

Review of grey literature relating to regional level

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Summary of key policies at regional level

Continental level

Africa's Science and Technology Consolidated plan of action (CPA)

Background and aims of CPA

The CPA was designed to integrate the AU's and NEPAD's strategies on Science and Technology policy and was developed to implement the decisions of first African Ministerial Conference on Science and Technology (AMCOST) in 2003. The background section of the CPA (p4 onwards) says that it was created to remedy the lack of serious attention STI has been given in African long term planning strategies and the mismatch between R and D activities and development goals at the national level. A key aim of the strategy was to increase co-operation and co-ordination between countries. It says *"The continent, as a whole, has spread its limited resources too thinly across science and technology fields. In many cases existing science infrastructure of the relatively well-to-do countries of the region is not accessible to others that desperately require it."*

It builds on the Johannesburg Plan of Implementation adopted by governments at the World Summit on Sustainable Development (WSSD), the Commission for Africa's *Our Common Interest*, as well the G8's Gleneagle communiqué containing statements on the group's commitment to support the development of "centres of excellence" in science and technology in Africa.

Although the plan has now been replaced by STISA it is of high relevance because of its influence on the development of STISA and also its influence on regional and national science and technology policies that are still extant (see section below on high level review).

Key characteristics

The CPA has three main aims. These are: (a) capacity building (b) knowledge production, and (c) technological innovation. In order to carry out these aims the plan puts emphasis on the development of regional centres of excellence. It also places emphasis on improving policies and institutions for science and technology. The document identifies a wide array research programme clusters to be developed, largely through developing centres of excellence. These are:

1. Biodiversity, biotech and indigenous knowledge
2. Energy, water and desertification
3. Material sciences, manufacturing and post-harvest technology
4. ICT and space science

In terms of the institutions for science and technology, one key provision in the document is for the *African Observatory of Science, Technology and Innovation (AOSTI)*.

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High level review

In 2012 a high level panel was established to evaluate the successes and failures of the CPA. I have not been able to locate the review but the results are summarised on page 505 of the UNESCO Science Report: towards 2030 (2015)

Key positive points are:

- Establishment of number of networks of centre's of excellence
- Creation of AOSTI and African Science Technology and Innovation Indicators Initiative (ASTII).
- Introduction of the African Union Competitive Grants scheme run by the AU commission.

Key failures were identified as:

- Lack of funding leveraged from African nations. 90% of the funding for the activities under auspices of CPA came from donors.
- Lack of robust monitoring and evaluation.
- Lack of focus on linking to key development goals.

Another key point regarding the CPA is that a number of regional economic groups have integrated parts of the CPA in to their policies on Science and Technology.

Science, Technology and Innovation Strategy for Africa (STISA)

Background and aims of STISA

STISA is the first of five decade long incremental phasing strategies for science and technology under the auspices of the Africa Union's Agenda 2063. Agenda 2063 is the AU's broad and long term strategy for Africa's development. It has significantly shaped STISA through deciding the priority areas of research that STISA is designed to take forward.

Further background to STISA was the high level review of its forerunner the Science and Technology Consolidated Plan of Action (CPA). See above. UNESCO (2016) describes it as displaying *"a stronger focus on innovation and science for development than its predecessor. (p. 528)*

STISA provides a high-level agenda setting plan for how to promote and harmonise STI in Africa designed to be adopted and taken forward by all relevant actors on the continent. Unlike the CPA it doesn't focus on the one instrument of Centres of Excellence but provides a broad agenda to be applied flexibly in local settings.

Key characteristics

Identifies strategic priority areas

It identifies priority areas along with research and innovation areas. For example it identifies "Eradicate Hunger and Ensure Food and Nutrition Security" and then the research area of

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agriculture along with developing the industrial chain for post-harvest storage and processing. Other areas are:

- Prevent and control diseases and ensure well-being
- Communication (physical and intellectual mobility)
- Protect our space
- Live together- build society
- Create wealth

Strategic objectives (p. 24)

These are general objectives beyond specific priority areas of research/innovation. They are:

- Enhance effectiveness of STI in addressing the priority areas
- Improve technical competencies and institutional capacity for STI development
- Promote competitiveness in economy
- Protect knowledge production through strengthening IPR
- Facilitate STI policy reforms, harmonization and science diplomacy

Pillars (p. 28)

It sets out a number of pre-conditions for the success of STI strategies to be built on. It advocates an assessment of each country's current status to enable the prioritisation of getting every country in a position to benefit. The pillars are infrastructure, technical competences, innovation and entrepreneurship and an enabling environment.

Governance (p39)

The document provides a statement on which partners are responsible for the different elements of the strategy. The AU is responsible for harmonisation, coordination and consolidation. The AU commission is responsible for overseeing implementation and monitoring (through AOSTI). Member states are responsible for funding and implementation.

Funding – (p.41-42)

It is recognised that for Africa to maximise ownership they need to increase spend and it is encouraged that each country spend 1% of GDP on R and D. It says this is necessary to reduce over-reliance on external resources. It also advocates an African STI Fund be set up.

Monitoring and evaluation (p. 50)

Strategy says that member states and RECs shall put in place harmonised mechanism for collecting annual data in implementation.

Regional economic community level

The AU recognises eight RECs, the:

- Arab Maghreb Union (UMA)

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- Common Market for Eastern and Southern Africa (COMESA)
- Community of Sahel–Saharan States (CEN–SAD)
- East African Community (EAC)
- Economic Community of Central African States (ECCAS)
- Economic Community of West African States (ECOWAS)
- Intergovernmental Authority on Development (IGAD)²
- Southern African Development Community (SADC).

(<https://www.au.int/en/organs/recs>)

Mugabe (2011:18-19) explains that most of the REC founding documents have reference to co-operation and harmonization on science and technology. The following covers some of the key policy initiatives at this level in the Sub-Saharan Africa region and is taken from UNESCO (2015) and Mugabe (2011).

East Africa

There are three main regional economic communities in East Africa: East African Community (EAC), the Intergovernmental Authority on Development (IGAD) and the Common Market for Eastern and Southern Africa (COMESA). The following are key initiatives relevant to science granting councils:

EAC

- ***“The Inter-University Council for East Africa (IUCEA) was formally integrated into the operational framework of the EAC by the East African Legislative Assembly in 2009 through the IUCEA Act. IUCEA has been entrusted with the mission of developing a Common Higher Education Area by 2015. In order to harmonize higher education systems in EAC countries, IUCEA established the East African Quality Assurance Network in 2011, which is in the process of developing a regional policy and an East African qualifications framework for higher education” (p.503)***
- Under the **EAC Common Market Protocol (2010)** states are *“to collaborate with the East African Science and Technology Commission and other institutions to develop mechanisms for commercializing indigenous knowledge and ensuring intellectual property protection. Member states also undertake to establish a research and technological development fund for the purpose of implementing the provisions in the protocol.” (p.503)*

IGAD

- IGAD’s current flagship programme (2013–2027) sets out to develop drought-resilient communities, institutions and ecosystems in the IGAD region by 2027. One of the key thrusts is “Research, knowledge management and technology transfer”

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Southern Africa

SADC Protocol on Science, Technology and Innovation (2008) “provides the basis for the development of institutional mechanisms for regional co-operation and co-ordination in the following areas:

- *policy training;*
- *the role of women in science;*
- *strategic planning;*
- *intellectual property rights;*
- *indigenous knowledge systems;*
- *climate change; and*
- *high-performance computing” (UNESCO 2015: 538)*

West Africa

*“ECOWAS’ Vision 2020 (2011) provides a road map for improving governance, accelerating economic and monetary integration and fostering public–private partnerships. The **ECOWAS Policy on Science and Technology (2011)** is an integral part of Vision 2020 and espouses the ambitions of the continental plan of action for STI.” (UNESCO 2015: 47).*

“ECOPOST encourages countries inter alia to:

- *raise gross domestic expenditure on R&D (GERD) to 1% of GDP, as recommended by the African Union a decade ago; currently, it averages 0.3% in West Africa;*
- *define their own research priorities, so that researchers are working on topics of national interest rather than those proposed by donors;*
- *create a national S&T fund which would allocate funds to research projects on a competitive basis;*
- *establish science and innovation prizes*
- *define a harmonized regional status for researchers;*
- *put in place a national fund for local innovators which would also help them protect their intellectual property rights;*
- *adapt university curricula to local industrial needs;*
- *develop small research and training units in key industrial fields, such as lasers, fibre optics, biotechnology, composite materials and pharmaceuticals;*
- *equip research laboratories, including with ICTs;”*

Summary of key reports relating to SGCs in Africa

General

UNESCO (2015) Science Report: towards 2030,

Overview of purpose and methods

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Aims to provide a comprehensive overview of scientific activity globally. The report is compiled thematically in part 1 and then regionally in part 2. I looked at the sections on Southern Africa, West Africa and East and Central Africa (not including the country specific overviews).

Summary of relevance to our study

Useful for regional overviews, including overviews of policy frameworks, written by locally knowledgeable experts. These overviews provide background on general economic development status and trends and then identify specific trends in science and technology and innovation and provide case studies to illustrate them.

It can be used to establish low levels of investment in R and D and strong bias in research publications towards health, and to a lesser extent agriculture.

Key sections, findings

West African Section

- Reports that only 3 countries in West Africa meeting target of 1% GDP on R and D. Explains that the priority up until now has been to meet the MDG on universal primary education (p. 474).
- Reports that publication record in West Africa is predominantly focused on bio-medical sciences and that agricultural research has been neglected in the region, reflected in low rates of graduate students. And that publications in other scientific areas have been negligible (p. 506)

East and Central African section

- Life sciences dominate publishing of scientific papers in East and Central Africa. (see diagrams on p. 515)

Southern African section

- Life sciences dominate publishing of scientific papers in Southern Africa except in South Africa which has a more balanced spread. (see diagrams on p. 545)

[World Bank \(2010\) Financing higher education in Africa](#)

Overview of purpose and methods

The report covers trends in financing of higher education in Africa mainly covering 2000-2006. Covers increase in student numbers and describes finance arrangements. The last section uses examples of successful reforms in Africa to show what policies might work.

Summary of relevance to our study

It is useful for an overview of the arrangements for financing higher education and can provide some explanations for low capacity of many African university systems. In particular

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the sections explaining patterns of donor support to African higher education are highly relevant though now quite outdated. This data is mainly based on the OECD DAC statistics I have been using (P. 109 has a useful methodological note on using OECD DAC data).

Key sections, findings

- Reports problem in African universities of the increasing number of students far outstripping increased investment leading to overcrowding and a lack of equipment and teachers (p. 2).
- Gives explanation of difficulty in increasing investment as a low tax base and a priority being given to primary and secondary education. It describes how aid to the university sector is a quarter of aid to education sector reflecting donor's priority on primary and secondary education (P.3)
- Makes point at length that only a small amount of donor support goes directly to African universities, with lion's share going to scholarships abroad or to students for maintenance costs in Africa (p. 3, 95-97).
- Of aid that does go direct it describes how is relatively evenly spread over Africa but generally less in Francophone countries (p. 96).

AOSTI (2013) Science, Technology and Innovation Policy-making in Africa: An Assessment of Capacity Needs and Priorities

Overview of purpose and methods

Study commissioned by AU to provide an overview of African countries' capacity needs and priorities in relation to developing STI policies. Report was compiled by John Mugabe. It is based on reviews of reports (e.g. proceedings of workshops) on national STI policy development activities, reviews of outcomes of policy development efforts, and interviews with key stakeholders in governments (in South Africa, Botswana, Rwanda, Uganda, Senegal and Kenya) and donor institutions.

Summary of relevance to our study

The study identifies the challenges facing development of functioning STI policies in African countries. This issue is relevant as background to the strengthening of SGCs in Africa.

Key sections, findings

- The study identifies some common challenges facing STI policy divisions. These include organisational capacity, funding, infrastructure capacity, human resources capacity and ICT (p. 12).

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- Reports on growing interest by African states in STI policy: 37 states had created STI policies as of 2010. Also provides an explanation of this growing interest. Explains with reference to three factors. Firstly, recognition by ministers that STI fundamental to solving development challenges, secondly a growing interest among NGOs in issues related to STI and thirdly a growing interest from donors. Explains that it used to be only IDRC and SIDA that were interested but now is a whole range of actors (p. 15).

House of Commons Science and Technology select Committee (2012) Building scientific capacity for development

Overview of purpose and methods

The select committee was set up to assess progress DfID and others had made in prioritising science for development. The background is that another inquiry 8 years earlier had found DfID wanting in capacity building efforts. The terms of reference were:

- i. How does the UK Government support scientific capacity building in developing countries and how should it improve?
- ii. What are the most effective models and mechanisms for supporting research capacity in developing countries?
- iii. How does the Government monitor and evaluate the effectiveness of the scientific capacity building activities it supports? Is further assessment or oversight required?
- iv. What role does DFID's Chief Scientific Adviser play in determining priorities and in the development and assessment of capacity building policies?
- v. How are government activities co-ordinated with the private and voluntary sectors?

Summary of relevance to our study

It is useful for two reasons. Firstly, it provides an account of changes in DfID's approach to science for development and the shift to a broader approach in trying to develop capacity in Africa beyond just funding individuals. Secondly, the written evidence from a number of key organisations, such as the Wellcome Trust, can shed some light on their activities and thinking.

Key sections, findings

- Royal Society states that the MDGs (with their lack of focus on science and technology) had led to blocking of science and technology being considered in development of poverty reduction strategies. (p.7 of Vol 1)

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- Minister for DfID gives breakdown of their commitment to scientific capacity building “We have allocated £56.4 million up to 2020 to scientific and research capacity strengthening. That is the budget both overall and for capacity.” (p. 13 of Vol 1)
- Can see that the Wellcome Trust were already focused on wider capacity building issues at this stage. They state: “To provide sustainable solutions, funders may need to consider support for research infrastructure, building national and international research networks and developing institutional research strategies alongside the provision of research and training grants.” (p. 15 Vol 1) They also state that this focus is relatively recent. (p. 28 Vol 2)
- P14 and 15 (Vol 1) provide detail on the consensus that “ownership” of programmes locally is crucial. Provides details on 2005 Paris Declaration on Aid Effectiveness and the subsequent 2008 Accra Agenda for Action that UK has signed up to and requires local ownership.

World Bank (2016) Sub-Saharan African science, technology, engineering, and mathematics research: A decade of development

Overview of purpose and methods

Report aims to provide evidence and analysis on the supply of and demand for skills, education, and research within Science, Technology, Engineering, and Mathematics (STEM) in Africa. It is written under the aegis of Partnership for Applied Science, Engineering, and Technology (PASET), an initiative of the World Bank to help African governments build strength in these areas.

The report uses a bibliometric database of citation and research output data collated with Elsevier from 2003 to 2012 and covers all disciplines but has a focus on STEM. Its analysis is split into West and Central, East and Southern Africa (excluding SA).

Summary of relevance to our study

It provides a background assessment of progress that African regions have been making in developing their research bases. It also provides headline figures on the make up of research by subject in the region.

Key findings, sections

- Reports that health is the largest area and that Africa has a comparable weakness in STEM subjects compared to other regions (p. 5). It states that the reasons for this weakness are low quality of basic education in science and math, a higher education system skewed towards social science and humanities, donors prioritising health and agriculture. P. 40 provides data on FTE researchers by discipline which shows a similar neglect of engineering and STEM.

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- That research capacity is fragmented with limited collaboration within and between regions according to the citation database. The report suggests increased funding for networks of excellence and other programmes that stimulate regional interaction (p. 9)
- The collaboration with corporate sector (as measured by patent citations and corporate downloads of research) is limited to health sector. (p. 9)

UKCDS (2012) Research Capacity Strengthening: Learning from experience

Overview of purpose and methods

The report provides a synthesis of discussions at a workshop on capacity strengthening held by UK Collaborative on Development Sciences in 2012 which brought together funders, learned societies and research councils.

Summary of relevance to study

Provides insight on thinking of donors around capacity building.

Key findings, sections

- Evidence of shift to focus on deliberate efforts to build capacity: “A key message from the workshop was that a conscious and deliberate focus on supporting research capacity, alongside or even as a precursor to funding research projects, is more likely to lead to improved capacities to produce high-quality research, not only during the lifetime of the grant but into the future.” (p. 14)
- Uses a conceptual framework for different types of capacity building based on distinction between Individual, Organisational and Environmental level initiatives (p. 14). They report that need to think of the three levels together or can have negative effects. For example they posit that increasing an individual’s capacity could lead to them leaving the research institution if the research organisation and environment cannot meet their needs. Many examples are provided of the importance of thinking of the levels together. For example on p 18 describes how key to turning funding of individual post grads into benefits for organisations is also considering early career, post doctoral phase to keep them in place.
- P. 27 provides an overview of SIDA’s longstanding coherent and systematic approach to research capacity building.
- P. 37 describes the difficulties of capacity building at the environmental level (this includes developing and/funding of science granting councils). Reports that “research capacity strengthening at the environmental level is non-linear, iterative, political, and context-driven. Long timelines and strategic approach are needed to build-up critical mass, partnership with institutions in countries are vital. Working at

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this scale and making progress requires stamina and commitment from all partners.” Goes on to identify how these long time frames and uncertain results can conflict with donor agendas. States “Being realistic about the iterations and unpredictability of research capacity strengthening can be challenging to agency cultures and country partners. Trial and error is a legitimate part of the process, but taking a learning and adaptive approach is not easily supported by funders’ home politics nor if local organisations prioritise their own goals in the process.”

UKCDS (2015) Rapid mapping of UK and international funders' priorities in research capacity strengthening

Overview of purpose and methods

Report aims to provide a snapshot of international funders’ priorities and activities as of 2015. Based on 22 survey responses and earlier reports by UKCDS (see items above and below). The report categorises organisational focuses along two lines. Firstly, into support at the individual, institutional and environmental levels. Secondly into support for research production, brokering or use.

Summary of relevance to study

Useful report for an overview of high level strategic priorities. It covers most of the organisations we have been focusing on.

Key findings, sections

- DfID is unusual in having a relatively broad and even spread across research production, brokering and use across individual, institutional and environmental levels. Relatively few funders have focused on environmental level as seen to be risky and challenging. But mentions Wellcome Trust and DfID scheme and also AESA as examples. (P. 3-4)
- Funders generally see health as a priority with climate change and agriculture also important (p. 6)
- Funders research capacity strengthening efforts are largely focused on SSA (p. 7)
- Funders tend to embed capacity strengthening into wider research programmes (p.8)
- Private sector capacity strengthening tends to happen through CSR activities and focuses on supporting prizes and fellowships, often administered by a recognised academic body (p. 9)

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ODI (2007) Research capacity strengthening in Africa trends, gaps and opportunities

Overview of purpose and methods

This report aims to provide an overview of donor support for research capacity building in Africa and to evaluate what has worked and not worked. It is based on a review of grey literature, evaluation documents and 20 key informant interviews.

Summary of relevance to study

Provides a snapshot of activities in 2007 that can be used to compare to more recent evaluations to provide an analysis of what is changing and has stayed the same. Has a detailed annex summarising different approaches of organisations and a long annotated bibliography.

Key findings, sections

- Has a useful description of the difficulties of getting data on capacity strengthening which mirrors our experience (p.12)
- Has a table of top funders of capacity strengthening. Interestingly Holland is by far the largest funder and DfID doesn't feature at all (p.12)
- Reports that language barrier between donors and recipients can present a barrier to support. *"It is interesting to note that Anglophone African countries are disproportionately represented in the group receiving support from multiple donors. This suggests that perhaps more attention has to be paid to language and socio-cultural barriers if those countries with low levels of support are to be targeted more effectively by the donor community"* (p. 13)
- Finds that few funders are focused on the system level of capacity strengthening. Identifies SIDA, with a long history of this work, and Japan, as a recent entrant, as two exceptions.
- Finds multilateral organisations tend to focus on institution building rather than individual level capacity building. Either through supporting non-university research institutes or research networks. (p.17)

Agriculture

ASTI-FARA (2011) Supranational collaboration in agricultural research in sub-saharan Africa

Overview of purpose and methods

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Paper reviews last ten years of institutional development and financial flows in supra national collaboration in Africa. Concludes that *“Despite all efforts to increase African ownership of the supranational agricultural research agenda, high donor dependency remains a factor that limits such ownership. The only way to change this is by introducing an African funding base for supranational agricultural research. Unfortunately very little progress has been made on this front to date.”*

Summary of relevance to study

Useful summary of agricultural research landscape in SSA if decide to focus on this area in the report.

Key findings, sections

- P7-8 provides a detailed justification of supranational collaboration in research, covering ideas such as spill-over and spill-in.
- P9- says that CGIAR is by the largest supranational form of research in Africa. But that they are seen as “as largely donor-driven, top-down agencies.”
- P10- describes how a number of Sub-Regional Organisations (SROs) have been formed to co-ordinate research and develop research agendas. But their funding from national governments has been unreliable and so depends mainly on donor support. Explains that FARA is officially controlled by SROs and NARS but that FARA also relies on donor support so the control is somewhat cosmetic.
- P11- on CGIAR funding- *“Most of the investments going into supranational agricultural research in Sub-Saharan Africa are still controlled by the CGIAR (Table 1). In 2010, the CGIAR spend a reported US\$336.5 million on agricultural research targeting SSA. This represented about half of the total CGIAR expenditures worldwide. The SSA share in CGIAR expenditures has steadily increased over time from 39 percent in 1992, to 43 percent in 2002, and 50 percent in 2010.”*
- P17- Makes connection between a shift to an innovation systems perspective and the widening participation of range of actors such as NGOs and private companies.
- P18- raises issue that the participatory approach adopted by the SROs encourages the spreading of resources thinly over all the research areas raised by national government participants rather than strong leadership identifying strategic priorities.

ASTI (2016) Agricultural Research in Africa Investing in Future Harvests

Overview of purpose and methods

Book is based on the ASTI-FARA conference in 2011 with updated chapters and data. Based on a series of surveys conducted in 2001-04, 2009-10, 2012-13 and on quantitative datasets. The book covers effects of agricultural R and D, trends in financing, changes in donor priorities and the current situation in terms of human resources and higher education.

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Summary of relevance to study

This book provides an up to date and fairly comprehensive overview of agricultural research and funding in Africa.

Key findings, sections

- Chapter 5 is a political economy analysis considering why African governments underinvest in Agricultural R and D. Uses *“a framework of the key drivers of public investment decision making (Mogues 2015): (1) the attributability of investments to key actors, including politicians, bureaucrats, interest groups, and donors; (2) the incentives and constraints of these actors; (3) the budget process; and (4) the political and economic governance environment.”* They say it can be explained by the time lag between investment and benefit with research that leads to an issue of non-attribution, the issue of agricultural communities being dispersed and therefore finding it difficult to organise collectively to demand investment, shifts in donor priorities undermining system.

ASTI-FARA (2011) Changing donor priorities for agricultural r and d in developing countries: evidence from Africa

Overview of purpose and methods

A paper arising from the ASTI-FARA conference in 2011 on research for agriculture in Africa. Desk based research tracing trends in donor priorities and activities.

Summary of relevance to study

Useful if decide to focus on Agriculture.

Key findings, sections

- Page 5 describes the influence of Bill and Melinda gates on Agricultural R and D in Africa. Describes how they spent \$642 million on agricultural r and d between 2003-2011. Describes how their influence is disproportionately high for the amount they spend. They have influence in the way they have opened up new research agendas and the way that they have convened influential initiatives that have catalysed other donor investment. This is said to be attributed to their nimbleness and lack of bureaucratic baggage and mixed priorities.
- Page 12 describes a shift in USAID's approach from a fragmented project approach to emphasis on institution building and capacity building.
- P16 has a useful graph showing who funds CGIAR and how it has changed over 20 years.
- P18 identifies three trends in agricultural r and d spending by donors. Firstly, diversification of funders and types of research being funded. Secondly, diversification of modalities of research from discrete projects to funding of

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institutions. Third, *“donors are increasingly interested in funding an expansion of private-sector involvement in developing-country agricultural R&D. This involvement comes in several forms, including (1) direct funding to private firms for R&D activities, (2) involvement of private firms in collaborative research with the public sector, and (3) incentives that encourage greater spending by private firms on R&D activities that are outside of their core business.”*

Health

UKCDS (2015) Health Research Capacity Strengthening: A UKCDS Mapping

Overview of methods and purpose

Is based on review of donor projects beginning or ending in period 2009-15. And a set of semi-structured interviews with key donors. This created a database of 300 projects which were then categorised according to whether capacity building is at individual, institutional or environmental level.

Summary of relevance to study

Highly relevant report that details a large number of donor’s activities in the health field.

Key findings, sections

- Page 4 describes how most projects focus on funding capacity building at the individual level. *“In programmes UKCDS was able to classify by level, just under half (125/271) were primarily individual capacity strengthening schemes. Just over one third of programmes were primarily focused at the institutional level, with just over 1 in 10 operating at the environmental level”.*
- Page 8 describes the African Institutions Initiative by the Wellcome Trust *“The African Institutions Initiative invests significant management of consortia grants in one lead African university which disburses grants to sub-awardees, presenting challenges but ultimately encouraging stronger local ownership of research and more genuinely collaborative partnerships”*
- P9 describes the different ways that donors try to reform the research environment. They do it either through largescale funding programmes which are designed to cause system wide positive change. Secondly, through supporting funding agencies. Thirdly, through funding reforms of supporting institutions such as ethics boards.
- P11 talks about the way that geographical funding patterns tend to follow colonial and language ties.
- P18 identifies a number of trends in health capacity strengthening. Identifies trend towards bigger, unified capacity strengthening schemes such as DELTAs scheme and DANIDA scheme.

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Identifies trend towards increased focus on strengthening institutions. Identifies a trend *“towards supporting greater African capacity in research funding, governance and management. Since 2008, DFID and the Wellcome Trust have supported the development of health research funding agencies in Kenya and Malawi.”*

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