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**ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE**

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Strategy paper on the programmatic approach of the Platform for the Co-development and Transfer of Technologies, for the biennium 2018/2019

Executive Summary

Through Resolution 4/2015, the Governing Body endorsed the Programme of Work on Sustainable Use of Plant Genetic Resources for Food and Agriculture 2016–2019 and agreed, subject to the availability of resources, to support initiatives undertaken by Contracting Parties and other stakeholders voluntarily, such as the Platform for the Co-development and Transfer of Technologies (the Platform).

During the biennium, the partners of the Platform met once in Vienna, Austria, in October 2016 where they discussed the progress made and identified important issues for its future work.

This document contains the Strategy paper on a programmatic approach of the Platform for the biennium 2018/2019, for the information of the Governing Body.

*This document can be accessed using the Quick Response Code on this page;
an FAO initiative to minimize its environmental impact and promote greener communications.
Other documents can be consulted at [http://www.fao.org/plant-treaty/meetings/meetings-
detail/en/c/888771/](http://www.fao.org/plant-treaty/meetings/meetings-detail/en/c/888771/)*



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I. Background information

1. The Platform for the Co-development and Transfer of Technologies (the Platform), as outlined in the 2012 Rio Six-Point Action Plan,¹ was first discussed in practical terms at a meeting of potential action partners, made up of stakeholders in the International Treaty, in Brasilia, Brazil, in August 2012. This first meeting set out the broad logic of the Platform, namely as a point of contact where institutions active in technology transfer – including technical bodies and donor institutions – could constitute a coordination and initiation mechanism to mobilize resources, including those of the initial proponents themselves, for technology co-development and transfer.

2. A second meeting, held in Bandung, Indonesia in July 2013, built on the proposals set out in Brasilia, by reviewing a number of analytical documents aimed at enabling the action partners to move towards a better definition of the objectives, scope and modalities through which the Platform could be established. Based on actual examples of technology co-development and transfer, the meeting considered the distinction between germplasm based (i.e. material intensive) and non-germplasm based (i.e. information intensive) technology co-development and transfer, and determined that a combination of the two would be the most effective. Importantly, the second meeting also recognized the gaps between the needs and the deployment of appropriate technology packets, and concluded that a problem solving based approach, in a programmatic manner, would be effective in determining the Platform's scope of action, and making it operational. The meeting therefore agreed on several programmatic and institutional steps required to take the Platform forward (outlined in the strategic goals, see below). The 2013 Bandung meeting also noted that regardless of the model, appropriateness and affordability should remain key criteria for technology co-development and transfer, and that the Platform should deliver the technology packets through the development of standardized conditions, which would reduce transaction costs. In addition, it reaffirmed the need for collaboration for the Platform, noting that it should continue seeking synergies with existing mechanisms of the International Treaty, such as the Benefit Sharing Fund (BSF), and with highly respected institutions active in technology brokering, adaptation and delivery.

3. In September 2015 in Rome, Italy, a third meeting of the Platform assessed progress, defined the strategic focus of the initiative in the light of developments with other International Treaty processes, expanded the network of active institutions, and reported on advances made at the Sixth Session of the Governing Body of the International Treaty. It was decided that the Platform should continue operating as a functioning network of institutions, and agreement was reached on a strategic biennial programme of work, to enhance the Platform's coherence and focus.

4. At the third meeting of the Ad Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System of Access and Benefit-sharing held in Brasília, Brazil, 2–5 June 2015, in the context of mobilizing donor support for BSF projects, the BSF working group recommended strengthening the programmatic approach by providing:

- greater predictability to prospective donors regarding the planned activities and targeted output and impact of proposed projects, in order to enable them to make informed decisions about their potential contributions;
- improved thematic coherence between individual projects and project cycles;
- a long-term investment strategy, with objectives and results;
- promotion of synergy between the BSF and the Funding Strategy.

¹ *Rio Six-Point Action Plan for the International Treaty on Plant Genetic Resources for Food and Agriculture*
<http://www.fao.org/3/a-be484e.pdf>

5. Given the limited resources and time constraints, it was agreed that the programmatic approach should place greater emphasis on building the capacity to adapt existing technologies to local conditions than on developing ‘blue sky’ research aimed at achieving global breakthroughs.

6. In October 2016 in Vienna, Austria, a fourth meeting of the Platform took stock of the progress made and identified important issues for its future work:

- The role of the Secretariat of the International Treaty for future work in supporting Platform development activities.
- The establishment of regional platforms, to be led and managed by Contracting Parties of the International Treaty. An online web portal needs to be managed at central level by the Secretariat of the International Treaty.
- The development of a template for preparing package technologies for selected crops, namely wheat, rice, maize, beans and quinoa.
- The identification of gaps between available technologies and those needed at national level.

II. Mission, Vision and Strategic goals of the Platform²

7. The mission of the Platform is to provide a network of networks that can close the gap between technology application and the technologies needed by farmers, farmers’ organizations, breeders and practitioners for the conservation and sustainable use of PGRFA. The Platform facilitates the discussion and coordination of issues related to the identification of these gaps and the development of technology packets for farmers in the context of the International Treaty.

8. The vision of the Platform is:

“Stakeholders in the International Treaty are empowered to utilize technologies for the conservation, characterization, evaluation and use of plant genetic resources for food and agriculture.”

9. The strategic objectives of the Platform are listed below:

- 1) respond to needs identified and problems perceived by target beneficiaries – in particular, farmers and their communities.
- 2) create a functioning network of institutions with the skills and experience to support and undertake initiatives and projects that aim to co-develop and transfer technologies to beneficiaries in developing countries.
- 3) contribute to food security, and the social and economic development of target beneficiaries, through the establishment of a ‘one-stop shop’ for coherent ‘technology packets’, based on the understanding of technology co-development and transfer pathways and the mapping of actors involved.
- 4) promote the co-development and transfer of technologies, recognizing that technology transfer requires a range of supporting activities, in particular information sharing and capacity and institution-building.
- 5) mobilize financial and in-kind support to deliver relevant technologies, including through the International Treaty’s Benefit-sharing Fund.
- 6) support implementation of the BSF project cycle through the provision of relevant expert advice and capacity.”

² IT/GB-5/13/Inf.16: Report of the meeting on the establishment of a Platform for the Co-Development and Transfer of Technology-

III. Principles of the Platform

10. The Platform adheres to the following principles:
- 1) Technology transfer is a means to deliver benefits to target beneficiaries, rather than an end in itself.
 - 2) The Platform follows a problem solving based approach (i.e. the identification of existing constraints as the basis for undertaking technology co-development and transfer).
 - 3) There is a wide range of approaches to technology transfer and a broad range of potential solutions in responding to needs. Hence, the Platform does not adopt a single model of technology co-development and transfer – it evaluates the usefulness of different models based on parameters such as the capacity to lead integrated technology packets, and to technologies adapted to the needs of smallholder farmers and their communities.
 - 4) The Platform pursues technology co-development and transfer along the entire value chain, from the distribution of germplasm for research and breeding, to the release of improved varieties to farmers, including through technologies in support of the Global Information System of Article 17 of the International Treaty.
 - 5) The establishment of and progress within the Platform will be reported at the Governing Body sessions.
 - 6) The Platform will consult with a wide range of stakeholders in the International Treaty, in developing and implementing its activities.
 - 7) In keeping with the International Treaty's multilateral objectives, genetic material developed in the context of initiatives and projects supported by the Platform will be made available through the Multilateral System of Access and Benefit-sharing."

IV. The structure and governance of the Platform

11. The Platform has the flexibility and the potential to host facilities, such as an information management and sharing portal. The Platform is conceived as a coordination mechanism for these different facilities. In addition, within the framework of each of these facilities, core teams of action partners, with the support of technical advisory partners, can develop and implement a range of important activities, such as the documentation of good practices or the identification of existing potential components of technology packets. The action partners may individually or jointly implement the activities of the facilities, or host the facilities. The facilities themselves should follow the broad parameters of being demand driven, action oriented, problem based and incremental.

12. The Presidency of the Platform would be elected by the partners of the Platform and the office will last no longer than two years. It would be renewable only for an additional two years, on an exceptional basis.

13. The Platform is a Supporting Initiative to the Programme of Work on Sustainable Use (PoW 2016-2019), and the Ad Hoc Technical Committee on Sustainable Use (ACSU) is mandated with overseeing its implementation in accordance with Resolutions 7/2013 and 4/2015. Guidance to the overall functioning of the Platform is provided by the ACSU. For example, the ACSU has recommended involving farmers' needs and promoting benefit-sharing, and has also called for improved synergies between the Platform and other components of the PoW, such as support to pre-breeding.

14. The Treaty Secretariat, as a crucial participant in all previous meetings, plays an important role in providing coordination of the Platform. The Platform will continue operating as a functioning network of institutions, and a strategic biennial programme of work will be drawn up, to further enhance the coherence and focus of the Platform.

V. The Platform and the Benefit-sharing Fund of the International Treaty on Plant Genetic Resources for Food and Agriculture

15. The Platform is closely interrelated to the activities of the (i) Benefit-sharing Fund; (ii) the Multilateral System; and (iii) the Global Information System for the use of PGRFA for research and breeding and promotion of in situ and on-farm conservation. It is crucial to ensure a synergy of Platform activities with those of these critical components of the International Treaty, in order to realize the objectives of developing new varieties that can help to improve resistance to pests and diseases and crop yields, address the challenges of climate change, enhance the quality of agriculture, and increase food and nutrition security.

16. The Platform intends to provide important information and capacity-building tools to farmers in developing countries, which would allow them to profit from technology transfer. It is also designed to serve as an effective channel for action partners, made up of stakeholders in the International Treaty, enabling them to pool different skills and resources for the creation of technology packets and learning frameworks. These would be provided to farmers, farmers' organizations, breeders and practitioners, who are instrumental in fostering technology take-up. The Platform is expected to generate substantial added value by bringing together the core group of key institutions and practitioners for technology sharing.

17. The International Treaty's BSF is a unique mechanism that finances high impact projects supporting farmers in developing countries, in doing so addressing food security, adaptation to climate change and agricultural biodiversity.

18. The BSF offers the international community an opportunity to advance implementation of the International Treaty's objectives to transform the lives of smallholder farmers in developing countries, in particular with regard to the objectives of:

- enhancing food security;
- safeguarding biodiversity;
- adapting to climate change;
- providing science, innovation, sustainable livelihoods and income creation;
- supporting local projects directly reaching the poor and vulnerable.

19. Under Window 3, support to the co-development and transfer of technology was issued on the following basis:

“Technologies are being developed or are already available at institutions throughout the world – in the South and North, and in the public and private sectors – which could make a very significant contribution to the conservation and use of plant genetic resources for food and agriculture in developing countries. Identifying such technologies, and promoting their transfer, has been seen by the Governing Body of the International Treaty, since its outset, as a key component of the overall benefit-sharing strategy, and an important area for support by the BSF.”

20. In the context of mobilizing donor support for the BSF, there is a perceived need to strengthen the programmatic approach to the development of the Platform, so as to provide prospective donors with greater certainty regarding planned initiatives, targeted output and the possible impact of activities and projects. The programmatic approach needs to define a medium-term role for the Platform, capable of setting out the value proposition to the International Treaty audience and potential donors, and helping to build a case for supporting resource mobilization.

VI. Communication strategy for the Platform

21. Building awareness about the Platform for Co-development and Technology Transfer will be a determining factor in the success of the programmatic approach. There is a need for the Platform to raise its profile significantly within the international community, including among its own networking partners, international organizations, the private sector and major agriculture science research institutions. Communication will encompass a wide range of activities, including participation in meetings, announcing major achievements directly impacting smallholder farmers in developing countries through co-development and technology transfer, sending publications and using communication tools, such as a dedicated webpage for the Platform within the International Treaty website.

22. Other proposals for increasing awareness of the Platform include:

- Participating in international conferences and events. Developing a list of key international conferences addressing PGRFA and issues of food security, biodiversity and technology transfer, where it would be appropriate to participate and help raise awareness of the Platform.
- Consider organizing high level awareness-raising activities at major International Treaty/FAO meetings, so as to identify new partners, prospects and donors.
- Involving National Focal Points (NFPs) of the International Treaty and partners of the Platform. Make use of the important role that (NFPs) and networking partners can play in improving the information flow between the Contracting Parties and national agriculture science/research institutions among themselves and the Platform, and vice versa.
- Creating standard talking points, brochures, white papers, digital media about Platform activities, achievements and impact on smallholder farmers in developing countries, for use by Contracting Parties and network partners.

VII. Elements of the strategy for a programmatic approach

23. An outline of the specific elements, activities and operational requirements needed to implement the strategy for the programmatic approach of the Platform for the next biennium 2018–19 is given below. Each of these elements would play a vital role in accomplishing the objectives of the Platform in this period.

a) **BSF Window 3 call for proposals 2014 and the next new cycle for proposals under BSF Window 3 Phase II**

24. The Window 3 call for proposals 2014 resulted in the approval of 22 projects: (i) Five single country immediate action projects with a duration of three years for a maximum funding of USD 150,000; (ii) Five multi-country projects with a duration of four years for a maximum funding of USD 800,000; (iii) Three single country projects for the co-development and transfer of technology with a duration of two years and a maximum funding of USD 300,000; and (iv) Nine multi-country projects for co-development and transfer of technology with a duration of three years and a maximum funding of USD 500,000.

25. The BSF Window 3 call for proposals 2014, with a budgetary outlay of USD 6.4 million, is being executed in 44 developing countries around the globe. These projects aim to promote international cooperation among research institutions across boundaries for the co-development and transfer of key technologies. They will enable the generation, exchange and utilization of molecular, phenotypic and genotypic information for the development of new varieties adapted to climate change. The projects are expected to directly benefit at least 55 000 resource poor farmers in developing countries. In this regard, at least 30 PGRFA technologies are planned to be co-developed and

transferred to more than 80 research institutions of Contracting Parties in the developing world, to enable integrated data analysis and interpretation of germplasm, genomics and phenotypic data.

26. Projects supported through BSF Window 3 aim to promote international cooperation in support of the International Treaty by linking institutions across national boundaries. Projects are funded for co-development and technology transfer enabling the exchange of value added information about PGRFA, and in particular those related to the use of species in the gene pools of the MLS. Window 3 projects are expected to make a significant impact on the conservation and/or use of plant genetic resources by resource poor rural communities. In addition, these projects are expected to generate information and germplasm that could enhance the ability of farmers to adapt to climatic change, especially through increased resistance to drought, heat and associated biotic stresses.

27. In view of the above, it is necessary that Phase II of the Window 3 call for proposals should be activated in the biennium 2018–19.

b) Impact oriented and discovery driven research

28. In its charter, the International Treaty Secretariat has recognized the importance of understanding the needs and capacities of stakeholders, such as gene banks, breeders, researchers and farmers, when defining priority areas for germplasm characterization, evaluation and data access for impact oriented and discovery driven research. Plant research institutions are prioritizing the linkages with multilateral initiatives promoting access to, and transfer of technology and knowledge.

29. The Platform needs to develop technology packets through its programme of work (2018–19), which may result in (i) facilitated access to and use of high quality data on germplasm, and tools to analyse such data; (ii) germplasm under development.

c) Development of an online platform:

30. **A tool for collaborative research and participatory innovation.** The process of developing the value added chain linked to PGRFA could be achieved through collaborative research and a participatory innovation process. The Platform would be an online portal, accessible to the research community of plant breeders, gene bank managers, bio-informatics, data managers, policy specialists, agricultural science research institutions, university systems, farmers' organizations and representatives of relevant international organizations. The Platform will aim to utilize the wealth of crop diversity across the globe to help meet the global challenges of food security, with a primary goal of increasing crop genetic diversity in breeding programmes around the world.

31. **Developing communities in an online platform co-development and transfer of technologies.** There is scope for creating communities of researchers through the involvement of NFPs, who in turn could activate and encourage researchers and students in research institutions, university systems, farmers' organizations etc. to participate in the participatory innovation and collaborative research process. An online platform would integrate researchers in a structured manner, wherein researchers would work in a baton passing mode. This would enable scientists to deliver based on their core competences, and the results would be carried forward by others, depending on their areas of expertise. All contributions to the portal would be date and time stamped, which would enable downstream researchers to cite references to earlier entries. The Platform would have its own licensing and data sharing policy. Researchers would be encouraged to post new ideas, concepts and challenges, designed to propel the momentum towards the creation of new plant varieties. Researchers would be recognized and rewarded for developing novel algorithms on issues such as 'dematerialization', which would further enable the time period for creating new plant varieties to be reduced.

32. **Facilities of an online platform.** The Platform would provide for: (i) project management systems; (ii) a research algorithm system; (iii) a work flow system; (iv) learning management systems; (v) a micro-attribution system and algorithms to assign credit to contributors. The Platform would develop, in a transparent manner, its own policies on data sharing, credit sharing, incentive measures, project approval processes, a monitoring system, evaluation and a quality assurance framework. The Platform could become an important component of an effective GLIS, managed by the Secretariat. The budget line for the Portal may be created through international/donor funding and also through collaborative national mechanisms, since the online platform would work on projects and issues of concern not only to the global PGRFA community, but also to those of participating national mechanisms.

d) Strengthening human resources for the Platform in the Secretariat

33. In order to handle the increased activities, and to realize the full potential of the Platform, it is felt that the Secretariat of the International Treaty should be strengthened by assigning two full-time dedicated professionals, well versed in technology transfer and co-development.

VIII. Programme of work for the biennium 2018-19

34. Platform activities and organization need to have a flexible and modular arrangement. It is important to continue operating as a functioning network, so as to enhance the coherence and focus of the Platform. Accordingly, Annex 1 sets out details of the programme of work for the biennium 2018–19 concerning activities related to (i) Supporting the Phase II Window 3 project cycle of the BSF; (ii) Impact oriented and discovery driven research; (iii) Development of an online platform: a tool for collaborative research and participatory innovation; (iv) Strengthening human resources for the Platform in the Secretariat; and (v) Communication and community-building.

IX. Conclusions

35. A Strategy for setting out the programmatic approach of the Platform for the next biennium 2018–19 identifies clear deliverables. These could give focus to platform activities to ensure that they are consistent with the mission and objectives of the Platform. They could also take a significant contribution to meeting the objectives of the International Treaty, and to supporting the new initiatives of the Benefit-sharing Fund, the Multilateral System and the Global Information System.

Annex 1 - Programme of Work (2018-19)

OBJECTIVES	OUTCOMES	ACTIVITIES
1. Supporting Phase II Window 3, project cycle of BSF	Outcome 1.1 Support is provided to projects under Window 3	Activity 1.1.1 Backstopping missions to selected projects Activity 1.1.2 Mid-term and end-of-project workshops for Window 3 phase II implementing entities
	Outcome 1.2 A project management approach is in place for Window 3 Ph II of the Fund, which will strengthen its catalytic role in technology co-development and transfer	Activity 1.2.1 Achieving the identified milestones and reporting on progress
2. Impact oriented and discovery driven research	Outcome 2.1 Utilize germplasm characterization, evaluation and data access for impact oriented research	Activity 2.1.1 Understand the needs and capacities of stakeholders, such as gene banks, breeders, researchers and farmers
3. Online platform: a tool for collaborative research and participatory innovation	Outcome 3.1 Online platform for developing new plant varieties	Activity 3.1.1 Setting up online platform facilities
	Outcome 3.2 Online PGRFA research community	Activity 3.2.1 Developing online PGRFA research communities
	Outcome 3.3 Online platform facilities for (i) project management systems; (ii) research algorithm systems; (iii) work flow system; (iv) learning management system; and (v) micro-attribution system and algorithms to assign credit to contributors	Activity 3.3.1 Establishing systems for open source co-development, collaborative research & participatory innovation
4. Strengthened human resource for the Platform in the International Treaty Secretariat	Outcome 4.1 Two full-time dedicated professionals, well versed in co-development & technology transfer, available in the International Treaty Secretariat for strengthened support to the Platform	Activity 4.1.1 Identification, induction & placement of two dedicated professionals for the Platform in the Secretariat
5. Communication and community-building	Outcome 5.1 Progress and activities of the Platform are communicated effectively to potential donors	Activity 5.1.1 Preparing communication materials Activity 5.1.2 Developing a case for support
	Outcome 5.2 The Platform increases its range of available expertise	Activity 5.2.1 Issuing a call for expressions of interest