



CODATA Executive Committee Recommendations Regarding Task Group Proposals 2023

Task Groups are an important means through which CODATA delivers on its mission and Strategic Programme. 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.

[The 2023 call for Task Groups](#) encouraged that the proposed Groups contribute to one or more of the four strategic priorities described in the CODATA Strategic Plan 2023-2027 ([draft approved by the Executive Committee](#) and published in May 2023).

1. Making Data Work for Cross-Domain Grand Challenges: a programme of activity to help deliver areas of the ISC Action Plan.
2. Data Policy: promoting principles, policies and practices for FAIR Data and trustworthy, equitable and transparent science.
3. Data Science and Data Stewardship: advancing the frontiers of the science of data, particularly to enable interoperability and reusability.
4. Data Skills: building capacity for trustworthy, equitable and transparent science and data stewardship by improving data skills and education.

For the CODATA General Assembly in 2023, a total of **ten** proposals are considered. Details of the proposals can be found in the [‘Summary of Task Groups Proposals 2023’](#) document, distributed to the Delegates together with these Recommendations.

Five proposals for new Task Groups were submitted:

1. Task Group For Coupled Cross-Domain Interoperability
2. Data Systems, Tools, and Services for Crisis Situations Working Group (DSTS_CS-WG)
3. Advancing Data Science for Sustainability
4. Geographical Indications Environment & Sustainability (GIES)
5. The role of integrity in data and AI science, ethics, and policy (Integrity-TG)

Two existing Working Groups applied for a status of a Task Group:

6. Data Ethics Task Group (DETG)
7. Data driven social change towards society promoting cognitively healthy ageing

Three existing Task Groups applied for renewal:

8. Citizen-generated data for the SDGs
9. Digital Representation of Units of Measurement (DRUM)
10. FAIR Data for Disaster Risk Research

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 per annum, for 2024 and 2025, 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. Additionally, it is recommended that ONE proposal is accepted as a Working Group.

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.

Summary of Executive Committee Recommendations in an Ordered Table

10	FAIR Data for Disaster Risk Research (FAIR-DRR)	STRONGLY ENDORSE
8	Citizen-generated data for the SDGs	STRONGLY ENDORSE
2	Data Systems, Tools, and Services for Crisis Situations Working Group (DSTS CS-WG)	ENDORSE
3	Advancing Data Science for Sustainability	ENDORSE
4	Geographical Indications Environment & Sustainability (GIES)	ENDORSE
6	Data Ethics Task Group (DETG)	ENDORSE
9	Digital Representation of Units of Measurement (DRUM)	ENDORSE SUBJECT TO CONDITIONS
7	Data driven social change towards society promoting cognitively healthy ageing	ENDORSE SUBJECT TO CONDITIONS
5	The role of integrity in data and AI science, ethics, and policy (Integrity-TG)	ENDORSE AS A WORKING GROUP
1	Task Group For Coupled Cross-Domain Interoperability	DO NOT ENDORSE

1. Task Group For Coupled Cross-Domain Interoperability

Brief Summary of TG Objectives

The issue the Task Group is addressing is the Coupled Cross-Domain interoperability. Coupling of Cross-Domain interoperability introduces a significant change in the data management and data processing of cross-domain interoperability. With respect to Data Management, there have been proposals on Cross-Domain Interoperability Framework (CDIF) and FAIR IMPLEMENTATION PROFILES (FIP) which need to be modified to accommodate the coupling factor. With respect to Data processing, current Cross-Domain hazard processing is sequential. The simulation of complex hazards can not be processed by sequential ordering. A novel data processing method is required for coupled cross-domain Interoperability hazards and the TG aims to address these issues.

Brief Summary of Reviews and Recommendations

The reviewers' overall rating of the proposal was on the lower end. They noted that the objectives and issues to be addressed by the TG were not clearly explained and that the TG proposal may be coming too soon.

Cross-domain interoperability is a core aspect of the CODATA strategic plan and the consequent activities that are being undertaken as part of the implementation of that plan.

The concept of cross-coupled hazards is an interesting one, and this should give pause for thought about the degree to which we need to examine and plan for events of this kind. Since there is a range of possible hazards, the number of possible coupled combinations is very large. This task group proposes to examine the combination of earthquake and flooding. Why this combination was selected is not explained. The reviewers recommended an assessment of the most likely combinations and their scales to be carried out first in order to judge where work should begin, and what level of resources should be applied. They therefore noted that the TG (with a wider membership) would be better to focus on examining the probabilities and potential impacts of different hazard combinations.

It was also observed that given the rather short time-frame proposed, the planned outputs seem rather vague and should be better defined. Software, reports and journal articles are all mentioned, but there is no detail on planned content what role each deliverable plays in furthering the CODATA plan.

It was also noted that there seems to be little specification of likely collaborators. Even within the context of the identified coupled hazard combination, there is little indication of collaboration with groups/organisations knowledgeable about the given hazards. When it comes to the proposed TG membership the reviewers recommended that better geographic diversity should be strived for to be able to address the global implications and a large number of hazard combinations and places where they may occur.

While the requested funding of 8K Euros seems reasonable the reviewers noted that justification of the budget was lagging.

The Executive Committee recommends that this proposal is not endorsed.

RECOMMENDATION: DO NOT ENDORSE

2. Data Systems, Tools, and Services for Crisis Situations Working Group (DSTS_CS-WG)

Brief Summary of TG Objectives

This task group is proposed as a joint collaboration between RDA and CODATA for a Data Systems,

Tools, and Services for Crisis Situations Working Group (DSTS_CS-WG). It arises out of a widespread set of activities and interests in RDA and CODATA that have developed through close interaction with leading international, regional, and national organisations playing prominent roles in crisis preparedness and response, and rebuilding architecture, crisis governance, and the management of crisis situations as outlined below in the Background.

The principal objective of DSTS_CS-WG is to create a listing of the specific data-related needs and challenges arising during crisis situations mapped to data systems, tools, and services (DSTSs) indicating their applicability, interoperability, and utility, with reference to the data value chain.

The following specific objectives will be pursued by the DSTS_CS-WG:

1. identifying the digital tool needs and challenges by first responders, field workers, scientists, lab personnel, policymakers, national authorities, and communities during crises;
2. identifying the DSTSs requirements to achieve interoperable, high-quality data, and easy to communicate information for crisis management;
3. identifying DSTSs characteristics and attributes needed in their design, development, and deployment in crisis situations for the reliable and effective collection, analysis, and dissemination of information with reference to the data value chain;
4. mapping these to the more general characteristics for Research Commons as provided by e.g. the RDA GORC IG and FAIRSharing; and
5. developing a recommendation specifying the characteristics of DSTSs required to meet the needs and address the challenges in crisis situations.

A Case Statement has been prepared for RDA but not yet submitted. It is still in consultation.

Brief Summary of Reviews and Recommendations

Proposal overall rating was high and the reviewers deemed it to be highly commendable.

The reviewers noted that the proposed work was somewhat ambitious with 18 months to develop a recommendation on how to effectively use data for crisis situations, including technique issues, data interoperability issues and policy, legal issues, etc. This proposal might have some overlap with the existing TG of FAIR data for Disaster Risk Research. To address the issue of limited time and resources of the proposed TG, one of the reviewers suggested that the TG shall mainly focus on policy issues.

It was also unclear from the proposal what type resources RDA would allocate to support the joint work, if the Groups meets requirements of RDA to become a Working Group. [Secretariat note: the proposal has been approved as an RDA WG and the co-chairs are applying for support from the RDA Tiger project.]

The cross-domain data usage for Disaster Risk Reduction is one of the most important global challenges and a top priority for CODATA's strategy. Both challenges and solutions, as well as milestones, are clearly described in the proposal.

When it comes to collaboration, it was noted that the proposal sufficiently covers cooperation outside CODATA in this area, including the UN, RDA and others, but that it does not describe the relationship and distinction between the existing CODATA TG, FAIR-DRR. It was also recommended that the TG may also explore ways to engage also with the ISC IRDR, also as means to seek additional resources.

Suggested membership was viewed as appropriate to initiate the work and the reviewers recommended to involve representatives from the three use cases in due course to achieve broader engagement and diversity.

The reviewers commented on funding opportunities of this Task Group (also given the ambitious set of deliverables) and that it shall also seek additional resources outside of the support that may be provided by CODATA.

The Executive Committee recommends that this proposal is endorsed.

RECOMMENDATION: ENDORSE

3. Advancing Data Science for Sustainability

Brief Summary of TG Objectives

The task group “Advancing Data Science for Sustainability” has the overarching objective to enhance the knowledge and awareness of approaches on data science for sustainability and to impact the process of decision-making on data science for sustainability challenges. Equipped with this objective, the task group aims to prepare the ground for the envisioning, planning, and executing of initiatives and projects on the development of a sustainable future. Herein, the task group strives to cover the broad variety of sustainability aspects which are depicted by the United Nations Sustainable Development Goals (UN SDGs).

The knowledge of approaches on data science for sustainability will be enhanced by performing a survey on the past, present, and future initiatives on data science for sustainability which includes the involvement of young scientists in the creation of the survey.

The findings will be given to stakeholders in the format of recommendations ensuring evidence-based decision-making concerning the advancement of data science for sustainability.

Furthermore, the task group will distribute best practices and recommendations to the scientific community to raise awareness and knowledge for initiatives of data science for sustainability.

To ensure the inclusion of existing information, the task group aims to collaborate with the CODATA-WDS Task Group on Data from Participatory Mapping for the SDGs and other task groups that have worked on the UN SDGs or any other aspects of data science for sustainability.

Brief Summary of Reviews and Recommendations

The proposal was highly rated and aligns strongly with CODATA's strategic objectives in the area of ‘Making data work for cross-domain grand challenges’. The proposal outlines a comprehensive strategy to bolster data science for sustainability, aligning with the UN SDGs and CODATA's vision. By conducting a comprehensive survey involving young scientists, it aims to deepen understanding of past, present, and future initiatives. The emphasis on evidence-based decision-making, stakeholder engagement, and collaboration with relevant task groups highlights its practicality. The proposal's commitment to sharing findings as recommendations and best practices underscores its intent to drive positive impact. Overall, this proposal demonstrates a well-structured approach to enhancing awareness, knowledge, and actionable steps within the realm of data science for sustainability, fostering a collaborative and informed pathway towards a more sustainable future.

Conducting and evaluating the proposed survey was noted as a very sound prerequisite for the development of a white paper. Such a white paper could then constitute a real long-term contribution, provided that the recommendations are specific enough and that they are communicated clearly enough to relevant decision-makers.

The work plan could be improved by stating explicitly some of the actual stakeholders, key decision-makers and planned communications to raise awareness of the white paper. Also, the work plan should better specify estimated personnel resources needed to carry out the work of the Task Group.

The proposal highlights the TG plan to collaborate especially with the CODATA-WDS Task Group on Data from Participatory Mapping for the SDGs which is a previous CODATA task group. It may be useful to explore how the two task groups could efficiently work together, also to ensure synergies in approaches and eliminate potential overlaps of their work. The proposed collaboration with the Young Academies & Associations of the ISC, IYBSSD was viewed as an excellent idea. The TG may also wish to collaborate closely with CODATA Connect early career network.

The Task Group consists of highly qualified members from a variety of relevant organisations. There is an excellent balance between young scientists and very experienced professionals. Both genders are

adequately represented. All reviewers commented on the lack of representation from the global south to ensure a truly global and inclusive perspective. The TG should address that shortfall. It appears that the proposed Task Group does not anticipate the need for financial support from sources other than CODATA International. The proposal contains no suggestions for direct monetary external contributions. Nevertheless, the employers of the Task Group members are expected to allow sufficient time to be spent, which can be regarded as an indirect form of funding of the group's activities.

The Executive Committee recommends that this proposal is endorsed.

RECOMMENDATION: ENDORSE

4. Geographical Indications Environment & Sustainability (GIES)

Brief Summary of TG Objectives

The objectives of the proposed task group are:

- Enhancing open science by integration of geo-bio-eco-socio (culture) diversities for SDGs (SDG 1, 2, 6, 15);
- Accelerating case studies focused on challenges and solutions for SDGs (SDG 1, 2, 6, 15) using data driven technology including GIS, Remote Sensing, data mining and internet of things;
- Supporting the data technology transformation and capacity building for SDGs in developing countries, small islands and ecosystem critical regions;
- Demonstrating the coordination methodology among stakeholders for SDGs (SDG 17), particularly among scientists, decision makers and private sectors.

Brief Summary of Reviews and Recommendations

The TG proposal was overall highly rated by the reviewers while noting its alignment with CODATA's strategic priorities and the draft Strategic Plan 2023-202, and is particularly relevant to Strategic Objective 1) Making Data Work for Cross-Domain Grand Challenges and 4) Data Skills.

The proposed deliverables, including a cluster of over 40 GIES cases, comprehensive datasets, data papers, articles, and an online open science platform, offer substantial merits. Short-term benefits encompass immediate access to practical case studies, supporting data, and educational resources. In the long term, these contributions foster sustainable development practices globally, aiding policy formulation, research advancements, and cross-disciplinary collaboration. The task group's efforts can catalyse informed decision-making, promote eco-economic equilibrium, and fortify international partnerships, significantly advancing green development initiatives and aligning with CODATA's mission of advancing open data practices for societal betterment.

The proposal addresses the need for GIES data utilisation in post-COVID-19 recovery and climate change adaptation. By focusing on green development, socio-economic balance, and international cooperation, TG-GIES tackles timely and significant challenges. The group's involvement in FAO OCOP, RCEP, WFEO, and GIES 2021-2030 Action Program highlights its relevance and potential impact. It was though recommended that the Task Group specified further in their work plan their planned interactions with the FAO programme.

The work plan itself appears to be well-structured and ambitious, and while there are already 'case studies' available, the plan is to develop up to 40 or more 'GIES' cases. It was commented on the fact that the plan should better address what comprises these cases and how precisely they operate. The exact structure of the 'cases' should also be specified, i.e. what does a completed GIES case look like (structure, practical outputs).

There is a strong capacity building element, with training workshops in several localities.

In terms of most significant short-term benefits, the proposed Task Group activities will contribute to mitigate a major gap on how to scientifically trace geographical origins and monitor the quality of

geographical environment of Special Agricultural Products (SAPs) connecting production, production environment, marketing and consumers of SAPs for effective FAO's One Country One Priority Product Initiative implementation at country level.

In terms of long-term benefits, it will contribute to the acceleration of UN SDG implementation, especially SDG1, 2, 6, 15 and 17, and FAO's Strategic Objectives and Better Production, Better Nutrition, Better Environment and Better Life.

When it comes to the TG membership it was noted that a substantial number of Chinese scientists on the team and that engagement of participants from South Asia, Southeast Asia, and Middle East could also be explored. While it was difficult to confirm the proportion of female members from the list provided with the proposal the TG is strongly encouraged to ensure an adequate gender balance.

The budget allocation and secured external financial support demonstrate a well-structured funding plan for the proposed task group. Multiple sources, including CAST, GSC, IGSNRR/CAS, ANSO, and AOGEO, provide a diverse funding base, indicating strong commitment. The in-kind support from FAO, ICIMOD, and ministries of Agriculture in Cambodia and Papua New Guinea further enrich the available resources. The location and timing of the workshops and exhibitions that shall be funded from the CODATA budget should be specified.

The Executive Committee recommends that this proposal is endorsed.

RECOMMENDATION: ENDORSE

5. The role of integrity in data and AI science, ethics, and policy (Integrity-TG)

Brief Summary of TG Objectives

This proposal for a CODATA Task Group on 'The role of integrity in data and AI science, ethics, and policy' (Integrity-TG) arises from the increasing importance of data and AI in multidisciplinary, cross-domain research involving large data assets for the purpose of advancing responsible progress toward the international research community's shared scientific challenges. Research integrity, including the integrity of the data and the use of AI, is required to maintain trust, address ethical challenges, inform policy and regulation, foster interdisciplinary collaboration, and provide a long-term vision for responsible and ethical data and AI practices.

This TG will reflect on the need for long-term planning in the rapidly evolving field of data and AI. It will give particular attention to working across disciplines on understanding current data and AI societal and governance trends while anticipating future challenges. The group will build on the work of the ESOC-Future/RDA Working Group on Artificial Intelligence and Data Visitation (AIDV-WG) and its outputs (guidance on legal frameworks, informed consent, ethics review, and an AI Bill of Rights) to provide forward-looking recommendations that can help shape the role of data and AI stewardship and guide research agendas according to the objectives of the the ISC CODATA Making Data Work for Cross-Domain Grand Challenges: the CODATA Decadal Programme. The integrity and ethics focus is intended to support CODATA's mission of connecting data (and AI) to individuals and society in ways that advance science and improve our world.

Brief Summary of Reviews and Recommendations

The proposal rated relatively high and could be a very good candidate for a new CODATA Group. The proposed work outlines a unique angle on AI ethics and thus would be a valuable addition to the CODATA portfolio and complement other initiatives. It was noted that the proposal is focused on the RDA and EOSC Future community and broader participation and outreach was strongly recommended by the reviewers. The reviewers commented also on the fact that the aspect of integrity of data as a feed into AI models is significantly underrepresented in the arguments. Not only should data be ethically used, but the feed of the data (which is not equal to high quality, let alone to

'correct' representation of reality) is the lack of conceptual models coming along with the data. It was recommended that experts in this field be involved.

The proposed deliverables were noted as rather ambitious for a 24 months plan and the level of funding of the TG. It may not be feasible to deliver full lone standing deliverables, if that was the intention described by the proposal, and partial contributions with e.g. training on the aspects described as the core focus of this group may be more feasible.

The proposed collaboration includes a good selection of CODATA groups, but as mentioned earlier, the primary place for recruitment of further members appears to be RDA and EOSC Future [Secretariat note: which is a project about to end], although the membership will be open. This was somewhat confusing for the reviewers. It was also noted that the proposal only indicates the first 3 members (who are also the intended co-chairs) of the TG. Adequate engagement of additional CODATA communities as well as other organisations globally should be strongly encouraged to ensure broader 'embedding'.

Specification of the requested budget and the plan to obtain additional resources to fund the proposed work is not sufficiently addressed by the proposal.

The Executive Committee recommends that this proposal is accepted as a Working Group to further explore this important topic.

RECOMMENDATION: ENDORSE AS A WORKING GROUP

6. Data Ethics Task Group (DETG)

Brief Summary of TG Objectives

Taking into account the CODATA Strategic Plan on Cross-Domain data-driven innovation and the UNESCO Recommendation on Open Science the proposed CODATA Data Ethics Task Group (DETG) will work towards contributing to CODATA's priority on Data Policy through promoting principles, policies and practices for FAIR Data and trustworthy, equitable and transparent science. The DETG will focus on the development of a data ethics framework, co-produced with the CODATA community.

The aim of the DETG is to provide advice to CODATA, including the International Data Policy Committee, on current data ethics issues, in areas such as scientific integrity, protection of personal data, indigenous data sovereignty, computational uses of data, including AI and machine learning, and equality, diversity and inclusion.

This aim will be achieved through the following specific objectives:

- Bringing together a diverse, international group of scholars from across disciplines with an interest in data ethics;
- Raising awareness of issues across stakeholders including funders, researchers, publishers, research subjects and the public, through workshops and high-level briefings;
- Investigating current awareness and practices through a survey and case studies;
- The production of the first edition of a CODATA framework of data ethics principles which lays out principles for ethical data use in science.

Brief Summary of Reviews and Recommendations

This Task Group (TG) proposal comes from an existing [CODATA Working Group \(WG\) on Data Ethics](#) and will be co-chaired, if formed, by the two co-chairs of the current WG. The proposal touches on some of the general issues of data ethics, such as scientific integrity, protection of personal data, indigenous data sovereignty, computational uses of data, including AI and machine learning, and equality, diversity and inclusion. The proposal could, however, discuss specific cases or trends of

unethical data collection and use and be more targeted. The TG suggests developing a data ethics framework co-produced with the CODATA community.

The Group's work is relevant to the CODATA strategic priority 1) Making Data Work to Improve our World and 2) Data Policy. The proposed TG should align with the existing and planned work of the International Data Policy Committee (IDPC).

The proposed Task Group activities include a survey and consultation with CODATA communities. Briefing papers are planned at the start of TG activities. A glossary of definitions of key terms, as well as about 5-10 briefing papers on ethics issues, are planned. The focus of the briefing papers is yet to be identified.

It was noted that the TG should provide more detail on the planned approach for each stage. It may benefit the TG work if it was organised in a way that each stage delivers concrete published output showcasing intermediary steps towards developing the final framework.

The Task Group plans to work with CODATA's IDPC and the WorldFAIR project and plans to complement the previous work of the Data Ethics WG. The proposal does not mention collaboration with other organisations or groups. Additional strategic collaborations with organisations (e.g. OECD, United Nations Development Group (UNDG), RDA groups) should also be forged to avoid duplication of work.

The Task Group is formed by a multidisciplinary research team. However it is observed that there are very few members from the 'Global South'. The TG lacks participants from South Asia, Southeast Asia, and the Middle East.

The requested funding seems reasonable and aligns with the planned deliverables.

The Executive Committee recommends that this proposal is endorsed.

RECOMMENDATION: ENDORSE

7. Data driven social change towards society promoting cognitively healthy ageing

Brief Summary of TG Objectives

This Task Group's objective is to realise data driven social change towards a cognitively healthy ageing society through exploring data issues for the purpose of developing technology to help people live and age well, with special focus on maintaining cognitive functions until the very end of life. To tackle this challenge on cognitive ageing, we need to develop new data-intensive science utilising multiple domain data and knowledge. We will discuss the following topics: What are the data issues in relation to studying cognition? What data is gathered, what issues of access and interoperability are there? What are the issues of combining multiple data sources? How can cognition be understood from various data sources? How does lifestyle affect cognition and vice-versa? Which data to be collected by industries, academia, governments, or all? How should they be processed and shared to give feedback to individuals and stakeholders? How should they be utilised for policy making? Based on these discussions, we may propose recommendations to realise data driven social change.

Brief Summary of Reviews and Recommendations

This is a solid proposal, but can be improved in its membership, description of key organisational links, and description of the objectives. The proposers may also wish to consider shortening the TG name itself. It nonetheless would be a valuable addition to CODATA's portfolio of TGs.

It was recommended that the first sentence of the TG description is broken up into two sentences for easier comprehension. The proposal describes 3 areas of CODATA's strategic priorities that converge with the TG's objectives.

A reviewer observed that:

- The fact that this TG emanates from Japan is a major plus as the Japanese are a prime example of an ageing society in the Western hemisphere.

- One of the major impacts of this TG will be to build awareness of an important and growing challenge of an ageing society.
- It should make recommendations on which data should be collected. The focus on data stewardship in institutions is a major plus.
- Attention should be paid to privacy issues in the use of data for which there will be major confidentiality issues.
- As well, there needs to be awareness of possible harm done by using tools which give a faulty diagnosis.

The TG proposes to organise 2 workshops, an IDW session, to publish an article, and recommendations. Although ambitious, the proposed seems to be feasible, timely, and important. The deliverables are specific and address a data area that may be underserved. The foreseen impacts of the deliverables, as listed by one of the reviewers will be 1) building an awareness of the issues associated with an ageing society; 2) identifying existing data sources that can be brought to bear on the issues; 3) identifying data gaps; and 4) should also identify the benefits of an ageing population. The reviewers also noted that the question of collaboration with other relevant organisations could be addressed explicitly. While there is a fairly extensive members list, likely coming from relevant organisations, this should be elaborated on. It was also recommended that the TG ensures close collaboration with data stewardship and data privacy experts.

Although there appears to be very broad country coverage and expertise, there are two apparent deficiencies when it comes to the TG membership: 1) that there are no young researchers expressly identified in the proposal and 2) there are no members that come from the southern hemisphere. This seems especially problematic in that the proposal identifies the cognitive deterioration of ageing populations in LMICs as particularly acute. If the proposal is endorsed, the membership revision should be a condition that the TG should be asked to fulfil.

Funding from other sources appears to be sufficient and the amount requested from CODATA is modest. The funding requested of CODATA focuses on early career professionals.

The Executive Committee recommends that this proposal is endorsed subject to conditions. The Executive Committee recommends that this TG is endorsed but more attention be paid to privacy and ethical issues and the membership be broadened geographically, particularly to include the southern hemisphere.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

8. Citizen-generated data 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, Aligning Citizen Science outcomes to the United Nations Sustainable Development Goals 2019-2021, and Participatory Mapping for the SDGs 2021-2023.

The overall objective of the TG on Citizen-Generated Data for the SDGs is to support the use of citizen-generated data for 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). Our group is particularly involved in providing guidance for the UN Statistics Division on characteristics, quality, ethics, and sustainment of citizen-generated data. Our engagement supports

the development of a framework for communities and NSOs to engage on citizen-generated data in the official monitoring of the SDGs.

Brief Summary of Reviews and Recommendations

Proposal is overall highly rated. The TG is a continuation and expansion of three previous terms of the TG (2017-2019, 2019-2021, 2021-2023). The TG co-chairs (with some change in the leadership over the years) have been working stably in bringing out research articles and organising conference sessions. The current proposal seems to emphasise collaborations with various UN agencies in the area of citizen science (CS) for sustainable development monitoring. TG aims to contribute by exploring different practices of using CS across different domains and jurisdictions. They aspire to produce several outputs which seem feasible and with a concrete impact.

This proposal is relevant to three of four CODATA's strategic objectives and plans to contribute in the following manner:

1. Making Data Work for Cross-Domain Grand Challenges: SDG progress monitoring is by definition a cross-domain endeavour.
2. Data Policy: Currently, to the evaluator's knowledge, a unified framework for using CS data is missing and this TG will contribute to the development of a framework for evaluation of data quality in line with Open Data and Open Science.
4. Data Skills: The planned activities of this TG incorporate capacity building in their subject area.

Rather ambitious work plan. It was noted that there is a mistake where the International Data Week conference is mentioned to be 2024 opposed to 2025. The work plan lists a planned presentation at the conference.

The past editions of the TG have produced research articles and organised conference sessions. The current edition plans to do the same. For long-term benefits, the deliverables seem less clear.

The intended outputs of this TG are adequate to the intended impact; TG members have experience of producing similar outputs in the past. Publications and presentations produced by this TG in the previous cycle are highly relevant both for its objective and for CODATA's mission. They combine research on the use of CS for SDG monitoring, capacity enhancement, and producing and delivering relevant advice for policy.

The main collaboration that this TG intends to pursue is with UNSD, which makes a lot of sense. There are of course other UN and other agencies which might be interested in this work, such as SDSN or others. It is understood that ambition should match resources available and in this sense, I think the focus on UNSD is the optimal choice. Perhaps in addition, the TG could set a modest goal to explore other possible collaborations, including but not limited to those with grassroot communities.

The confirmed members of this TG possess relevant expertise and experience in using citizen science in environmental research. One TG specialises in Library & Information Services, Open distance learning, Repositories, Data integrity, Knowledge management. As the TG plans to contribute to UNSD, more involvement from this institution would be desired. Currently, one individual from UNSD is mentioned on the list of members, with 'being invited' status. The TG lacks participants from South Asia, Southeast Asia, and the Middle East.

The requested funding is to continue to support a student intern at the University of Lagos. The reviewer was of the view that it was better if the student intern was not tied to a particular institution. The publication fees indicated could probably be waived in some journals (e.g., DSJ). While in-kind contributions and funding is mentioned, the TG could be more specific in identifying possible funding sources to scale up this work.

The Executive Committee recommends that this proposal is endorsed.

RECOMMENDATION: STRONGLY ENDORSE

9. Digital Representation of Units of Measurement (DRUM)

Brief Summary of TG Objectives

In the many discussions about data lakes, domain repositories, or Findable Accessible, Interoperable and Reusable (FAIR) data there is a lack of focus on the topic of the digital representation of units of measure. Whilst there is international agreement on units of measure, and while there are community driven efforts in unit ontologies and encodings, there is as yet no fully agreed, suitably expressive, digital representation of units of measure for exchange of scientific data.

This is a fundamental and significant issue that must be addressed such that a vision for integrated global data can be realized. This task group thus has the following objectives:

- Engage with the International Science Unions, via their Ambassadors, to inform them of the importance of digital, interoperable representations of units of measurement.
- Understand particular domain-related issues concerning unit representation and propose possible solutions.
- Encourage and provide assistance for creating service-oriented infrastructure (APIs), deploying tools, and promoting the adoption of standards and effective methods to enable applications, artificial intelligence, and data scientists to easily discover and access FAIR machine-readable digital knowledge related to units of measurement, quantities, and fundamental constants.
- Develop a “State of the Unit Representation” paper to provide perspective on the digital implementation of unit representations
- Develop a good practice guide for the unit representation conversion
- Advise IUPAC (three DRUM members are IUPAC leaders) with guidance on the current IUPAC project to develop a digital version (5th edition) of the IUPAC Green Book on Quantities, Units and Symbols in Chemistry (digital unit use case).

Brief Summary of Reviews and Recommendations

Reviewers agreed that this is a very important topic, of fundamental importance for data sharing in a digital age and therefore highly relevant to CODATA’s strategic aims. The overall rating was very high. As an existing Task Group, there have been a number of important achievements. Nevertheless, it was remarked that there should be a more detailed plan for delivery of outputs and that the TG should be even more ambitious.

Reviewers recognised that DRUM is one of the pillars of CODATA of the Strategic Plan and aligns strongly with (1) Making Data Work for Cross-Domain Grand Challenges, and (2) improved Data Science and Stewardship. It was observed that the proposal does a very good job of stating the problems the Task Group is aiming to address but articulates less well how the proposed outputs will address these.

One reviewer observed specifically:

The scientific merit of the proposal has been and still is extremely high in respect to the strategic objectives set out by CODATA and in particular aims of the decadal program. However, the current proposal seems to have lost a little of the momentum for working towards these strategic aims:

- a. *Ambassadors only informed but more active work with ambassadors towards cross-domain interoperability would be beneficial (especially to cover ISUs requirements).*

- b. *The UMIS service which was promoted as an important pilot tool for interoperation of units of measurement disappeared completely from the agenda. Has DRUM dropped this development?*
- c. *Preparing the standards for efficient provision of units of measurement and related knowledge for applications in AI and APIs. (The current objectives mention to aim to advice other experts on their implementation already.)*

In general, the reviewers felt that the proposed outputs were achievable, but that the workplan should be more specific and detailed and more ambition should be shown. On important recommendation would be more specific actions including ambassadors (e.g., workshop) and more regular communication (i.e. continuing the DRUM beat newsletter and more regular updates to the website).

Reviewers felt that the proposed outputs were good but, again, that more ambition should be shown with more specific timetable. It was also remarked: “The current activities are not sufficient to bring about change at the pace it should be pursued. It would be good to see a concrete aim to specifically deliver a definitive good practice guide mentioned in the summary of objectives of the Task Group. Ideally there should also be an aim to start work on educational resources mentioned in the previous Task Group proposal but not featured in this one. The activities proposed are to participate in meetings and conferences organised by other bodies. It is not clear how this will help achieve the outputs to be completed by 2025. A more detailed schedule indicating the steps and timescales for delivering outputs should be provided.”

It was recognised that the membership was expert, but that gender and geographical balance could be considerably improved.

Some opportunities for external funding, but mostly working on in-kind support and the contribution of participants effort.

In terms of achievements, the Nature Comment paper was highly praised as were related efforts to raise the profile of the issue, to build connections in the community and to coordinate through the ambassadors. Dissemination was generally regarded as very good. Nevertheless, it was felt that a number of improvements could be made:

- the Units of Measurement Representation Inventory is only available as a static PDF and should be made available via a GitHub repository (and possibly updated);
- more visibility should be given to the DRUM Beat new paper (and findability improved);
- more specific and sustained engagement with the Ambassadors is recommended.

Overall, it was remarked that there remains much left to do in this topic, specifically i) recommendations for FAIR encoding of units, ii) guidelines for annotation of units, iii) best practice for adopting/implementing DRUM recommended system, iv) UMIS service (pilot demonstrator).

The reviewers all clearly and strongly recommended continuing the Task Group, but urged greater ambition and a more specific and detailed workplan.

The Executive Committee recommends that this proposal is endorsed. In the view of the Executive Committee, DRUM is an extremely important activity and should be endorsed. It is important however, that the recommendations of the reviewers are taken into account.

RECOMMENDATION: ENDORSE SUBJECT TO CONDITIONS

10. FAIR Data for Disaster Risk Research

Brief Summary of TG Objectives

In our interconnected world, addressing critical global challenges and global target for 2030 such as – the Sendai Framework for Disaster Risk Reduction (SFDRR), Sustainable Development Goal (SDG), Paris Agreement for Climate Change, the New Urban Agenda (NUA)-Habitat III and recently approved The Kunming-Montreal Global Biodiversity Framework necessitates the effective utilization of data. However, the current state of data is marked by fragmentation, disparate ownership, and a lack of standardization and accessibility, impeding its optimal use for research, assessments, and policy formulation.

With this in mind, we have established the CODATA Task Group on FAIR Data for Disaster Risk Research (FAIR-DRR). Our fundamental objective is to create a harmonized data ecosystem that adheres to the FAIR principles—ensuring that data is Findable, Accessible, Interoperable, and Reusable. By establishing connections and fostering compatibility among diverse data sources, including governmental agencies, research institutions, community groups, and individual contributors worldwide, we aim to streamline the process of data discovery, access, and utilization, leading to tangible societal benefits.

Through our previous endeavors, we have successfully demonstrated the potency of data-driven scientific applications in disaster and climate risk research, resulting in the notable recognition of the GEO SDG Testimonial Award in 2020 for our contributions to Rapid Damage Mapping response in support of Sustainable Development Goal 11 and significant contributions on data interoperability and transdisciplinary research on for COVID-19 response and recovery system.

Building upon these achievements, we are delighted to present our proposed Six-term objectives for the 2024-2025 term.

Brief Summary of Reviews and Recommendations

The escalating intensity of climate change effects coupled with the heightened vulnerabilities of communities cause the pressing need for comprehensive research and policy frameworks for adequate disaster response management. This area of focus holds unparalleled urgency and potential for significant positive impact. This TG aims to contribute to this very ambitious goal. Having a TG focusing on data for disaster response management will enhance CODATA's relevance to the current policy challenges. This is a long-standing CODATA TG that has got better with time.

The proposed work is extremely timely and relevant given the accelerating impacts of climate change and environmental degradation. The proposal does not make an explicit connection to the four strategic priorities of CODATA, and this could be improved. Nevertheless, the reviewers felt this connection was evident, particularly with 1) Making Data Work for Cross-Domain Grand Challenges and with 2) Data Policy and 3) Data Science. Appropriate policy frameworks need to be developed for disaster risk reduction and response; interoperability and reusability of disaster related data is an important topic.

The TG intends to produce research articles on topics "ranging from the conceptual model and design of new disaster data infrastructure, methods for effectively and efficiently archiving and sharing historical disaster data/loss and damage, cross-domain interoperability, standardised loss data collection, mapping disaster vulnerability, experience on developing linked open data applications on disaster response, and others that will emerge from the group's work". They intend to complete two policy briefs on relevant topics and carry out some capacity enhancement activities (webinars). Reviewers concurred that the feasibility of the proposed work is very strong and there is a good track record to substantiate this.

The workplan was highly rated and the monthly newsletter in particular received strong praise. One possible addition to these would be providing direct input to policy making institutions. The reviewer remarked: “Knowing activities of some of this TG members in the past and seeing their intended list of collaborations, I assume that this will happen, but I did not find much information on these plans in the proposal.”

The collaboration with other organisations was strong, but reviewers felt that it would be important to expand it to better include organisations in the Global South. While collaboration with UN agencies certainly helps to cover that, organisations located in Africa and Latin America would be beneficial.

The membership of the TG was generally praised. Again it was suggested that expanding the representation from countries in Africa and Latin America would be beneficial.

There are some potential sources of external funding that are being explored and considerable contribution in kind.

The previous achievements of the TG, including the policy recommendations, White Papers and activities in rapid mapping are excellent and demonstrate that this is one of the strongest and most important CODATA Task Groups.

The Executive Committee recommends that this proposal is endorsed.

RECOMMENDATION: STRONGLY ENDORSE