



CODATA Executive Committee Recommendations Regarding Task Group Proposals 2021

Task Groups are an important means through which CODATA delivers on its mission and Strategic Programme, including the [Decadal Programme 'Making Data Work for Cross-Domain Grand Challenges'](#).

Task Groups proposals are invited every two years and are selected by the General Assembly. Proposals are assessed by the Executive Committee which presents recommendations to the General Assembly.

For the CODATA General Assembly in 2021, a total of **twelve** proposals are considered. Details of the proposals can be found in the 'Summary of Task Groups Proposals 2021' document, distributed to the Delegates together with these Recommendations.

Four proposals for new Task Groups were submitted:

1. Creative Living and Aging through Cross-disciplinary Utilization of Data
2. Data Ethics
3. Extension of InChI for nanomaterials
4. Towards a Paradigm Shift for Open Data in Planning Resilience Cities

Eight existing Task Groups applied for renewal:

5. Advanced mathematical tools for data-driven applied systems analysis
6. Agriculture Data, Knowledge for Learning and Innovation
7. Applying Data Integration and Data Science Tools toward Research of Urban Life and Smart Cities
8. CODATA–WDS TG on Data from Participatory Mapping for the SDGs and Knowledge
9. Digital Representation of Units of Measurement (DRUM)
10. FAIR Data for Disaster Risk Research (FAIR-DRR)
11. Improving Data Access and Reusability (IDAR)
12. Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD)

The Executive Committee makes the recommendations which follow in this document to the General Assembly, which it hopes will be considered attentively.

CODATA has a limited budget for Task Groups, although Groups are expected to find other sources of funds and CODATA endorsement should assist with this. The Executive Committee asks the GA to consider that the more TGs are endorsed, the more thinly the CODATA financial and secretariat support is spread. The Executive Committee recommends the **total amount available in 2021 for all TGs** combined should be 30,000-40,000 euros. Therefore, a range of 6-8 TGs is optimal in these circumstances.

It is the responsibility of the Executive Committee to make budget allocations to those TGs which are approved by the GA. Budgetary support will only be allocated if the Executive Committee is satisfied that the TG will deliver, that changes requested of the TG's proposed work plan have been made and will be executed.

CODATA Task Group Proposals: Executive Committee Recommendations

In what follows, we give a brief summary of the TG's proposed outputs and make some comments on strengths and weaknesses based on the Executive Committee's own considerations as well as the external reviews. **In several cases, the Executive Committee recommends that the proposal be endorsed on condition of certain changes being made. The Executive Committee will determine the support available from CODATA accordingly.**

As noted above, the Executive Committee judges that in consideration of CODATA's budget and the resources of the Secretariat, the optimal number of Task Groups that CODATA should have is **SIX**, with a maximum of **EIGHT**. A total of **EIGHT** Task Groups are recommended for endorsement below (assuming the two proposals on urban/cities data are merged).

Please note that in addition to the Task Group applications received, the Fundamental Physical Constant Task Group has been recognised as a standing initiative of CODATA since 2016 and thus was not requested to submit a proposal.

1. Creative Living and Aging through Cross-disciplinary Utilization of Data and Knowledge

Brief Summary of TG Objectives

This Task Group's objective is to develop technology to help people live and age well, maintaining their cognitive functions until the very end of life. To tackle this challenge, we need to develop new data-intensive science utilizing multiple domain data and knowledge. There exist cohort studies and large scale databases which study the aging process of humans but findings from statistics cannot necessarily be applicable to individuals. Healthcare services to maintain cognitive health are still not pervasive since the specification is unclear. There exist missing data and knowledge to fill the gap between existing knowledge and real world problems. It is not yet identified which data and knowledge to be collected prospectively and stewarded for both future science and healthcare services.

The Task Group members consist of domain experts on cognitive aging and gerontology, technology experts on analysis and assistive technologies which are applicable for healthcare data and knowledge, experts on promoting cross-disciplinary science through international collaborations.

Brief Summary of Reviews and Recommendations

Reviewers recognised the importance of the topic and that this could potentially form a valuable cross-domain use case for the Decadal Programme.

Numerous reviewers observed that the scope was too broad. It was questioned to what extent the proposed TG could or should engage with the assistive technologies, some are at very early stages of development and this may increase the scope beyond what is feasible and beyond CODATA's core interests. Although the activities and outputs are appropriate, the description of the issues is so broad it is hard to see what the content of these would be.

Any revised proposal should clearly emphasize what are the data challenges in this cross-domain area and how will the proposed TG help address these? Similarly, it was strongly recommended to narrow the scope and better targeting the outputs. The relationship with existing funded projects also needs to be clarified. Concrete recommendations were:

1) focus work plan and deliverables more tightly.

- 2) Increase involvement of the developing world.
- 3) Provide details of external funding and collaboration.
- 4) Provide breakdown on proposed use of CODATA funding.

It was also suggested that the proposers might organise a workshop in order to develop focus for a new proposal in 2023.

The Executive Committee recommends that this proposal is not endorsed as a Task Group, but that the activity should go forward as a Working Group, with support and engagement from CODATA to better define the topic and the scope of a potential Task Group.

RECOMMENDATION: DO NOT ENDORSE - TAKE FORWARD AS A WORKING GROUP

2. Data Ethics

Brief Summary of TG Objectives

Data Ethics Task Group's Objective is to develop a common understanding of concept and content of data ethics, and to release General Data Ethical Principles and CODATA Data Ethics Framework, which promote appropriate judgments and accountability when managing or using data under FAIR data principles, then promote it in some countries supported with AI solutions.

Realising that there are many concepts on data ethics, the TG aims to target 'unification' of the concepts with the ultimate goal to support realisation of the CODATA Decadal programme and via the Data Ethics framework help scientists make full and ethical use of data.

Brief Summary of Reviews and Recommendations

Reviewers widely recognised the topic as one of considerable importance. Through an appeal to the CODATA list, the proposers have managed to pull together a strong group of international experts with reasonable balance. One of the early objectives, to create an annotated bibliography/webliography on data ethics was very well received by reviewers. The participants include some members of the CODATA International Data Policy Committee, and that link needs to be strengthened and maintained.

Reviewers' main concern was that the TG proposal did not mention existing work and initiatives whose activities should be taken into account (a number were listed by reviewers and should be communicated with the proposers). Relatedly, the proposed TG faces a challenge of determining its niche and contribution in a busy and complex space. The importance of the topic is not disputed, but the specific contribution of CODATA and this proposed TG needs to be clarified. The proposed TG would clearly need to embark on a scoping phase and it should be determined whether this is appropriate.

The Executive Committee recommends that this proposal is not endorsed as a Task Group, but that the activity should go forward as a Working Group, with support and engagement from CODATA to better define the topic and the scope of a potential Task Group.

RECOMMENDATION: DO NOT ENDORSE - TAKE FORWARD AS A WORKING GROUP

3. Extension of InChI for Nanomaterials

Brief Summary of TG Objectives

The EU-funded NanoCommons has initiated a collaboration with the InChI Trust (U.K. non-profit) to develop a computer-readable code that would uniquely specify a nanomaterial while recognizing the inherent complexity of nano-objects with respect to chemistry, shape, size, surface conditions, and other factors. The proposed task group would further support this effort and accelerate general

acceptance of the new identifier by creating a partnership between the earlier CODATA WG on Nanomaterials with activities at the InChI Trust and IUPAC, specifically with the NInChI working group and the IUPAC Nomenclature Task Group. The project's foundation includes the successful and widely adopted International Chemical Identifier (InChI) and CODATA WG's Uniform Description System for nanomaterials (UDS) as well as the cumulative experience of global nanoinformatics initiatives. The major output of the project will be a fully-documented and tested Nano-InChI (NInChI).

Brief Summary of Reviews and Recommendations

This TG proposal was very well received by the reviewers. It was felt to be very strongly aligned with CODATA objectives. Although the primary focus of proposed TG is on NInChI (extending InChI for Nanomaterials) the implications and use touch a number of fields including environmental sciences, health, toxicity etc. The range of institutions and membership were praised as meeting

Nevertheless, it was also observed that it should be ensured that the TG develops links to relevant bodies within IUPAC. Contact has been made with a group dealing with nomenclature in the field, but the closest alignment within IUPAC is the Committee on Publications and Cheminformatics Data Standards. Links with IUPAC and the appropriate activities should be ensured. Further information should be requested about the workshops and the use of the funds.

RECOMMENDATION: STRONGLY ENDORSE

4. Towards a Paradigm Shift for Open Data in Planning Resilience Cities

Brief Summary of TG Objectives

This task group shall focus on studying the global data sharing policies and identifying the gaps, and recommending the good practices for open data to make cities resilient. As cities are dynamic phenomena, it is extremely important to have planned cities and have a good data repository that can help in making better lives. This task group will understand and analyze the best practices to enhance data sharing to improve the cities' decision-making. The study shall include the SWOT analysis of the data sharing policy, which has been adopted globally to build digital twins of megacities and carve out the best practices which can be adopted by developing nations to move efficiently towards opening up the government data. Additionally, this task group may eventually evolve into a consultation entity, available to institutions during their decision-making processes regarding prioritizing specific tasks.

Brief Summary of Reviews and Recommendations

The topic as such was very well received by reviewers. It aligns with the objectives (and existing activities) in the Decadal Programme. The work plan and deliverables were also well received, in particular: "Mapping of best practices on open data for resilience cities", "Mapping of international/regional data policies for resilience cities," and the "Roadmap for the civic communities and governments for opening up their data."

On the debit side, a number of reviewers observed that the proposal team needed considerably more geographic diversity to meet CODATA's objectives. The presentation and clarity of the proposal also needed improving.

A further challenge is that CODATA already has a Smart Cities Task Group, as well as a Resilient and Healthy Cities activity emerging from the Decadal Programme. Merging the two urban Task Group proposals would seem necessary.

The Executive Committee recommends that the two proposals for Urban Data related Task Groups are combined and would be endorsed as one Task Groups. The recommendation of endorsement is subject to agreement of a reasonable way of combining the objectives, activities and effort.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

5. Advanced mathematical tools for data-driven applied systems analysis

Brief Summary of TG Objectives

The objective of the Renewed Task Group is further development and refinement of the advanced mathematical toolkit developed by the TG members in 2019-2021 and its application to the problem area of resilience of sociotechnological systems (STSs) and critical infrastructures (CIs) including segments (energy, industrial production, information, banking & finance, transportation, etc.) that are affected by various distributed destructive impacts exacerbated by cascading effects. The refinement is required for adequate modelling and decision making regarding conditions caused by extreme events when management of an STS is constrained to use extra-large volumes of imperfect data, the primary items of which are incomplete and inconsistent. So the main task is to develop mathematical and knowledge engineering tools for operating with low-quality Big Data and, nevertheless, providing rational solution of complex Systems Analysis problems relating resilience of STSs and CIs. A refined mathematical toolkit could be used as an integration tool by other existing CODATA Task Groups:

- 1) FAIR Data for Disaster Risk Research;
- 2) Data Integration and Data Science for Urban Life and Smart Cities;
- 3) Improving Data Access and Reusability;
- 4) Agriculture Data and Knowledge for Learning and Innovation.

Brief Summary of Reviews and Recommendations

Reviewers observed that the outputs in the TG's first term were valuable, including an edited volume of articles and a very successful workshop. The topic aligns with the Decadal Programme and the success of the TG in helping broker collaboration with IIASA has been extremely valuable. The membership and partnerships are appropriate and strong.

The mathematical toolkit, central to the activity and originally slated as a first term deliverable, caused some uncertainty with reviewers, who recommended that it should be better defined, that its relationship to widely used data science platforms (e.g. R and Python, Mathematica and WolframAlpha) clarified, and that it should be documented and delivered in a shareable form. The Task Group should be encouraged to engage with Decadal Programme activities and with other Task Groups.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

6. Agriculture Data, Knowledge for Learning and Innovation

Brief Summary of TG Objectives

To coordinate efforts at every level to collect, analyze, and publish the agricultural research data needed for the Sustainable Development Goals (SDGs) and for reporting on progress against Malabo commitments ((CAADP framework (2015 to 2025)) in East Africa countries (EAC). The aim is to provide requisite information for biennial review discussions and for policy and program formulation on improving the quality, reliability, management and accessibility of agricultural research data in EAC. Further to strengthen the collection, management, and availability of agricultural research data in EAC based on an already developed strategic plan for strengthening agricultural and rural statistics (SPARS) and within CAADP processes.

Making agricultural research data available and usable will empower the different stakeholders (scientific and technical community) to make informed decisions, improve management capabilities, awareness, enhance adaptation and mitigate against potential risks. The group will be responsible for the review and harmonization of key agricultural research data and statistics for the EAC, and integration into the developed multi-year comprehensive National Agricultural Investment Plans (NAIPs) in EAC for sustainability. Additionally, to formulate proposals for improving the usability of existing agricultural research data, SPARS and eventually integrating new generated data as a framework policy.

Brief Summary of Reviews and Recommendations

The Task Group topic is aligned with CODATA objectives. The Task Group has done good work hitherto in mobilising activity, providing a focus for technical development and training and capacity building led by KALRO. The TG has become an important locus of activity in Kenya and members form the core of the Kenyan National Committee.

The work plan, focusing on training and capacity building, is laudable but a number of reviewers remarked that it seemed over ambitious. The work that the TG has done hitherto on the data platform and capacity building has been effective, but it would be good if they could engage also with issues of data science, stewardship, interoperability and reusability of data for practitioners and decision makers. It is strongly recommended that the Task Group extend its geographical scope and build more upon its international connections. Finally, the TG needs to be more proactive in communicating its good outputs, making sure the CODATA website is up to date and outputs are publicised, activities reported.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

7. Applying Data Integration and Data Science Tools toward Research of Urban Life and Smart Cities

Brief Summary of TG Objectives

“Mobility as a Service (MaaS) and the Design Challenge of Inclusion, Sustainability, and Data Ownership” is a framework of topics being developed. This framework also helps us define the smart city data domain. To achieve the TG goals the following is planned:

- Reasoning and design of a MaaS data system to stabilize traffic in flexible routine and open groups vs. personalized on-demand RoboTaxis. Data sharing in various scenarios in multi-stakeholder ecosystems.
- Taxonomy building: Attitudes and perceptions in social groups
- Data science education and training for Smart Cities Collaborating with Early Career Data Professionals (ECDPs)
- Organisation of events.

Brief Summary of Reviews and Recommendations

The objectives of this Task Group are very much aligned with the Decadal Programme and the TG members have made a number of valuable contributions to CODATA activities.

However, reviewers felt that the proposal needed further work and clarification. The workplan and the outputs were not sufficiently well presented or worked out. As one reviewer wrote: “The coherence between proposed activities, expected outcomes, and budget planning needs to be improved.” Beyond the hackathons and participation in international events, clarification is needed on the timeline of proposed activities and expected deliverables. Similarly further information about the members (and the roles they will play) and partnerships would be appreciated.

The chair has been very enthusiastic and has contributing to a number of CODATA activities and events. However, to be effective, the TG really needs a co-chair team, and needs to expand its engaged membership. Mentoring and support in the organizational and project management side of the TG activity will be needed. The relationship between this TG and the other Cities TG proposal needs to be considered.

The Executive Committee recommends that the two proposals for Urban Data related Task Groups are combined and would be endorsed as one Task Groups. The recommendation of endorsement is subject to agreement of a reasonable way of combining the objectives, activities and effort.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

8. CODATA–WDS TG on Data from Participatory Mapping for the SDGs

Brief Summary of TG Objectives

This Task Group (TG) builds on the results of the prior CODATA–WDS Task Groups on Citizen Science for Validation, Curation, and Management of Crowdsourced Data 2017-2018 and Aligning Citizen Science outcomes to the United Nations Sustainable Development Goals 2019-2021. The overall objective of the TG on Data from Participatory Mapping for the SDGs is to study data on environmental changes generated by participatory mapping projects and platforms for the specific requirements of the Result Framework proposed by the United Nations (UN) 2030 Agenda. Namely we focus on indicators associated with the Sustainable Development Goals (SDGs), especially Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) and other high-level policy frameworks, such as the Sendai Framework for Disaster Risk Reduction and the post-2020 biodiversity monitoring framework proposed by the Convention for Biological Diversity (CBD). The alignment facilitates and encourages the inclusion of participatory mapping in the official monitoring of the SDGs and other policies at local, national, and global levels. Our group is particularly interested in evaluating the use of Participatory Geographic Information Systems (PGIS) data for underrepresented groups in relation to global environmental challenges.

Brief Summary of Reviews and Recommendations

The topic is very important and appropriate. The TG provides an excellent area of collaboration with WDS. The activities and deliverables have been extremely good. Reviewers consider the work plan to be appropriate and the deliverables good.

The TG is well organised and supported. The membership is strong with good representation. The evolving leadership is also a very positive feature.

RECOMMENDATION: STRONGLY ENDORSE

9. Digital Representation of Units of Measurement (DRUM)

Brief Summary of TG Objectives

The objective of this task group is to work with the International Science Unions to raise awareness of, educate, and enable their communities in the understanding and implementation of digital unit representation. This will be done with reference to each of the three objectives of the CODATA Decadal Programme, namely:

1. Enabling Technologies and Good Practice for Data-Intensive Science
2. Mobilising Domains and Breaking Down Silos
3. Advancing Interoperability Through Cross-Domain Exemplary Case Studies

Each of the above objectives can be addressed by awareness of the different units of measurement representations that are currently available (see the inventory developed in the 2018 - 2021 TG).

This, coupled with the movement toward FAIR data, will be used to promote the idea that units of measurement are not second class citizens in science, but rather the most important aspect of what is needed to make data FAIR.

Brief Summary of Reviews and Recommendations

This Task Group has made excellent progress in an important but complex area. The topic is of fundamental importance to the objectives of the Decadal Programme. Through its outreach to Unions, the TG has helped CODATA in fulfilling this part of its mission and has raised awareness in the ISC community. The TG has also helped strengthen CODATA's links with BIPM.

The TG team itself is small but very active. Broadening the active membership in addition to more regular involvement of the Ambassadors would be worthwhile.

RECOMMENDATION: STRONGLY ENDORSE

10. FAIR Data for Disaster Risk Research (FAIR-DRR)

Brief Summary of TG Objectives

FAIR-DRR is an increasingly important activity linking and ensuring coherence of major global milestones – the Sendai Framework for Disaster Risk Reduction, SDG, Paris Agreement for Climate Change and the New Urban Agenda. Although large amounts of data exist today, they are typically dispersed geographically, owned by various entities including government agencies, research centres, community groups and, sometimes, individuals around the world, lacking standards, interoperability, and accessibility, making them difficult to access and utilise for research, assessment and policy decision. Therefore, there need to be clear processes in place for ensuring that data are accessible and available following the FAIR principle for disaster and climate risk management. In 2015, the CODATA task group FAIR Data for Disaster Risk Research (FAIR-DRR, formerly called LODGE) was established to study the mechanism for connecting such data and data networks to enable easier and faster discovery, access and creating positive impact in the society.

Following objectives are proposed for the 2022-2023 term (fifth term of the TG):

- Volunteer Rapid Disaster Monitoring and Mapping in collaboration with Earth-GEO
- Enhance interdisciplinary data integration using FAIR-DRR's sequence, partnership with other networks and documenting good practices.
- Engage with users and sectors for greater alignment and consistency of hazard definitions, standardisation of data loss quantification and risk assessment
- Demonstrate transdisciplinary approaches linking sectoral professionals to identify future emerging and complex research using data
- Capacity building using monthly newsletters, policy papers, conferences, webinars and white papers.

Brief Summary of Reviews and Recommendations

The proposal was very well received by reviewers. This has been a consistently excellent group, doing important work and is an integral part of the Decadal Programme. The work plan and deliverables are strong.

It was recommended that the TG use its success to engage more with ECRs. Linkage with the newly formed GOSC Case Study will be important and has been established.

RECOMMENDATION: STRONGLY ENDORSE

11. Improving Data Access and Reusability (IDAR)

Brief Summary of TG Objectives

The scientific tradition has a rich history of uncovering the universe's secrets by extracting (rescuing) information from past records. The TG is focused on the refinement of these rescue activities into resources and methods to speed the time to solution for researchers and other stakeholders worldwide.

The objective is to directly address one of the more common problems in the modern scientific enterprise: Attempting to do research without the necessary data, or being challenged by data that are not fit for purpose for a variety of reasons. In the last 18 months, our task group has refocused our goals to emphasize efficiency, awareness, and active adoption of leading practices through published articles and engaging workshops.

Our activities from this point forward will fall into three basic categories: Initiate, Consolidate, Disseminate.

We will initiate activities that will be coordinated with related task groups to highlight pre- or post-production data rescue events, advertised through the CODATA website. Information from these events will be consolidated and organized as a resource (dissemination) on the IDAR-TG page, thereby raising the overall visibility of CODATA's site, and branding it as the "place to go" for data rescue guidelines and information.

Brief Summary of Reviews and Recommendations

The topic of the TG is extremely important and an area in which CODATA has interest for some time, but with mixed results. The shift in focus more explicitly towards data rescue has been well-received by reviewers. The expanded membership, the focus on ECR engagement and on 'do-athons' is also welcome.

The existing co-chair team found it very difficult to deliver on the previous set of activities due to the pandemic. Some TGs thrive in a world without the promise of a face-to-face meeting in six months, others did not and this TG falls into the latter category. CODATA would need very strong reassurance that the co-chairs were committed to the activity. The co-chair team has been broadened which is welcome. The membership needs to be fully engaged and even more geographic diversity would be welcome. The shift to do-athons is welcome and promising, but the TG should not move entirely away from the long term objective and need for guidance on data rescue as well as mobilisation.

One balance the recommendation of the Executive Committee is to endorse subject to the conditions stated above and to give the new co-chairs team an opportunity to take forward the revised set of activities.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

12. Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD)

Brief Summary of TG Objectives

In responding to the "Open Data in a Big Data World" –An International Accord issued by ISC, IAP, ISSC and TWAS and the Open Science for SDGs of the United Nations, the PASTD task group pays more attention to the implementation of the International Accord in/for/with developing countries.

Task Group objectives:

- Promote strategy, policy and institutional guidelines for implementation of open data principles in developing countries, especially in low and middle income countries (LMIC).
- Provide an interdisciplinary forum for enhancing capacity building and sharing best practice in developing countries.
- Advance data publishing driven open science for SDGs, especially focused on the Goal 1, 2, 13 and 15 in developing countries.

- Enhance international communications during and post COVID-19 pandemic.

Brief Summary of Reviews and Recommendations

The objectives of the TG are important and it has a (very long) track record. The TG obtains significant financial support from CAS. Many of the TG workshops, historically, have been very successful and milestone (particularly the 2014 Nairobi Workshop).

However, the basic objectives and activities of the TG have remained the same for some time. The Global Change Research Data Publishing & Repository is long established and maintained by IGSNRR CAS. The 'Geo Museum' is worthy, but niche and has changed little for many years. The recent collaboration with IGU was very positive but the untimely death of R.B.Singh means this will need to be renewed. The participant list supplied is long out of date and contains names of people who have withdrawn from the activity.

Although the TG has contributed a great deal historically, there is a considerable need for renewal, new leadership, new membership and an update to the approach. The core workplan has stayed the same for a number of years now and needs to be updated. The TG has been reluctant to embrace new policy and guidance developments (Open Data in a Big Data World, FAIR etc) and collaborations (AOSP, Data Schools). The policy proposals rest on the Nairobi Declaration of 2014, an output of the TG itself. Although this was at the time a solid contribution to discussions, it has been superseded by numerous other statements from CODATA and elsewhere. The TG has shown a reluctance or inability to modernise and to move with the times. Similarly, the TG needs to link more with other data skills activities, particularly the Data Schools. The TGs communication and reporting is lagging and there is a need to publish concrete outputs: curricula, training materials, reports on the workshops etc.)

The Executive Committee's recommendation is that this Task Group is not endorsed. Given the length of time that the TG has been in existence, the reluctance to update the approach and the limited communication, the Executive Committee does not think the proposal makes a compelling case. Furthermore, it is a good idea regularly to refresh and renew CODATA's Task Groups: they must move with the times. The Executive Committee, nevertheless, recommends that discussions are held to see whether there are mechanisms to continue the training activities as an initiative endorsed by the Chinese National Committee, as a partnership between National Committees and Unions or otherwise.

RECOMMENDATION: DO NOT ENDORSE

Summary of Executive Committee Recommendations in an Ordered Table

1	Digital Representation of Units of Measurement (DRUM)	STRONGLY ENDORSE
2	Extension of InChI for Nanomaterials	STRONGLY ENDORSE
3	FAIR Data for Disaster Risk Research (FAIR-DRR)	STRONGLY ENDORSE
4	CODATA–WDS TG on Data from Participatory Mapping for the SDGs	STRONGLY ENDORSE
5	Advanced mathematical tools for data-driven applied systems analysis	ENDORSE SUBJECT TO CONDITIONS
6	Agriculture Data, Knowledge for Learning and Innovation	ENDORSE SUBJECT TO CONDITIONS
7	Applying Data Integration and Data Science Tools toward Research of Urban Life and Smart Cities	ENDORSE SUBJECT TO CONDITIONS: AND MERGER
8	Improving Data Access and Reusability (IDAR)	ENDORSE SUBJECT TO CONDITIONS
9	Towards a Paradigm Shift for Open Data in Planning Resilience Cities	ENDORSE SUBJECT TO CONDITIONS: AND MERGER
10	Creative Living and Aging through Cross-disciplinary Utilization of Data and Knowledge	RECOMMEND TO BE WG TO SCOPE TOPIC
11	Data Ethics	RECOMMEND TO BE WG TO SCOPE TOPIC
12	Preservation of and Access to Scientific and Technical Data in/for/with Developing Countries (PASTD)	DO NOT ENDORSE