



DS/SC-2/15/2

Updates since the last meeting of the Steering Committee

Information note by the Joint Facilitation Unit

This document contains information on relevant developments within the various work tracks of the organizations that serve the Joint Facilitation Unit.

The Committee is invited to appraise the developments in the light of the vision, mission and principles of DivSeek, as well as its current status and expected progress.

1. Global Plant Council

The Global Plant Council undertook an initial landscape of projects of relevance for DivSeek, which included those characterizing genebank accessions, web-based portals to access crop diversity data, and projects developing software or data standards for sharing information about crop diversity. A summary of this was presented at the Steering Committee (SC) meeting in Rome in May.

At this meeting, it was recommended that the initial landscape study be extended to highlight less visible projects, and those areas where DivSeek might facilitate coordination and help to leverage the sharing of information and expertise among different projects. To achieve this, an email was sent to all DivSeek member organizations to request information on additional projects.

To date an additional 25 projects have been identified; further information about these, as well as the previous projects, are provided in *Appendix 1*.

In summary, 26 infrastructure, tools and standards projects; 12 crop/species databases and portals; 29 germplasm evaluation projects; 2 reference genome projects, and 4 other projects have been identified.

To help make progress in the general areas of data standards and data integration, the Global Plant Council's Executive Director Ruth Bastow has been working with the NSF, DoE, USDA, BBSRC and DFG, to organize three events at the Plant and Animal Genome (PAG) meeting in San Diego in January 2016. These events comprise two open forum workshops, followed by a brainstorming session that will bring together 50-75 invited scholars from diverse fields. During these events participants will seek to address how investments in genomics, phenomics, and information management can be leveraged to advance frontiers in basic, translational, and applied plant biological research by supporting data integration and re-use. The series of events seeks to encourage cross-disciplinary discussions to develop key

priorities for strategic national and international investments that advance the development of data-driven approaches to predictive phenomics in plants.

In addition to the activities listed above Ruth Bastow has also presented the concept of DivSeek at a number of events and meetings including:

- XV Brazilian Congress of Plant Physiology
- International Plant Molecular Biology Congress
- GPC AGM

2. International Treaty on Plant Genetic Resources for Food and Agriculture

The Governing Body of the International Treaty held its Sixth Session on 5-9 October 2015.

The Chairperson of the Sixth Session, the Secretary of the Treaty and the Executive Director of the Global Crop Diversity Trust referred to DivSeek in their written reports to the Governing Body, and in their interventions during the Session. Delegates of Contracting Parties and civil society organizations considered DivSeek, under the agenda item on the Global Information System and other agenda items, such as on the enhancement of the Multilateral System of Access and Benefit-Sharing. This witnesses the high level of attention that the initiative is receiving from the constituency of the International Treaty.

Two Resolutions of the Governing Body contain direct references to DivSeek and its Joint Facilitation Unit.

In Resolution 3/2015 on the Global Information System, the Governing Body:

- noted that the Secretariat participates in the Joint Facilitation Unit of the DivSeek initiative, with the view to enabling synergies with the Global Information System in full respect of the provisions of the Treaty, and requested the Secretary to continue doing it;

- requested the Secretary to invite DivSeek stakeholders to report on the implications for the objectives of the Treaty of the technologies underlying the DivSeek initiative and to compile a synthesis report on this for consideration by the Governing Body at its Seventh Session.

DivSeek is also referred to in the multi-year programme of work of the Global Information System. In relation to the promotion of transparency on the rights and obligations of users for accessing, sharing and using crop germplasm associated information, and ways to exercise those rights and obligations within the Global Information System, the programme of work is to develop a deeper understanding of the applicability and impacts of models developed in other parts of the Treaty, such as the Multilateral System of Access and Benefit Sharing, and initiatives such as DivSeek.

The programme of work contains several other activities such the development of software and technical infrastructure, standard setting and capacity development that could overlap with the first programme of work of DivSeek, based on the discussions that have already taken place during 2015, and could benefit from close collaboration.

The full text of Resolution 3/2015 is appended to this document (*Appendix 2*).

In Resolution 8/2015, on policy guidance to the Global Crop Diversity Trust, the Governing Body:

- commended the Trust for its close collaboration with the Treaty Secretariat on the Global Information System, *inter alia* through the joint development of Genesys and the

DivSeek Initiative, in accordance with the Treaty's objectives and provisions, especially Article 17;

- encouraged the Trust to support, in its activities, synergies and complementarities with the Programme of Work on the Global Information System in recognition of the mandate and standard setting capacity of the Governing Body and to continue close collaboration with the Treaty Secretariat on the joint facilitation of the DivSeek Initiative.

Another Resolution of the Governing Body refers to a theme that may be relevant to DivSeek in its further progress. Resolution 1/2015 on measures to enhance the functioning of the Multilateral System of Access and Benefit-Sharing, emphasized the importance of collections that are fully characterized and evaluated, including specific traits, genomics and phenotypic characterization and appealed to both Contracting Parties to the Treaty and natural and legal persons to make them available in the Multilateral system together with the relevant characterization information. The Governing Body re-convened the working group that has been negotiating enhancement measures for the Multilateral System since 2013 and requested such Group, *inter alia*, to consider the issues regarding genetic information associated with the material accessed from the Multilateral System.

The Treaty Secretariat also contributed extensively to the research project conducted by the Arizona State University (ASU) which has been jointly commissioned by the Treaty Secretariat and the Trust. An update and summary of this contribution is contained in the Memorandum on the DivSeek Governance Research Project (document DS/SC-2/15/5).

Finally, the Treaty Benefit-sharing Fund financed a workshop for the multi-country construction of a test platform for the development and allocation of globally unique identifiers for rice germplasm, linking the MLS information infrastructure and the DivSeek repository, as well as the Platform for Co-development and Transfer of Rice Technologies. The workshop was attended by scientists, researchers and expert of the Global Biodiversity Information Facility (GBIF), the DivSeek JFU, the African Agricultural Technology Foundation (AATF), the Chinese Academy of Agricultural Sciences (CAAS), IRRI, Collima Agro, the Agriculture Research Center of Lao, PhilRice and Indonesian Agency for Agricultural Research and Development (IAARD), *inter alia*. It contributed to the establishment of a multi-country platform for application of Digital Object Identifiers for genetic resources of rice. This platform will also be connected with the infrastructure of the MLS and with a number of rice databases chosen in the context of the GLIS. The workshop was held in September 2015 at IAARD.

3. Global Crop Diversity Trust

Since the meeting in May, the Crop Trust has presented DivSeek at the *Annual General Meeting of the Genebank CRP* (Turkey) and conferences of the *Crop Science Society of America* (USA), the *European Plant Phenotyping Network* (Spain), and the *COST Action on Phenotyping Platforms* (Germany). An increasing number of people in the audience seem to be wondering when DivSeek will start generating tangible outputs and what these outputs will be. As a result, the Crop Trust has been reflecting on the scope and role of DivSeek so that it can generate useful outputs for the scientific community in the near future.

What is the scope of DivSeek?

Genebanks have long waited for an opportunity to unlock the genetic potential of their holdings. Genomics researchers have started to deploy cutting-edge technologies to systematically characterize crop diversity. Breeders would like to more effectively utilize

genetic variation to speed up genetic gains. DivSeek could be seen as the area where the interests of these three stakeholder groups *intersect*. Clearly, research in this area is rapidly accelerating and will continue to do so, irrespective of DivSeek. DivSeek, however, could add value to otherwise uncoordinated efforts by establishing and advocating a common set of tools, approaches, and platforms.

The Crop Trust's initial role was to encourage and assist these communities to gather around the common goal of unlocking the value of crop diversity. The resulting DivSeek partnership was intended to be a research-driven initiative for and by scientists, as there is much that needs to be done within the scientific arena to best utilize genetic resources for the benefit of food security and diet quality. We therefore believe that DivSeek needs to maintain a research-driven focus.

At the recent Governing Body (GB) meeting of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) DivSeek stakeholders were asked to investigate the implications of technologies for the objectives of the ITPGRFA.¹ Although this is an important topic for the ITPGRFA, we believe it goes beyond the originally intended scope of DivSeek. The discussions at the GB meeting illustrated how much DivSeek has become a topic of the political discourse among ITPGRFA stakeholders.

Given these discussions, it is important to reflect on who the key constituencies of DivSeek are. Was DivSeek meant to embrace the *entire* spectrum of PGRFA stakeholders, including R&D organizations, governments, farmers, NGOs, and consumers? We believe not. Convincing independently managed research projects to agree on a common set of standards, approaches, and actions is a challenging- enough task on its own! Other, better-prepared fora exist to deal with policy-related topics at the science-society interface where some of the conflicts seem to arise. Instead, the 'policy' component of DivSeek should primarily focus on how researchers and organizations participate in the Initiative, interact with each other, and share the data generated.

The need for an effective organizational structure

The governance-related input documents for the SC meeting deal with questions of leadership in the context of operational effectiveness and consensus among stakeholders. In our opinion, consensus on the Initiative's *purpose, principles, and objectives* is critical. Seeking consensus at an *operational* level, however, simply doesn't seem to be feasible if the Initiative wishes to become an innovation platform and keep up with a rapidly evolving science and technology landscape.

The Crop Trust's role in DivSeek

The Crop Trust has contributed substantial resources to gather DivSeek stakeholders, help the Steering Committee form, and support its operations by hiring a staff to work for the Joint Facilitation Unit. We suggest the Steering Committee now clarifies the identity and scope of the Initiative and develops an effective and independently funded operational unit.

We are a deliberately nimble organization and continuously challenge ourselves to focus on the essence of our mission. Going forward, we intend to shift our focus from DivSeek governance towards taking concrete actions² to advance what we consider to be the original

¹ The Governing Body requested "... the Secretary to invite DivSeek stakeholders to report on the implications for the objectives of the Treaty of the technologies underlying the DivSeek initiative and to compile a synthesis report on this for consideration by the Governing Body at its Seventh Session".

purpose of the Initiative, which deeply resonates with us: to **re-imagine the way genebanks conserve and add value to crop diversity** in the form of freely accessible information linked to accessions.³ This will include assisting genebanks in their efforts to capture and ‘digest’ the growing body of data generated by ‘DivSeek projects’ to tackle questions like:

- How will genomic data change the way genebanks manage and promote their collections?
- What combination of skills will the next generation of genebank managers require?
- How to use this information to accelerate the development and implementation of Global Crop Conservation Strategies?

4. CGIAR Consortium Office

No update received.

² See examples outlined in the Potential Elements for a DivSeek Strategy document prepared for the May meeting in Rome.

³ We also refer back to some earlier documents including the DivSeek White Paper and the Report from the meeting in Jan 2015.