

Proposal for a Funding support module for the Crops to End Hunger Initiative as part of the Excellence in Breeding Platform

Purpose

This document presents a proposal from The Excellence in Breeding Platform (EiB) to create a “Funding Support module for the Crops to End Hunger Initiative” within the EiB. This new time-bound module will provide a vehicle for a coherent system approach to fund the ‘CGIAR implementation plan for the Crops to End Hunger Initiative’ (as approved by the System Management Board at its 12th meeting in December 2018). The module’s purpose is to administer and disburse funds on behalf of Funders according to the framework proposed here.

Action Requested by the System Council

The System Council is requested to consider, and if thought appropriate, **approve** the creation of a new EiB Funding Support Module for the CtEH Initiative for immediate implementation for the period 2019-2021.

Document category: Working document of the System Council

There is no restriction on the circulation of this document

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Background

1. The Crops to End Hunger Initiative ('CtEH Initiative') has the objective of improving and modernizing CGIAR crop breeding programs, to enable the delivery of a higher rate of genetic gains, in the form of nutritious, market-preferred cultivars, in the fields of smallholder farmers. It calls for change to move from the current way of operating, to using improved breeding approaches so that CGIAR can respond optimally to the food security and related human welfare and climatic challenges articulated by the Sustainable Development Goals towards 2030.
2. The strategy for the Initiative was established by the Funders¹ and the CGIAR implementation plan² prepared by the EiB Platform and System Management Office (taking into account inputs from the System Council) has been endorsed by the System Management Board. The CtEH Initiative therefore embraces both a modernization (or uplift) aspect as well as continued support to the optimized breeding activities of CGIAR research programs ('CRPs') and CGIAR Centers³.
3. The Excellence in Breeding Platform ('EiB') exists to lead, coordinate and support the response to the CtEH Initiative at both a System level and for individual CGIAR Centers and breeding pipelines. EiB also provides and coordinates access to breeding tools, shared services and know-how⁴.
4. To be successful, the CtEH Initiative will require CGIAR breeding Centers, programs and teams to make changes in the way they operate, to improve the ongoing components of their breeding. In addition, it will require the CGIAR, as a system, to:
 - a. jointly develop, manage and access new tools and services;
 - b. access specific expertise that enables and/or catalyzes these changes;
 - c. upgrade testing and processing capabilities, including infrastructure and capital improvements; and
 - d. improve understanding of market needs and overcome barriers to variety adoption.
5. These can all be regarded as significant short-term investments that enable or catalyze the improvement and/or modernization of CGIAR breeding.
6. There is an appetite amongst Funders to finance these activities. However, there is currently no vehicle by which Funders can direct their funds specifically and collaboratively for the time-limited uplift costs associated with the Initiative.

¹ Initiative on "Crops to End Hunger". Strategy and Options for CGIAR Support to Plant Breeding, version Oct 10, 2018.

² Implementation Plan for the Crops to End Hunger Initiative for 2019-2021: [Document SMB12-02](#) (Dec 2018).

³ Articulated in Crops to End Hunger Implementation Update, [Document SMB13-02](#) (March 2019).

⁴ Excellence in Breeding Platform: Full Proposal 2017-2022, July 2016; and, CGIAR Excellence in Breeding Platform, Plan of Work and Budget (POWB) 2019.

7. This document presents a proposal for creating a special purpose financing vehicle and describes the framework for planning and disbursing funding and the governance and monitoring that would be applied to ensure Funders can have confidence that their funds will be utilized appropriately to ensure successful implementation of the CtEH Initiative during the 2019-2021 period. The framework for fund disbursement seeks to ensure that the funding allocated to the Initiative results in maximum impact, in particular, for the highest priority crop by region combinations supported by Funders. Decisions were taken in response to a prioritization process that took into account quantitative impacts on poverty and qualitative gains in nutrition and climate resilience, and further informed by individual Funders' regional or global priorities.

The proposal

8. The 'windows funding' mechanism of the CGIAR Trust Fund (and the 'CGIAR Fund' before it) was primarily designed to provide financing for CGIAR research programs ('CRPs') and platforms with a scientific focus. Crop breeding improvement as envisaged by the CtEH Initiative cuts across the dimensions of CRPs and Centers and system infrastructure.
9. Following preliminary discussions, the System Management Board, on the advice of the EiB Platform, Funders and Centers proposes the creation of a funding module within the EiB Platform to channel specific financing for additional 'uplift' costs arising from the modernization agenda of CtEH to prioritized crop breeding programs and breeding Centers. This module is a gated funding (or flow through) mechanism and would not have a scientific content (and so is not presented for independent expert review moderated by the System's Independent Science for Development Council). The disbursement mechanism rests on the framework provided by: a) breeding plan development and implementation activities of Centers already underway; and, b) EiB activities that, inter alia, support the finalization of breeding improvement plans. Allocation is therefore based on an agreed set of high-quality crop breeding improvement plans and guided by funder priorities for crop trait by geography combinations.
10. The module would be for the lifetime of the EiB Platform, with an immediate goal to support the modernization phase of the Initiative.
11. As identified in the December 2018 endorsed CGIAR CtEH Implementation plan, a set of crop-specific 'Breeding Improvement Plans' (see Annex I) for each of 20 crops is being developed by the relevant CGIAR crop breeding Center. Collectively, these plans will be the source of the identification for modernization pathways and will be instrumental in identifying costs and needed funding in responding to the CtEH Initiative. It is anticipated that the modernization demand will significantly outstrip the supply of available funding and that, therefore, prioritization and sequencing of investments will be required. The expected dimensions of prioritization are described in Annex II.

12. Disbursements of received funding will be according to an agreed framework (see Annex II) and sequence for improvement activities. While a first round of Breeding Improvement Plans is available now, more mature versions of these plans are expected in September 2019, with Breeding Improvement Plans for other crops to follow⁵. Disbursements in 2019 would therefore be made on the basis of meeting the needs of commonly agreed target programs on the recommendation of the EiB Platform, as overseen by its current Platform Steering Committee. In future, a more complete framework based on the full set of Plans will guide disbursements in 2020 and 2021.

More detailed considerations in module operation

13. **Framework and disbursements:** The EiB Platform will be responsible, using the considerations in Annex II, to develop a proposal for a prioritized plan for improvements to target with financing from the EiB Module for CtEH. This will clearly state which improvements, capacity enhancement, etc. will be funded with the first USD 10M, the second and third. This plan will be presented to Funders on an annual basis for their approval. To prevent Funders from needing to review plans more often than on an annual basis, the EiB Platform will prioritize within USD 10M blocks.
14. **Schedule for EiB to propose these plans to Funders:** EiB will present the 2019 plan to the CtEH contributing Funders (copied to the System Council for information) by 15 July 2019. The 2020 plan will be a refinement of the 2019 plan and presented to the CtEH contributing Funders (again copied to the System Council for information) by 31 March 2020. The plan will be refined annually thereafter.
15. **Release of funds:** As soon as funds are received by the module, they will be disbursed according to the plan. Note that this does not necessarily mean that all funding will be disbursed immediately since some changes will take years to fully implement and will have stop/go points along the way. For these projects, funding will be disbursed annually.
16. **Time span and operational approach for the module:** The proposed Module is a funding mechanism, and therefore there are no additional operational, staff or capital costs to be borne by the EiB Platform. Administrative costs will be borne by EiB.
17. **EiB technical and financial reporting:** The financial reporting of the EiB Module for CtEH will be included in EiB's Annual Platform reporting but will be distinct from financial reporting for the rest of the EiB Platform (science modules 1-5). Disbursements will be made by way of sub-grant and each sub-grant will define the financial and technical reporting requirements. CIMMYT, as the host organization for EiB, will not charge indirect costs on funding sub-granted to other CGIAR Centers given that these are inter-Center transfers. Centers and breeding pipelines receiving

⁵ Breeding Program Assessment Tool (BPAT) evaluations have been continuing on a staggered basis across the 20 breeding programs considered by the CtEH initiative and the EiB will need time to process all crop breeding improvement plan proposals to the same level.

funding will report annually on progress and utilization of the funding. EiB will use these reports to:

- a. inform future planning,
- b. provide summary financial reporting through EiB's annual reporting process
- c. provide a summary of progress with the CtEH implementation Plan through the Platform's Annual report.

18. **Governance (of EiB and of the proposed module):** EiB has a Platform Steering Committee (PSC) with the following representatives:

- a. DDGs-R or designated breeding heads from each of the Centers or alliances conducting breeding programs
- b. Two to four representatives with current or past major experience with modernized, large scale public (e.g. NARS) or private sector breeding programs
- c. EiB Director (ex-officio)

In addition, up to four technical representatives of Funders are invited to attend meetings of the EiB Platform Steering Committee as active observers.

19. **Issue resolution:** Any issues that cannot be resolved by the Platform Steering Committee are escalated to the System Management Board. If there are issues that cannot be resolved by the System Management Board, then they are escalated to the System Council.

20. **Financial implications:** It is envisioned that the Module may disburse between USD 10-80M annually. The amount will be governed by Funder responses to the prioritized framework for the CtEH Initiative. The CtEH Funding Module will not commit contractually more funding than received. These amounts will be held and managed separately from funds supporting the regular budget of EiB for Platform activities (e.g. for regular Modules 1-5 as described in the EiB POWB, reference 6). Financial management by CIMMYT, EiB and all Center recipients follows CGIAR guidelines. Recipients will follow financial and technical reporting requirements. Subcontracts include compliance with Funder policies.

Summary of advantages of the introduction of the proposed funding module:

21. Funders able to target placement of crop breeding modernization funding according to Funder-defined crop and geography priorities.
22. Operated hand in hand with Breeding Improvement Plan development, and identification of crop program needs, cross-system services or major hub upgrades (i.e. a "framework").
23. Allocation is therefore based on an agreed set of high-quality crop-specific Breeding Improvement Plans and guided by funder priorities for crop by geography combinations.

24. Disbursements gated against agreed steps of a prioritized modernization process.
25. Opportunities for coordinated Funder replenishment for the duration of the modernization “uplift” initiative (the three years of the current Business Plan period) and for other funders who wish to support the initiative.
26. Allows EiB to enter into discussion and advice on tailored crop breeding program uplifts.
27. Prospect of funding aids focused compliance with initiative schedule and scope.
28. Does not disincentivize continuing funding to longer term crop breeding through CRPs (which benefit from upgrading) – however, allows Funders to enforce conditionality of breeding program funding through the CtEH model of modernization of CGIAR crop breeding programs to deliver higher rates of genetic gain in farmers’ fields.

Linkage to CGIAR’s Risk Management Framework

29. In November 2017, the System adopted a whole of system ‘CGIAR System Risk Management Framework’⁶ and agreed to consider opportunities and risks according to five risk families. Of the 5 ‘CGIAR Risk Families’ that the System has adopted, two are directly relevant to the CtEH Initiative and the creation of the proposed funding module:
 - a. Risk Family 1 - ‘*CGIAR is no longer a front runner*’, resulting from missed opportunities by CGIAR to ensure that CGIAR science is relevant and cutting edge; and
 - b. Risk Family 5 – ‘*Poor execution undermines capability*’, resulting from missed opportunities to ensure that effective and efficient Center and program/platform operations minimize costs and protect key assets.
30. The CtEH Initiative mitigates these risks as follows:

Risk Family	Key risk	Mitigation measures
CGIAR is no longer a front runner	Lack of continued commitment of Center, CRP and Breeding Program Leads to the modernization agenda	<ul style="list-style-type: none"> • Approval of funding module provides time-limited uplift funding for critical breeding improvements • Nevertheless, the breeding modernization agenda should not be seen as separate from the desire to produce impacts from CRP pipeline research - which will require necessary linkages with seed delivery and systems research and adequate monitoring

⁶ <https://www.cgiar.org/wp/wp-content/uploads/2018/01/Risk-Management-Framework-APPROVED.pdf>

Risk Family	Key risk	Mitigation measures
		(as per the CtEH strategy) of CRP impacts over time
Poor execution undermines capability	Dissipation of allotted funding for breeding modernization to other programmatic or Center activities	<ul style="list-style-type: none"> Adoption of the new funding module provides visible channel for funding to be targeted to the modernization program

Recommendation to System Council

- The recommendation is that the System Council approve the development of a Funding Support module for the Crops to End Hunger Initiative in the Excellence in Breeding Platform to act as a vehicle for Funders to target specific financing for CGIAR to implement the CtEH Initiative. The rapid implementation of such a module will allow disbursements to the Initiative in 2019.

Annex 1: Material to be identified in Crop Breeding Improvement Plans

- A. The improvement plans systematically collect information about:
- a) Breeding teams, their members, time allocated to breeding and staff, operating and capital investment into the current breeding program.
 - b) It lists the proposed Breeding Program Assessment Tool (BPAT) recommendations, or improvement ambitions in case no BPAT has (yet) been conducted.
 - c) Aligned with the BPAT recommendations, it develops an action plan for 2019 – 2023 with objectives, milestones, tasks, responsibilities, accountabilities, and staff, operating and capital budgets. It defines funding that is already available for implementing any of these improvements.
- B. The improvement plan clarifies multiple levels of operation of CGIAR breeding, as follows:
- a) First there is the **breeding institution** (e.g. ICRISAT), then,
 - b) The **breeding program** (e.g. the ICRISAT Sorghum program), then,
 - c) The **breeding pipeline** often associated with a specific breeding team (e.g. the ICRISAT Sorghum pipeline in West Africa as distinct from the ICRISAT Sorghum pipeline in Asia). Each breeding pipeline has **product concepts** (list of traits targeted and managed by a pipeline), then,
 - d) **Product profiles**, where each product profile describes the product that will be developed in order to replace a specific variety or set of varieties in the market place. Any particular breeding pipeline may have multiple product profiles.
- C. Funding can be targeted at any of the above levels in order to satisfy outcomes from a priority setting exercise.

Annex II. Using Improvement Plans as a means for prioritization of CtEH investment.

- D. There are a number of considerations for funding improvements to CGIAR breeding. Some of these are determined by the current situation of the CGIAR Centers and the current breeding pipelines which vary by crop and scope across the system. Funders have a wish to improve CGIAR system capacity generally but also to encourage exploitation of crop by geography combinations which will have congruence with other investments and maximize development impact. Other technical and feasibility considerations require input from the EiB. Many of these considerations demand prioritization of the very large number of potential improvements that could be targeted across the many crop breeding pipelines and the eight CGIAR breeding Centers.
- E. Prioritization has principally two dimensions:
1. Funders' decisions:
 - a. How important is a crop, crop x region, or a set of product profiles ("pipeline") in view of food and nutrition security and poverty reduction? What is a **reasonable investment level for improved operations** relative to each other (i.e. not in absolute terms) and when funded through CtEH funders? This is ideally to be decided and rationalized by CtEH funders. Given that the costs of operations differ between less and more costly crops, we propose to do so in relative terms and focus on the relative investment of crops, crop x region or a set of product profiles ("pipeline") after optimization, using a scale such as low CtEH priority – Medium CtEH priority – High CtEH priority and a descriptive rationalization. (Note: Over time, such a decision will be better informed by pipeline data collected by EiB. For now, understanding which pipelines breed for which regions, together with existing Funder-commissioned analyses is a start.)
 - b. Funders will be asked to agree on an overall CtEH investment target across crops (e.g. USD80 or 100 million? Over how many years?), given that the costs for the total modernization plan will likely go beyond that. BPAT teams took first world breeding programs as bench-mark for their review; some suggestions with lesser ROI will hence likely remain aspirational and will unlikely be funded with the first 3-year CtEH investment. In any case, we need to establish "what investment should come first".
 2. Implementers' recommendation: EiB in consultation with Centers will assess:
 - a. **What short term CtEH investments are required** to get breeding programs to an improved level of operation? This can be deduced from the improvement plans and further discussions with Centers.

- b. **Absorption capacity**/capacity to successfully utilize funding for improvements: Each center can only implement a finite number of improvements at one time and this capacity is different across centers and pipelines. This also can be deducted from Improvement Plans as absorption capacity is linked to current size of investment and number of staff – details for both captured in Improvement Plans.

- F. The outcome of this will help with priority setting and decision making regarding how funding is targeted to various Centers or breeding pipelines, over what time period and starting when, such that:
 - a. Higher priority (crop x region) pipelines will receive more funding and is the first and overriding consideration;
 - b. Crop x region pipelines with the greatest need to improve (greatest gap) will require more funding;
 - c. A given Center's absorption capacity will determine how long improvements will take to implement; and
 - d. High priority (crop x region) pipelines with the greatest gap will need to start earlier.

- G. What are the CtEH investments with the **highest return to investments**, within and across crops? And, what is the **likelihood of success** of any particular intervention/improvement? Within improvement plans, Centers proposed a range of improvements covering the full range from quite simple through to highly complex. These can be categorized as follows:
 - a. Change practice is +/- within the same context possible
 - b. Change requires new "system" +/- low risk capex + training
 - c. Change requires higher risk Capex + Systems + training that needs a more elaborate plan
 - d. Focus should likely be first on a. and b.

- H. **Synergies of scale:** What high priority improvements are shared across Centers and can be implemented in an aligned manner (e.g. common training)?

- I. In addition to a Center's capacity for implementing a certain rate of change (absorption capacity), **a logical order needs to be followed** (e.g. proper testing network before genomics). A Center or pipeline's capacity for implementing change may be linked to the size of the Center / pipeline (in terms of current investment) and the number of staff. These data will be captured in the improvement plans, including the Center's own relative priority.