![International Agri-Food Network logo]

APPROVED

Private Sector Mechanism Position Paper

ADDRESSING CURRENT DATA GAPS AND CHALLENGES

Current data gaps lead to immense losses in agriculture productivity and income and help perpetuate hunger and poor nutrition particularly among the most vulnerable. There is a growing recognition of the need for sharing of available, accessible, and usable open data for agriculture and nutrition to help ensure global food security.

Farmers use data daily, from deciding when and what to plant, to grow, harvest and/or sell their crops, when to send cattle to pasture, or where to buy fresh fruits and vegetables. This is precisely why accurate and timely data should be made accessible to facilitate the best-informed decisions, and for the development and design of effective policies. But while greater quality data is needed, farmers need to be able to process this data effectively.

We believe addressing the data gaps and challenges requires greater investment in high quality data, more actionable data, the use of new sources of data, the creation of an enabling environment, increased exchange of data to reduce disaster risk and the consideration of the role of the private sector as a key partner.

The PSM's goal is to take actively contribute to the CFS Data Collection and Analysis Workstream in order to address the current data gaps and challenges that affect farmers and the entire agri-food industry.

PSM highlights the following to address the current data gaps and increase agriculture productivity and ensure global food security.

1. Increase investment in high quality agricultural data

Investment is data collection and provision is extremely low; amounting to around 0.3% of the total invested annually in agriculture. Harnessing the power of data will be one of the most important tools for achieving the United Nations' Sustainable Development Goals. The share of investment must increase to at least 2% if we want to meet the 2030 Agenda. This requires a focus on gaps and topics where high quality data does not currently exist. The primary focus of investment should be on the data necessary to track achievement towards the SDG indicators.

2. Promote better, more actionable data

There is a plethora of data available, but not all is good quality, or actionable. Data should be framed to measure something actionable, which can be used to design appropriate and effective policy, test the effectiveness of interventions and adapt programming to achieve continuous improvement.

Greater disaggregated data is also needed to enable the development of appropriate, evidence-based responses and policies. This requires regular collection and use of sex, age, and disability-disaggregated data and gender-sensitive statistics and indicators. Disaggregated production, prices and environmental indicators are also critical. Existing platforms and start-ups that can develop new ways to interpret such data should be identified for greater investment.

APPROVED
3. Utilize new sources of data

Diverse sources and methods can also lead to better quality data. The data needed for progress in agriculture development may be available and can be sourced. Businesses and NGOs have large resources of data available, but more needs to be done to facilitate the sharing of that data.

Adopting a Value Chain Approach which looks beyond productivity, to the entire value chain from seed and animal health, through farming, post-harvest losses, primary markets, secondary markets, processing, consumption, and nutrition outcomes is crucial. This leads to the identification of data gaps along the value chain to match existing data with identified needs. The following are examples of technology, which where appropriate, may lead to the greater use of new sources of data, but inequality of access should be addressed to ensure alignment with SDGS, with no one left behind.

- Information technology, including mobile apps, allow more data to be collected, and technologies like geospatial data and near-infrared sensing could allow the objective compilation of data on a global scale – likely for a fraction of the cost of current methods. However, the extent to which passive measurement technologies are unable to discern disaggregated data should be acknowledged.
- Remote sensing can provide soil moisture data and help determine the quantity of moisture in the soil and hence identify the type of crop to grow, or water-use efficient practices.
- Land use calculations are equally important, as well as the assessments of crop rotations, and the impact of extreme weather. This could allow us to dramatically speed the rate at which we can understand the agricultural system and measure its improvements.

4. Create an enabling environment for increased data

- Improved rural infrastructure and bandwidth will ensure entire communities are not left behind in today's information-driven economy, particularly those in rural areas. Addressing the lack of connectivity and related infrastructure needs to connect communities is crucial to create greater opportunities for the rural poor and urban centres.
- Greater availability of cloud computing in rural can be used to aggregate data from tools like soil sensors, satellite images, and weather stations to help farmers make better decisions about managing their crops and understanding their production environment.
- Increased uptake of digitization in agriculture can increase the availability of data. Incentives for digital technologies and suitable legal and privacy protections to allow agreed, anonymized aggregation are needed for farmers and other SMEs.
- Collective efforts to support anonymized data sharing according to harmonized protocols are needed. Data collected and shared in real time allows for the determination of patterns such as weather, production inefficiencies, and problems with soil health. The necessary safeguards must be in place so that no personal information or farmer data is shared with third-parties without a farmer's consent and according to local regulation.
- Coherent rules and regulations for better governance at the local, national and regional level must recognize and incentivize the use of new technologies and accelerate their use for good.

APPROVED

5. Exchange of data for Disaster Risk Reduction

Disaster risk reduction can result from greater exchange of data through an early warning and rapid response mechanism. Digital early warning systems help farmers and scientists get ahead of weather forecasts, pests, diseases, and disasters. FAO has a role to play in creating a next-generation rapid response mechanism to improve the resilience of food systems to disruptive events. A rapid response mechanism convened by the UN could regularly bring together national governments, crop pathologists, entomologists, meteorologists, and digital agriculture companies with the capacity to forewarn of issues, rapidly assess them and mount responses.

6. Consider the Private Sector as a key partner

The agri-business sector, being reliably conversant in and knowledgeable about levels of inputs, production, soil fertility, crop and animal disease risks and trade could serve as a cross reference for the soundness of agricultural data and its findings. This is already underway under various collaborative working groups such as the CGIAR Platform for Big Data in Agriculture, but more can be done.

PSM calls for a mindset that welcomes an inclusive collaboration with the private sector, academia and civil society on any data initiative. The SDGs recognize the need to bring all stakeholders on board, including the private sector. This is the only way to close the data gap and achieve the SDGs.