

## CGIAR Action Area Theory of Change: Genetic Innovation

SPHERE OF CONTROL

**Innovation Demand** & scaling & scaling Demand **Initiatives Challenges** partners partners **Outcomes** partners **Impact** Researchers, breeders and other **Nutrition**, health and users access genebank collections **food security:** Crop varieties with higher nutritional content where use is facilitated with more NARES **Limited agrobiodiversity** data associated with accessions and quality increase nutrition and health of population Farmers underpinning food systems Governments to provide sufficient, affordable, Farmers CGIAR & partners produce better, nutritious and diverse diets in a National Agricultural demand-driven, more impactful **Poverty reduction, livelihoods** changing climate Research and Conservation and use of genetic Seed companies varieties defined by multidisciplinary, NARES and jobs: Productive varieties **Extension Services** resources (Genebanks) holistic market intelligence better suited to farmers needs (NARES) **Contested international policy** Private breeding contribute to increased income Consumers environments on genetic **Accelerated breeding: Meeting** companies CGIAR & partner breeding programs resources and precision genetic farmers' needs with nutritious, Consumers increase their efficiency and speed **National Ministries Gender Equality, youth and social inclusion:** Women climate-resilient crops technologies of variety development by using best Vendors and Ministries practices and shared services contracting services and marginalized groups are Universities Variable, often slow rate of genetic Enabling tools, technology and empowered through varieties gain from CGIAR breeding and services for genetic gains CGIAR & partner breeding programs Universities Universities addressing their needs low varietal replacement in farmers Advanced Research accelerate variety development and Institutes **Accelerating crop improvement** quality by securing access and using Environmental health and biodiversity: Loss of genetic variation reduced through agrobiodiversity conservation. Expansion of farm land prevented Advanced Research Advanced research novel, cutting-edge technologies through precision genetic Institutes institutes **Breeding optimization is hindered** technologies NGOs by strategic and operational Public and private sector partners NGOs NGOs constraints SeEdQUAL: Delivering genetic increase co-ownership and co-Regional organizations gains in farmers' fields implementation of research and with increased productivity Regional organizations National genebanks Prioritization is supply driven, investment decisions Funders lacks transdisciplinary insights. Market intelligence for **Climate adaptation** and is ill coordinated with NARS and Funders Community more equitable and impactful Seed sector actors increase their and mitigation: Climate smart Seed companies other diverse, key partners organizations genetic innovation investments in scaling-up new varieties with novel traits increase resilience of food system actors Seed companies varieties from CGIAR breeding Food industry Inadequate capacities and pipelines Agribusiness actors partnership models to co-develop Food industry Contributing to and scale-up novel solutions Farmers adopt climate-resilient, Food industry SUSTAINABLE GOALS nutritious, market-demanded varieties more broadly and rapidly 2022

**INFLUENCE** 

SPHERE OF INTEREST