate aggregated data in terminal; the school provides data cleansing services to Bloomberg and students receive Bloomberg certificates stating that they are power users in the technology

58. The presenter also shared that the private sector and academia have been able to develop papers that impact policy across the region in various industries. He clarified that this was not open data, but was pragmatic in addressing the research agenda and training for business and management. He stated that the lab was creating vibrancy in the production and dissemination of new knowledge and that revenue generated was being used to support open data initiatives.

Discussion

59. The Chief of the Hernán Santa Cruz Library, ECLAC endorsed the inclusion of the Data Publication Pyramid in the presentation, and recalled that it was developed as part of the successful ODE project in which he was previously involved. He noted that libraries had an important role to play in research data management, pointing out that they had their core role, but new research activities presented them with opportunities to adapt to the current information environment, such as data mining and text mining. He went on to ask participants to share their experiences with educating people in a data society. Answers included that the information needs to address economic and social development and that it was important to understand the information environment of users and researchers. Participants also shared on the importance of networking for data collection and the need for publication dissemination.

60. In his contribution to the discussion, the representative of the Economic Development Advisory Board (EDAB) Ministry of Planning and Development, Trinidad and Tobago, affirmed that there was a growing demand for knowledge and information. He stated that governments needed data for decision-making, but the governments also wanted data for others to make decisions, citing examples such as market information and demographic information. He indicated that both the type of data or information and its usefulness was important. He informed that from his experience, politicians support open data and open data platforms, once they excluded procurement information. He pointed out that consideration should also be given to legislative frameworks, including the Freedom of Information Act.

61. He also noted that there is a need for the private sector to engage in more research and development. He shared that at present, in the local business environment, companies focused on the retail industry; not many companies invested in research and development. He stated, however, that the ones that do seek research data from the United States and other countries outside of the region. He noted that a gap seems to exist between the research data needs of the private sector and that which are being undertaken by the universities. He shared that current programmes at the Ministry of Planning and Development, Trinidad and Tobago, seek to have further engagement with universities and their existing open data platforms and related mechanisms for knowledge and information sharing. He surmised that the key actors and collaborators will be private sectors, governments, universities, and also libraries, whose key role will be in the building of platforms.

7. Presentation – Preparing the implementation of policies and strategies for the management of research data in the Caribbean

62. The Director of the Research and Innovation Department, USC, presented on the topic: implementation of policies and strategies for the management of research data in the Caribbean. The participants were given an overview of the activities of the university, which included the development of

a platform on research in the region. The USC - part of a network of Seventh Day Adventists (SDA) universities worldwide - was also one of fourteen such institutions in Latin America and the Caribbean that was cooperating in the development a common digital platform for knowledge sharing and increased awareness of research in the region.

63. She noted that the initiative started following her recent attendance at the SDA regional conference in Mexico, where over 200 research scholars presented, and it was decided that a compilation of these research papers would be made available to the public in this online repository. Topics included science and technology, mathematics, education, social sciences, and many other disciplines. Apart from these related initiatives, she pointed out that the USC has a digital collection, being managed by their library, to which researchers have volunteered to make submissions of research work, such as articles and electronic books. The collection is available to the public. Research data management policies are factored into the ethics policies of the university's Institutional Review Board (IRB).

64. Two main activities for the implementation of research data management are, firstly, creating awareness of roles, duties and obligations; and secondly, ensuring that the appropriate infrastructure is in place at the institution. She suggested that there was a need for research data management roadmap and governance model to ensure cooperation among information service managers and oversight by an academic steering group. She underscored the importance of involving as many stakeholders as possible, to ensure peer review and validation of research. A pilot study involving all research units can develop functionality and key services (data storage, customization of digital online tools and data repositories).

65. The presenter then reviewed the LERU (League of European Research Universities) Roadmap for Research Data model, which could serve as a guide for the development of research data management policies at universities. She noted that its simplicity allowed users to develop the roadmap to suit the needs of their institutions. The roadmap could also be used on the national level, where common principles could be identified and developed for data research development and services. Other factors in the implementation of research data management included costs, legal advice, capacity building and evidence-based decision-making. She also shared a case study of a university in the process of developing a research data management plan for a Digital Curation Centre, outlining the relevant series of steps and timeframes.

Discussion

66. The discussion centered on the need for platform building, collaboration, knowledge and information sharing, institutional repositories, access to data and available research data management policies and strategies. Participants were invited to assess how applicable the LERU Roadmap may be for institutions in the Caribbean; as well as to suggest alternative models that they have already implemented at their institutions.

67. Representatives from two institutions shared that they were in the process of developing research data management strategies. For the Ministry of Planning and Development, data distillation and file-sharing software is critical since it was the recipient of large amounts of data on an ongoing basis. There was a concern that much of the data, which were left unused, could be pooled and used as a source of sound policy making. Copyrights, data protection and privacy were also highlighted as key issues in developing and using platforms and repositories. The NIHERST representative indicated that there is a draft electronic data management policy being championed by their records manager. Staff from all departments was surveyed regarding their data needs and outputs. Taxonomy and classification systems were established and the platform being used is Office 365 by Microsoft, through which they engaged in data analyses and business intelligence. The presenter underscored that universities, in having a pool of

experts, could bridge the theory with the practical aspect, through collaboration with government departments, in support of policy planning and building theoretical frameworks.

68. With regard to building repositories, participants were informed that UWI Space is an institutional repository, which provided access to theses for use by researchers within the campus. It was noted that education on researcher participation was needed, since the platform was underused. A new platform called UWI Scholar was being developed, which would list researchers and contain links to full-text resources. During the discussion, there was a call for collaboration between the public sector and universities to facilitate the sharing of platforms and knowledge exchange. Commenting on access to data, an online participant stated that they experienced challenges in trying to access census and survey data from the Caribbean in support of academic research and graduate teaching.

8. Closing remarks

69. At the close of the workshop, the SSDU Coordinator, ECLAC noted that the concept of open data was not a new one in the Caribbean subregion, and that there were ongoing initiatives and examples. He recalled that participants were interested in the practical aspects of open data, including the identification of the next steps for institutions, countries and the subregion. He highlighted that the discussion engaged participants in sharing knowledge on good practices, and so, he encouraged continued discussion. He then requested that the LEARN Project should give consideration to the inclusion of the Caribbean as a major component of its next phase.

70. Next, Chief of the Hernán Santa Cruz Library, ECLAC, agreed with the suggestion and stated that it was a work-in-progress, hence the current workshop in Port of Spain, and that there was hope for a bigger project during the next phase. He called for participants to be champions of change within their organisations. He shared that the ECLAC Library in Santiago had taken the initiative to be a champion of change through its recent renovation project, which allowed for the review of its products and services. He noted that it was important for libraries and organisations to identify their priorities, especially since there were limited resources available. He stated that the data society brings with it both challenges and opportunities. He called for participants to use the LERU Roadmap for Research Data for guidance and support in their activities. He thanked the participants and the staff ECLAC subregional headquarters for the Caribbean, who played a major role in organising the workshop.

71. The Chief of the Caribbean Knowledge Management Centre (CKMC), ECLAC, also thanked participants and presenters for their contributions that were made in person and online. He also stated that the Research Data Management Readiness Survey will be again circulated to participants, as well as presentations from the workshop.

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Annex II

PROVISIONAL PROGRAMME

(GMT-4)

0930-0950 Online Registration

0930-0950 On-site Registration

0950-1000 Security Briefing for On-Site Participants

Mr. Juda Francis, Security and Building Management Assistant, ECLAC subregional headquarters for the Caribbean

1000-1003 Welcome Introduction

Mr. Peter Nicholls, Unit Coordinator, Caribbean Knowledge Management Centre, ECLAC subregional headquarters for the Caribbean

1003-1010 Opening Remarks

Ms. Diane Quarless, Director, ECLAC subregional headquarters for the Caribbean

1010-1050 Presentation: "The Data Deluge: the Role of Research Organisations",

Introduction: Mr. Wouter Schallier, Chief of the Hernán Santa Cruz Library, ECLAC

Presenter: Mr. Paolo Budroni, Head of Department e-Infrastructures, Vienna University Library and Archive Services

1050-1100 Questions

Moderator: Mr. Wouter Schallier, ECLAC

1100-1130 Presentation: "LEARN Project: The story so far"

Introduction: Mr. Peter Nicholls, ECLAC

Presenter: Mr. Wouter Schallier, ECLAC

1130-1145 Questions

Moderator: Mr. Peter Nicholls, ECLAC

1145-1205 Presentation: "Data for Development in the Caribbean",

Caribbean Open Data Portal Project

Presenter: Ms. Bernadette Lewis, Secretary General, Caribbean Telecommunications Union

1205-1220 Caribbean 2030: Open frameworks for Open Data

Presenter: Mr. Gabriel Abed, CEO of Bitt; Open Data and Governance Group Facilitator; Caribbean 2030 Leaders Network, Barbados.

1220-1230 Questions

Moderator: Mr. Peter Nicholls, ECLAC

1230-1330 Lunch

1330-1415 Open Discussion: "Managing Research Data in the Caribbean: Good Practices and Challenges"

Lead: Dr. Winston Butler, Jamaica

Moderator: Mr. Wouter Schallier, ECLAC

1415-1500 Open Discussion: “Preparing the implementation of policies and strategies for the management of research data in the Caribbean”

Lead: Dr. Susan Chand, Director, Research and Innovation Department, University of the Southern Caribbean, Trinidad and Tobago

Moderator: Mr. Abdullahi Abdulkadri, Unit Coordinator, Statistics and Sustainable Development Unit, ECLAC subregional headquarters for the Caribbean

1500- 1530 Closing Remarks

Mr. Wouter Schallier, ECLAC

Mr. Abdullahi Abdulkadri, ECLAC

Annex III

**Workshop evaluation survey
LEARN Caribbean mini workshop**

LEARN Workshop evaluation

Where appropriate respondents scored each question using a scale of 1-5 where 1 = Poor and 5 = Excellent

1. How suitable was the venue for the LEARN Caribbean Workshop?

Score	1	2	3	4	5	Total	Weighted Average
Respondents	1	0	2	2	5	10	4.00
%	10.00%	0.00%	20.00%	20.00%	50.00%		

2. How adequate did you find administrative and catering arrangements for the Workshop adequate to support the success of the event?

Score	1	2	3	4	5	Total	Weighted Average
Respondents	0	0	1	2	7	10	4.60
%	0.00%	0.00%	10.00%	20.00%	70.00%		

3. How would you rate the presentation by Mr Paolo Budroni (The Data Deluge: the Role of Research Organisations)?

Score	1	2	3	4	5	NA	Total	Weighted Average
Respondents	0	0	0	5	6	1	12	4.55
%	0.00%	0.00%	0.00%	41.67%	50.00%	8.33%		

4. How would you rate the presentation by Mr Wouter Schallier (LEARN Project: The story so far)?

Score	1	2	3	4	5	NA	Total	Weighted Average
Respondents	0	0	0	5	6	1	12	4.55
%	0.00%	0.00%	0.00%	41.67%	50.00%	8.33%		

5. How would you rate the presentation by Ms Bernadette Lewis (Data for Development in the Caribbean)?

Score	1	2	3	4	5	NA	Total	Weighted Average
Respondents	0	0	1	4	5	2	12	4.40
%	0.00%	0.00%	8.33%	33.33%	41.67%	16.67%		

6. How would you rate the presentation by Mr Gabriel Abed (Caribbean 2030: Open frameworks for Open Data)?

Score	1	2	3	4	5	NA	Total	Weighted Average
Respondents	0	0	0	6	4	2	12	4.40
%	0.00%	0.00%	0.00%	50.00%	33.33%	16.67%		

7. How would you rate the open discussion Managing Research Data in the Caribbean: Good Practices and Challenges?

Score	1	2	3	4	5	NA	Total	Weighted Average
Respondents	0	0	0	6	3	3	12	4.33
%	0.00%	0.00%	0.00%	50.00%	25.00%	25.00%		

8. How would you rate the open discussion Preparing the implementation of policies and strategies for the management of research data in the Caribbean?

Score	1	2	3	4	5	NA	Total	Weighted Average
Respondents	0	0	2	6	3	1	12	4.09
%	0.00%	0.00%	16.67%	50.00%	25.00%	8.33%		

9. Was there enough time for questions and discussion after each plenary paper?

	No	Yes	N/A	Other	Total
Respondents	2	10			12
%	16.67%	83.33%			

9. Did the panel sessions give you a broad overview of the state of play in research data management, and the points of view of its main stakeholders?

	No	Yes	Total
Respondents	0	11	11
%	0.00%	100%	

Comments:

I think that there were some key stakeholders that were missing from around the table e.g.CSO

11. Any other comments about the LEARN Caribbean Workshop?

- The Workshop is a good start. I think we need to tap into some of the interventions that are ongoing in the area of open access and research data management.
- I am particularly interested in managing research data for decision making.
- The session was extremely packed and more time was required for discussions. Given the limitations re: availability of key personnel, I understand the challenge with having this session conducted over two days, however two days would have been best with the depth of information shared!
- I thought that the ability to participate by the online tool was great as it facilitated fuller participation in this important conference.
- Excellent idea to offer the option to follow it online. Please keep doing so for those who don't have the means and/or time to travel. Thank you! Please send the presentations or link to watch the presentations missed.

Annex IV**Selected online resources**

LEARN Workshop Presentations

<http://www.cepal.org/en/events/leaders-activating-research-networks-learn-workshop-caribbean>

<http://learn-rdm.eu/en/dissemination/presentations>

LEARN ECLAC Third Mini Workshop – Caribbean (**Blog**)

<http://learn-rdm.eu/en/learn-eclac-third-mini-workshop-caribbean>

UN ECLAC – LEARN Project

<http://learn-rdm.eu/en/partners/un-eclac>

LERU Roadmap for Research Data

http://www.leru.org/files/publications/API4_LERU_Roadmap_for_Research_data_final.pdf

LEARN Workplan

<http://learn-rdm.eu/en/about/workplan>

LEARN Workshops

<http://learn-rdm.eu/en/workshops>

LEARN ECLAC Mini Workshops

<http://learn-rdm.eu/en/workshops/eclac-mini-workshops>

Research Data Management Readiness Survey

<http://learn-rdm.eu/en/rdm-readiness-survey>

Glossary

<http://learn-rdm.eu/en/further-reading/glossary>

Webliography

<http://learn-rdm.eu/en/further-reading/webliography>

LEARN Project Twitter page

<https://twitter.com/learnRDM>

ECLAC Caribbean Facebook page

<https://www.facebook.com/eclaccaribbean>

Caribbean 2030

<https://www.wiltonpark.org.uk/event/wp1513>

e-Estonia.com - The Digital Society – X-Road

<https://e-estonia.com/component/x-road>



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