CoSAI
Commission on Sustainable Agriculture Intensification

POLICY BRIEF #1

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Reorienting funding for research and innovation is an urgent step to transform agri-food systems

Photo: C. de Bode/CGIAR

A CoSAI commissioned study reveals that of the US$60 bn per year of innovation funding for agricultural systems of the Global South, less than 5% considers both environmental and social aims. There are also gaps in critical areas of innovation needed for agri-food systems transformation.

Actions needed

- **Funders and innovators should reorient research and innovation to include sustainability and equity aims,** adopting common international principles to track innovation intentions and implementation.
- **Funding bodies should increase funding for agri-food systems innovation as an immediate priority.** Research and innovation have long lead times for their major payoffs, and they need upfront investment to meet global goals.
- **The global community should address critical innovation gaps.** Innovation in policy, institutions and finance is vital, but rarely addressed systematically. Other underfunded areas identified in the study were post-harvest issues, local seed systems and natural resource management.
- **International agencies should join together to track global funding flows for research and innovation,** including the proportion of funding that promotes sustainability and equity aims.

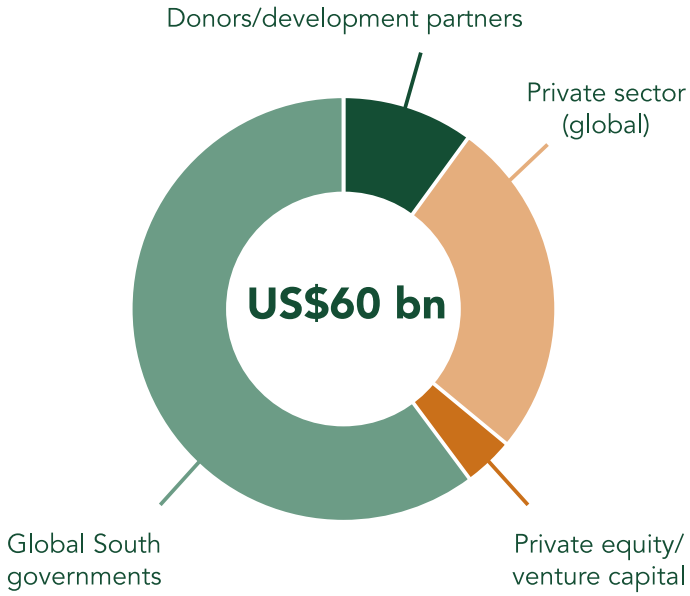
The challenge: Current patterns of innovation funding are inadequate to transform agri-food systems

Today's investments in agri-food research and innovation will shape agri-food systems in decades to come. Innovation – in science and technology, policy, institutions and finance – will play a critical role in addressing the complex challenges of future agri-food systems. These include meeting rapidly increasing global needs for affordable, nutritious, safe and healthy food, while protecting and improving the natural environment and promoting resilient livelihoods and social equity.

Are current patterns of innovation funding likely to achieve this? What needs to change? To answer these questions, a CoSAI study has mapped current funding for innovation for agricultural systems of the Global South, and estimated how much of this promotes sustainability aims (classified as productivity, economic, human, social and environmental).

Overall innovation funding is estimated at about US$60 bn per year. Over 60% of this comes from Global South governments (driven primarily by China), about a quarter is from the global private sector (mainly large companies), and about 10% is from aid and development partners.

Global South governments dominate annual investment in agricultural innovation



The most crucial finding is that only 7% of the total funding has detectable environmental aims, and less than 5% has both social and environmental aims. Although aims don't always match outcomes, there is little evidence that multiple equity and sustainability aims can be met without clear intentions and tracking of progress.

Reorient research and innovation towards sustainability and equity, reporting to international standards

Even among international aid and development partners and large private companies, who report most diligently on sustainability aims, less than a tenth of the innovation funding analyzed has detectable environmental aims. Future innovation investment needs to be oriented towards reaching the multiple aims of sustainable agricultural intensification – environmental, social and economic.

CoSAI's study emphasizes that **intentional management** of research and innovation to meet **multiple sustainability and equity aims** is vital. While a sole focus on one aim may sometimes help meet another aim (for example, an increase in crop productivity may help mitigate climate change) this is not guaranteed, and can come at the expense of other important aims (such as livelihoods of the poor).

Adopting a standard for transparent reporting and measurement could lead to swift changes in funding patterns towards sustainability goals. Such an international standard does not exist for research and innovation, and the study found reporting to be patchy.

CoSAI has therefore initiated an international Task Force on Principles and Metrics for Innovation that represents different sectors and is co-chaired by experts from FAO and the USAID Sustainable Innovation Lab. The Task Force has recommended eight Principles for Agri-food Research and Innovation and a scoring system. These are being piloted by the public and private sectors, with an aim to improve and eventually promote them for wide adoption.

Make funding for agri-food systems innovation an immediate priority

Research and innovation have huge payoffs but long lead times. They demand upfront investment to meet global goals and targets.

The current US$60 bn yearly investment in agricultural innovation for the Global South is equivalent to 4.5% of agricultural sector output. This is low in relation to some other sectors. For example, investment in innovation in the energy sector – another key sector for climate change – is 6% of sector output. Matching that 6% would mean an additional US$20 bn every year for innovation in agriculture.

Global South governments have a key role to play in providing consistent funding for innovation that supports societal goals. Current funding varies dramatically between governments. China accounts for about half of total government spending on agricultural innovation, while some governments fund very low amounts and there is scope to increase this.

International aid and development partners are relatively small funders (10% of the total), but play a catalytic role. Even relatively modest funding increases for agricultural innovation would help make significant progress towards global goals.

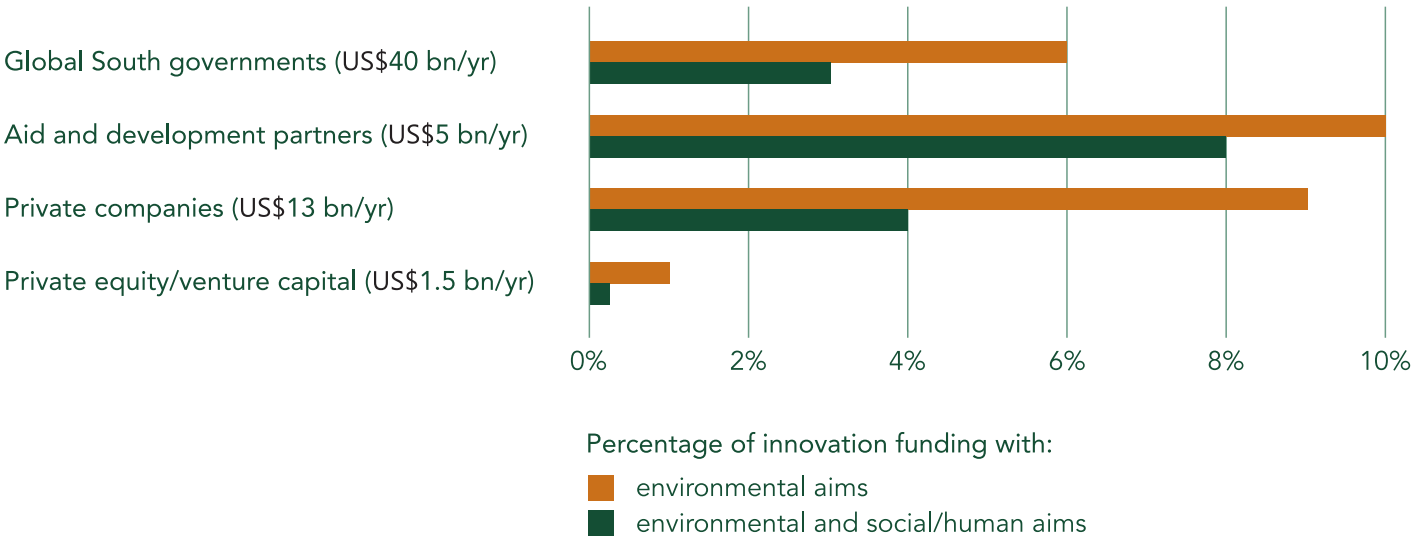
Tackle critical gaps in research and innovation as a global community

The CoSAI study identified some areas of underfunding in research and innovation for the Global South:

- Policy, finance and institutional change are vital to transform food systems; however, innovation in these areas does not often receive systematic attention and funding
- Post-harvest loss and waste are critical areas for food security and climate change; however, innovation in post-harvest issues receives less than one-tenth of the funding for innovation in pre-harvest production
- Innovation in local informal seed systems and farmer-saved seed gets less than 0.5% of all seed innovation funding, although these are the main source of seeds for many farmers
- Innovation in land and natural resources management is another area where funding is relatively low, despite its importance.

Global funders and research/innovation organizations should consider how best to fill these global gaps.

Less than 10% of funding promotes sustainability, across all funder types



Build a global hub to track funding for research and innovation

The CoSAI study found that current reporting on innovation for agri-food systems is patchy and short on detail. It generally lacks clear statements of intention, progress and expenditure.

A number of organizations already collect information on research and development funding, including CGIAR-ASTI, OECD and InSTePP. However, a concerted global effort is needed to build a single open-access source of information with a wider scope than is currently available. This scope could include:

- Global tracking, including both OECD countries and the Global South
- Moving beyond public sector agricultural research and development to track other sources of innovation in agri-food systems, especially from the private sector, on a more systematic basis
- Moving beyond traditional research and development to look at other types of innovation.

A global tracking hub should also track which innovation funding is likely to promote sustainability and a move to transforming agri-food systems. One means to this end would be to track implementation of the Principles for Sustainable Agri-food Research and Innovation.

Conclusions

CoSAI's study concludes that funding patterns for innovation in agri-food systems of the Global South are inadequate to deliver a transformation that will meet global goals and targets. Urgent action is needed, in particular by global, regional and national funding bodies. Agri-food research and innovation have long lead times and huge payoffs, so front-loading funding to this area is worthwhile.

Reorienting research and innovation to consider multiple sustainability aims can make the best use of the funding available. Adopting common principles for innovation in agri-food systems and tracking their implementation is a way forward. The global community should mobilize to tackle critical gaps around post-harvest issues, local seed systems, and land and natural resources management. Innovation in finance, policy, and social institutions also needs concerted attention.

Finally, international agencies need to systematically track agri-food innovation funding, and how much of this is likely to promote sustainability goals. Such public information will provide incentives for funders, researchers and innovators to make the needed changes to deliver transformed agri-food systems.

This policy brief draws on an overall study that synthesized data on public and private funding for innovation, and also eight case studies: India, Brazil, Kenya, USAID, IFAD, CGIAR, seed systems and agricultural finance.

For more information, see the full report at: https://hdl.handle.net/10568/114762

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