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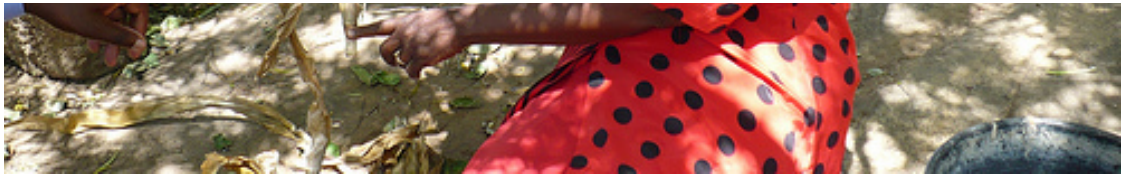
SAME MEAT, DIFFERENT GRAVY? THE NEW SCIENCE, TECHNOLOGY AND INNOVATION STRATEGY FOR AFRICA (STISA)

Posted on 5 August 2014 by David Ockwell



By David Ockwell, STEPS Centre Deputy Director, Research

On 2 July African Union Heads of State and Government adopted the new Science, Technology and Innovation Strategy for Africa 2024 (STISA-2024)[i]. This replaces the previous African Science and Technology Consolidated Plan of Action (CPA) that was adopted by the AU back in 2006. STISA-2024 sets out a decadal vision that prioritises science, technology and innovation (STI) as the core driver of economic and human development across the continent. The vision, based on what is described as a "participatory process" that included "…policy-makers, prominent scientists, and researchers at home and in Diaspora; institutions and organizations including the AU Commission and the NEPAD Agency", is focussed around six core goals: Eradication of Hunger and Achieving Food Security; Prevention and Control of Diseases; Communication (Physical and Intellectual Mobility); Protection of our Space; Live Together- Build the Society; and Wealth Creation.

The document itself articulates some sound ideas of the barriers faced by both the preceding CPA and STI in Africa more generally. These frame the impetus for STISA-2024 and include: insufficient funding for STI; over reliance on oversees funding that tends to focus on isolated projects; a lack of linkages between entities in charge of STI policy making and other relevant policy organisations, academics and the private sector; STI policy officials lacking in STI expertise; and inadequate infrastructure, e.g. IT, energy, water. These barriers certainly concur with recent research in the STEPS Centre, for example in this recent paper.

These barriers then translate into the following seemingly sensible strategic objectives:

1. Enhance effectiveness of science, technology and innovation (STI) in addressing/implementing priority areas.
2. Improve technical competencies and institutional capacity for STI development
3. Promote economic competitiveness through fostering Innovation, Value Addition and Industrial Development /Entrepreneurship
4. Protect knowledge production (inventions, and indigenous knowledge, etc) by

strengthening Intellectual Property (IP) and regulatory regimes at all levels
5. Facilitate STI policy reforms, harmonization, science diplomacy and Resources Mobilisation

It is then proposed that these objectives be achieved via a focus on the following four pillars that are described as prerequisite conditions to its success:

1. upgrading and/or building research infrastructure
2. enhancing technical and professional competencies
3. innovation and entrepreneurship
4. providing an enabling environment for STI development in the African continent.

But once we get past this list of pillars, the document shifts to a focus on governance structures, with little attention given to the substance of what constitutes these pillars and how they might be implemented in practice.

As Linda Nordling, writing for Nature in a recent news item, summarises STISA-2024 has been criticised on a number of fronts, including: being a top-heavy administrative structure; lacking in firm commitments from governments to funding or training; having aims that are beyond the limits of the continent's existing financial resources; failing to provide sufficient detail on how the vision will be achieved; and creating new institutional structures as opposed to building on existing ones.

But, neither in Nature's fairly detailed coverage of reactions to STISA-2024, nor in the document itself, do we see any attention to some of the core concerns that decades of research in Innovation Studies and the emerging literature on Socio-Technical Transitions would suggest are fundamental to realising sustainable human and economic development in Africa via a focus on STI (these concerns are illustrated by recent STEPS Centre research on the growth of the Solar Homes Systems market in Kenya). A critical reading of both Nature's critique and STISA-2024 itself from the perspective of these insights raises a number of concerns.

Firstly, both "innovation" and "research" seem to be treated as synonymous with, and measurable in the same way as, research and development (R&D). So in Nature's coverage we see mention of the failure of African nations to meet their target of at least 1% of GDP spent on R&D and nice, neat graphs comparing low levels of R&D spending in African countries with America and countries in Europe – as if this has some kind of material implication for the role of STI in underpinning economic and

human development on the continent. Nowhere is there any attempt to understand the actual meaning of innovation (which is not the same as invention) or the incremental ways in which other developing countries, such as the Asian Tiger Economies, drove their economic success through a slow, deliberate process of technological capability building, from low, to increasingly sophisticated levels of capabilities – something that decades of empirical research in the field of Innovation Studies quite clearly demonstrates.

This then leads to a failure to recognise that in many African nations, across many technologies, interventions that build technological capabilities, and hence provide the bedrock for future industrial development and innovation, are likely to be better targeted at much later stages in the innovation chain; not at the early R&D stage, but at demonstration stages, or, more likely still, by gaining experience and building capabilities through working with existing, commercially available technologies. This is not to say that research expertise is not important and that Africa shouldn't focus on building its capacity in this area – it should. But this is likely to play only a minor role in how Africa builds the capabilities necessary to engage with STI in ways that underpin broader processes of technological change and development.

Bearing in mind that these very basic understandings of the nature of innovation, technological change and development don't seem to be present in STISA-2024, or indeed Nature's critique of it, it's no surprise that more recent insights from socio-technical transitions thinking are also absent. Taking this to the level of understanding science and technology as co-produced with social practices, and processes of technological change as contingent on the interactions and mutually reinforcing trajectories of both, is probably a long way off. However, as illustrated by Byrne et al's (2014) collaborative research with the African Technology Policy Studies Network (ATPS) in Kenya, such a perspective provides powerful traction for understanding how technological change happens and for designing policy interventions to proactively nurture this in specific directions.

As we move towards establishing the Africa hub of the emerging STEPS Centre Global Consortium, we hope to continue the collaborative research with partners in Africa which to date has served to demonstrate, in an African context, the relevance of the above insights. Working with our partners to expand their empirical application across other African country, technological and socio-cultural contexts, we hope to continue to demonstrate how such insights and approaches can contribute to

more sustained, and indeed sustainable, development pathways that do indeed "place STI at the epicentre of Africa's social and economic development" (STISA-2024 p.14) – and do so in ways that serve the needs of poor and marginalised people whilst simultaneously offering new opportunities for economic growth across the continent. Until such time as these insights are mainstreamed in international STI policy, new strategies such as STISA-2024 run the risk of continuing to taste like "same meat, different gravy".

- *[i] The strategy isn't available online but can be obtained by emailing Mahama Ouedraogo at the AU OuedraogoM@africa-union.org*
- *Photo credit: Seed selector, Kenya / STEPS Centre*

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One Response to "Same meat, different gravy? The new Science, Technology and Innovation Strategy for Africa (STISA)"

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