

Recommendations to enhance African – European research infrastructure cooperation

Research Infrastructures for Africa-Europe STI cooperation.
African Union Commission, Addis Ababa, 26-27 June 2013



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Building Bi-regional Partnerships for Global Challenges



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Definition of Research Infrastructures

- Facilities, resources and related services used by the scientific community to conduct research
- Could be single-sited, distributed or virtual
- Examples:
 - “singular large-scale research installations, collections, special habitats, libraries, databases, biological archives, clean rooms, integrated arrays of small research installations, high-capacity/high speed communication networks, highly distributed capacity and capability computing facilities, data infrastructure, research vessels, satellite and aircraft observation facilities, coastal observatories, telescopes, synchrotrons and accelerators, networks of computing facilities, as well as infrastructural centres of competence which provide a service for the wider research community based on an assembly of techniques and know-how”
 - http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=what

PAERIP / CAAST-Net Recommendations

- PAERIP is a “sister” project of CAAST-Net: African-European consortium funded under FP7 research infrastructures programme
- Recommendations prepared following extensive stakeholder input conferences in Accra (December 2012) and Brussels (March 2013)
- Focus how to enhance role of RIs in JAES Science, Information Society and Space
- **Interrogates rationale for bi-regional RI partnerships (do we need them?)**
 - Why we need RIs – beyond core science mission and in international STI cooperation
 - Why RIs need international partnerships
 - Why Africa-EU RIs cooperation is useful, necessary
- **Recommendations to enhance Africa-EU RI partnerships: (how to do it better?)**
 - Objectives for bi-regional RI partnerships (enhanced for what purpose)
 - High-level recommendations (enabling environment)
 - Specific recommendations (operational)

Target audience of Recommendations

- Input into JAES STI cooperation:
 - Africa-EU STI High-Level Policy Dialogue Bureau
 - (as they deem appropriate)
 - Joint Expert Group of Africa-EU Science, Information Society and Space Partnership (Joint Africa-EU Strategy)
 - African and European authorities preparing respective regional and national programmes
 - Other actors relevant to JAES implementation (public dissemination) – what we are doing today!

Why we need RIs – for international STI cooperation and beyond core science focus

- RIs key determinants competitiveness and development
 - Leveraging innovation potential and non-science benefits
- RIs essential for research address societal challenges
- RIs encourage multi-disciplinarian research
- RIs enablers for training and mobility (researchers / ideas)
- RIs foster excellence in research
- RIs platforms for science communication / science education
- RIs drivers for international cooperation
- Illustrative examples of RIs well-suited bi-regional cooperation
 - radiation sources, bio-banks, clean rooms, observatories, telescopes, databases, supercomputers, high-speed networks, etc.

Why RIs need international cooperation

- RIs are complex and costly – cannot do it alone – need to pool resources
 - Integrate equipment, services and data
- RI cooperation can leverage efficiencies of scale and scope
 - Avoid duplication of effort and investment – shared objectives
 - Coordinate and rationalise use facilities – e.g. where user community not merit new investment
- Enable international research cooperation

Compelling arguments for Africa-EU RI partnership

- Long-standing and strong Africa-EU STI cooperation framework – RIs can enhance
- RI cooperation aligned with objectives of enabling JAES political and STI frameworks
 - Support shared sustainable development and STI capacity-building objectives
 - Specific reference JAES 2nd Action Plan
- Respective comparative advantages and complementarity to exploited for mutually beneficial RI partnerships
 - Geographic, resource or knowledge

Objectives for Africa-EU RI partnerships

- Optimally leverage bi-regional RI partnerships for scientific advancement and innovation in Africa and Europe
 - Ensure availability of world-class RIs to African and European researchers to enable and support their cooperation
 - Establish reciprocal access and RI networking programmes
 - Build, maintain and operate RIs required for global and bi-regional STI cooperation
 - Harness RIs as instruments for capacity-building

High-Level Recommendations: Enhance enabling environment for Africa-EU RI partnerships

- Facilitate cooperation and coordination between different national and regional African / European RI programmes
 - Greater awareness of capacities / needs
- Encourage synergy between different funding instruments for RIs – optimal investment
- Introduce key policy objectives into bi-regional STI cooperation frameworks:
 - Foster innovation potential of RI partnerships
 - Support provision of human capital development for RIs
 - Leverage RIs for human capital development, institutional capacity-building

Specific Recommendation (1): Develop and agree “Roadmap” for Africa-EU RI partnerships in JAES

- Proposals for partnership in development new large-scale facilities
 - Inventory of opportunities and support required
 - Options include establishing regional partner facilities for existing large-scale facilities
- Guidelines for bi-regional integration and opening up (access) of RIs
 - Proposals for bi-regional RI networks, how to facilitate mobility, joint research activities, etc.
- Framework for e-Infrastructure cooperation (horizontal)
 - Inform policy (e.g. data / open access) and investments (required capacities)
 - Development, deployment and operation
- Recommendations on different funding / cooperation instruments
 - Research and Innovation (Horizon 2020, African Research Grants, etc.)
 - Development cooperation (European Development Fund, Pan African Programme, Africa-EU Research Infrastructure Trust Fund, etc.)
 - National (bilateral) cooperation frameworks

Specific Recommendation (2):

Innovation potential of and human capital for RIs

- Further explore how best to foster and leverage innovation potential of bi-regional RI cooperation
 - Exploiting role of RIs early adopters of technology as platforms for bi-regional technology transfer
 - Promoting R&D partnerships RIs and industry (e.g. multinational companies footprint both Africa and Europe)
 - Facilitating industrial use of RIs (part of Africa-EU economic cooperation)
 - Stimulating creation of bi-regional RI-linked innovation clusters
 - Involving of EBI, AfDB (investment funding agencies)
- Establish Africa-EU cooperation programme / framework on human capital for RIs
 - Training and exchange programmes staff managing and operating RIs

Way forward

- In addition to targeted dissemination also wide public dissemination to ensure broader take-up and ownership of recommendations
 - With final PAERIP conference report
- Provide input into preparation of International Conference on Research Infrastructures 2014 (ICRI-2014)
- PAERIP consortium (self-funded!) will continue work (close consultation with CAAST-Net Plus, eAfrica and others)
 - Develop concept for roadmap
 - Organise targeted workshop second half of year:
 - Innovation potential of RIs and human capital development for RIs
 - CAAST-Net Plus and PAERIP knowledge resource
 - Recommendations available at:
 - www.paerip.org

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Thank you for your attention



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