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Conduct of the Janzania Resilience Academy

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1. Mission

Resilience Academy is universities' education, research and service transformation model to secure resilient urban development. The Resilience Academy aims to equip young people with the tools, knowledge, and skills to address the world's most pressing urban challenges.

Resilience Academy is led by four Tanzanian academic institutions: Ardhi University (Tanzania), University of Dar es Salaam (Tanzania), Sokoine University of Agriculture (Tanzania) and State University of Zanzibar (Zanzibar). University of Turku (Finland) is acting as the Secretariat of the Resilience Academy, coordinating and providing support for RA implementation. University of Twente (The Netherlands) and Delft University of Technology (The Netherlands) are affiliated members.

Resilience Academy is one of the four components of the Tanzania Urban Resilience Program (TURP), which is a partnership between the Government of Tanzania, the World Bank, and the UK Department for International Development.

The purpose of the Code of Conduct is to define the values and principles of the Resilience Academy, and provide good practices for the cooperation for its members and partners.

2. Values and principles

- Innovativeness and sustainability of plans, actions, and outcomes to encourage discoveries of new ideas, solutions and expertise for improved risk management and resilience for the society, ecosystems, cultural heritage and the environment.
- **Reliability and accuracy** in ensuring the quality of the operations, from the planning and implementation to the results, materials and dissemination actions
- **Honesty and integrity** in developing, reporting and communicating Resilience Academy in a transparent, fair and unbiased way.
- **Respect and empowerment** of colleagues, participants, citizens and institutions involved
- **Openness and accountability** related to the operations, data, methods and results, including citizen engagement, capacity development, supervision and wider impacts.

3. Good practices

We describe good practices in the following context:

- Cooperation environment and service development
- Education and skills development and use of e-learning assets
- Industrial training and internship cooperation
- Research and innovation
- Publications and digital data management and sharing practices
- Safeguards

3.1. <u>Cooperation environment and service development</u>

Members and partners **endorse cooperation**, which leads to establishment of innovative data, methods and solutions, which increase society's capacity to respond to risks posed by climate change and which lead to improved urban resilience

Members and partners **follow organizational practices**, **local laws and global treaties** so that Resilience Academy does not contradict with the policies of the member organizations, and is in line with the international and national legislation.

Universities demonstrate leadership in providing clear policies and procedures on good research, education and capacity development practices, and **promote awareness and wider accessibility** of assets and opportunities offered by the Resilience Academy.

Members and partners secure the **health**, **safety and welfare of the participants and communities** connected with Resilience Academy. Members and partners respect and protect everyone's basic right for privacy and data protection by adapting good personal data processing methods and data protection practices. Each research endeavor complies with appropriate organizational data protection policies and international regulations such as General Data Protection Regulation of the EU.

Members and partners operate in line with the principles of **sustainable development** in its all dimensions, and aim to minimize adverse effects of our activities on the society and the environment.

3.2. Education and skills development and use of e-learning assets

Resilience Academy education activities endorse learning by participation and by doing with focus on building digital data and community driven skills for transformation of urban resilience capacities in Tanzania, and internationally.

All members and partners are committed to actions, which promote open learning, wide accessibility to learning assets and cumulative growth of individuals' and institutions skills. Members and partners engaged in designing and implementing learnings materials and e-learning courses share their materials and courses through **openly accessible MOOC platform**, which RA Secretariat is offering. The recommended license for the learning modules is CC-BY-SA.

Institutional uptake and promotion of e-learning materials and courses is ensured through the cooperation of the member universities and their experts. Together members are committed to identify potential local courses at the universities and then train the teachers and experts to use the materials for the benefits of their students and stakeholders. Universities are proactively using the materials in their education and cooperation activities, and organize also short courses on the basis of the materials to reach wider audience.

Open access e-learning materials are equally available for self-studying and learning of new skills for anyone. However, RA learning materials and courses are not accredited or certified independently. Accreditation is provided by each local university for their students and stakeholder, following their certified institutional practices.

3.3. Industrial training and internship cooperation

Internship practices of the Resilience Academy aim for regular engagement of Tanzanian university students to practical and applied learning of digital skills under the guidance and hosting of the industry representatives. The key beneficiaries of the industrial placement are the students, whose future employment capacities in a digitalizing work market are promoted.

The industrial training model of RA is grounded on, but not restricted to, **community mapping and digital data collection related tasking, including learning of digital data management and sharing skills.** The detailed tasking of the students is planned based on the needs or the industry. Through team working, students are exposed to **learning of wider transferrable and employment skills**, such as community engagement skills, and writing and reporting skills.

Industrial placement is implemented as a cooperation between Tanzanian Universities and their degree program internship/industrial training structures, the industry actors (clients) and student engagement managers (hosts managing the students). **Rules, requirements, funding needs and good practices of the**

industrial training are described in Industrial training skeleton document¹. The usual length of the industrial training is 5 - 8 weeks.

Selection of students for industrial training is aiming for diversity in terms of participating universities, degree programmes and gender, so that opportunities for participation are fair and equal. Local universities are in charge of the selection. At the end of the industrial placement, students are engaged in feedback survey to track the realization of their expected benefits and to collect their contact information for future RA engagements and employment opportunities.

Data collected during the industrial training is shared in the **Climate Risk Database** in order that can be used for education, skills development, research and innovations

3.4. <u>Research and innovation</u>

Resilience Academy encourages members and partners **to discover novel data and technology ideas and solutions** for digital urban transformation and improved digital employment. These are done largely through the research partnerships and co-creative processes between the universities and their researchers and students, local problem owners and potential solution providers.

Research activities are enabled through co-funded initiatives and projects between the member institutions and researchers, through the involvement of the undergraduate and postgraduate students and through co-supervision of the young researchers and students.

Researchers, including undergraduate and postgraduate students, follow good scientific practices by designing, implementing and documenting research and innovation processes in a careful and standardized manner. Researchers are committed to acknowledge the ones, who provided root ideations for the research and contributed to the success of the research work, and by openly and critically discussing the anticipated research impacts in the society, also possible risks related to the applications of research information.

Researchers respect confidentiality of data or findings when legitimately required to do so. The role of citizens is acknowledge according to the principles of good scientific practice. Informed consents are asked from all the participants, whenever necessary.

3.5. <u>Publications and digital data management and sharing practices</u>

Researchers are committed to **open science practices**, where data, methods and results are published to ensure wide accessibility and wider learning impacts and thus further opportunities for new ideas and innovations.

Member universities and researchers cooperating with Resilience Academy support **proper infrastructure for the management and protection of digital assets.** This includes both qualitative and quantitative data, protocols, processes, other research artefacts and associated metadata that are necessary for reproducibility, traceability and accountability. To facilitate this, FAIR Data Principles guide Resilience Academy to maximize findable, accessible, interoperable and reusable digital assets. To ensure reusability, digital assets are recommended to be published under an open license with attribution condition, CC BY 4.0. Third party derived assets must follow the terms of licenses of the original licensor. In case of sensitive data, information of the data is made discoverable through metadata, which is open even when the data itself might be restricted due to ethical reasons or immaterial property rights.

Resilience Academy offers an **open access platform for digital data sharing** (Climate Risk Database, CRD, <u>https://geonode.resilienceacademy.ac.tz/</u>). All authors and institutions, and cooperative data provides are

¹ <u>https://drive.google.com/file/d/1oEX1cMGnxJubmUo0Koi1wEQVjr37PS_K/view?usp=sharing</u>

committed to follow the data quality requirements of CRD, explained in the Resilience Academy **Data quality** requirements document².

Authors acknowledge important work and intellectual contributions of others, including collaborators, assistants, and funders, who have influenced the reported research in appropriate form, and cite related work correctly. Engagement and achievements of all those involved in the research are well acknowledged and credited in all publications of the research. In the case of students' theses, open sharing of the dissertations are encouraged via student's home organization or via the Resilience Academy platforms (see next section). When research results are published as scientific papers, the recommended form is co-authored, peer-reviewed publications in open-access peer-reviewed journals.

All partners are properly informed and consulted about submissions for publication of the results. All authors **disclose any conflicts of interest and financial or other types of support** for the research or for the publication of its results.

Resilience Academy has a **Communication Plan jointly managed by the RA Secretariat and the World Bank**. Authors from the member and contributing institutions ensure that their work is made available to colleagues in a timely, open, transparent, and accurate manner, unless otherwise agreed, and are honest in their communication to the general public and in traditional and social media.

3.6. <u>Safeguards</u>

Member institutions and individuals comply with codes and regulations relevant to their discipline.

Researchers handle research subjects, be they human, animal, cultural, biological, environmental or physical, with respect and care, and in accordance with legal and ethical provisions.

Researchers have due regard for the health, safety and welfare of the community, of collaborators and others connected with their research.

Research protocols take account of, and are sensitive to, relevant differences in age, gender, culture, religion, ethnic origin and social class.

Researchers recognize and manage potential harms and risks relating to their research There is a zero tolerance for corruption and bribery of any form.

4. References:

The European Code of Conduct for Research Integrity, revised edition, 2017 (Accessible at: https://allea.org/code-of-conduct/)

Fair data principles: <u>https://www.go-fair.org/fair-principles/</u>

The World Bank group. Living our values, code of conduct 2013 (Accessible at: <u>http://pubdocs.worldbank.org/en/187641552944627970/ethics-code-of-conduct-2013-mar13-cra.pdf</u>)

https://opensciencemooc.eu/coc/

https://www.urisa.org/about-us/gis-code-of-ethics/

https://www.researchgate.net/publication/312078831 Beyond Professional Ethics GIS Codes of Ethics and Emerging Challenges

https://www.osgeo.org/code_of_conduct/

² <u>https://geonode.resilienceacademy.ac.tz/documents/182</u>

https://www.ogc.org/ogc/policies/conduct

https://lindaraftree.com/2013/02/11/the-ethics-of-participatory-digital-mapping-with-communities/

https://www.brainchamber.net/assets/docs/Code%20of%20Conduct%20-%20internship%20Program%20-%20Brain%20Chamber.pdf

