2022 Annual General Meeting

Executive Director, Operational Update

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MOBILIZING CROP DIVERSITY

The DivSeek International Network is a global community driven Not-for-Profit organization that aims to facilitate the generation, integration, and sharing of data and information related to plant genetic resources (PGR).

To unlock the potential of crop genebanks

https://divseekintl.org/

A community of practice – sharing expertise, standards, platforms

> 70 member organizations
• 2021, May - Launched Strategic Plan

This document defines major goals for the DivSeek International Network, with specific measurable objectives and strategies required to achieve them over the next five years.

doi: 10.23688/60gr-7w40
1. Catalyze advanced conservation, **management, utilization and traceability** of PGR standards, FAIR data exchange, cohesive community

2. **Add value**, facilitate **wider utilization** and accelerate crop improvement **best practices for phenotypic and genotypic characterization**

3. **Increase awareness** and **education** about the biodiversity and relevance of PGR **technology-driven practices for access and benefit sharing obligations**
Working towards DivSeek Strategic Objectives

**Goals** → **Objectives** → **Activities** → **KPIs**

- **WORKING GROUPS**
- **REGIONAL & THEMATIC HUBS**
- **TASK TEAMS**
  - e.g. standards, platform integration, best practice training
DivSeek Hubs (more later)

- pilot program
- independent, but synergistic with DivSeek
- ongoing, respond to pandemic comms
- successful in engaging wider community

https://divseekintl.org/regional-hubs/

Regional Hubs
- African Orphan Crops
- Australasian
- Canada
- Latin America
- West Africa

Thematic Hubs
- Democratize & Empower PGR Conservation and Use
- Does it Taste Good?
- Genebank Genomics
- Germinate database
- Global Durum wheat
- Haplotype & PanGenome: chickpea
Working Groups

• define and discuss Objectives and Activities
• fluid discussion, webinars, workshops and membership
• specific tasks informed by, and commission Concept Notes from any members/stakeholder group
  + targeted Task Teams to help secure funding and deliver

→ major opportunity for DivSeek to catalyse complementary funding sources
- please help us identify opportunities
- DivSeek can help in dialogue with and between funders/service providers
Concept Notes - launched Nov 2021

Why? - Complex landscape, multi-faceted requirements, new technologies

What? - Align with Strategic Plan – identify specific Activities/ Tasks /Approaches

Who? - DivSeek Members/Observers + PGR/Stakeholder community

How? - download and complete template

When? - anytime; start now!

- please contribute
- need active feedback
An Ecosystem of Standards, Open Data Resources, Analysis Tools and Best Practices

Why?

* Tools/resources dispersed in different communities.
  * Increase FAIR **connectivity** and interoperability
  * Raise **awareness** of (value and practice) of interoperability
  * Encourage community **engagement** between stakeholders
  * Increase **access** to generic data tools and standards for minor crops

- please participate
An Ecosystem of Standards, Open Data Resources, Analysis Tools and Best Practices

https://divseekintl.org/commons/

What? *Inventory of tools/resources covering PGR/DivSeek landscape

*Discuss, develop & contribute to standards

*Provide a forum for discussion of proposals, exchange expertise

*Showcase FAIR use cases, best practices, dissemination

Who? - DivSeek Members/Observers + PGR/Stakeholder community

*Please volunteer!

How? - Website, GitHub, links to platforms, training videos etc

- help coordinate funding for development, integration

When? – from now!
An Ecosystem of Standards, Open Data Resources, Analysis Tools and Best Practices

https://divseekintl.org/commons/

+ tools/resources landscape matrix
+ integration platforms (Galaxy?)
+ DOI best practices
+ standards development
+ ABS best practices
+ ...
+ ...

- please contribute
# Landscape matrix of available tools/resources

## Information domain

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<th>Plant Genetic Resources - interoperability</th>
<th>Legal / Permissions</th>
<th>standards</th>
<th>curation</th>
<th>repositories</th>
<th>access/retrieval</th>
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...also brings focus to gaps

[https://divseekintl.org/commons/](https://divseekintl.org/commons/)
### Taxonomy
- to subspecies
- cultivars
- pedigrees/lineages

### Germplasm
- Genetic Resource Collections
- Research Collections
- Breeding Programs
- Production
- Process & supply chain

### SNP variants
- Whole-genome sequencing
- Food supply chain

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#### Open and F.A.I.R.
- Plant Genetic Resources

#### Domain
- Information

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#### TOOLS & RESOURCES
- STANDARDS / Traceability
- CURATION
- REPOSITORIES
- ACCESS, retrieval
- ANALYSIS / EVALUATION
- General Information

### PROCESS
- Taxonomy
  - to subspecies
    - NCBI accession
    - NCBI accession
  - cultivars
    - not universal
    - IPN2
    - none
  - pedigrees/lineages
    - ad hoc

### Germplasm
- Genetic Resource Collections
  - SMTA: (population level)
  - WTVS: [labels]
- Research Collections
  - ad hoc
- Breeding Programs
  - ad hoc
- Production
- Process & supply chain
- Consumption

### SNP variants
- Whole-genome sequencing
  - BioSample: [ID]
  - BioProject: [ID]
  - CD annotation
- Food supply chain

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#### First draft – now open for comment/input via Google Docs

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### Information domain

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#### DivSeek Commons
- GeneSys R&D
- GeneSys R&D
Support for ongoing activities – developing a ‘funding menu’

Empowering Plant Genetic Resources

Support interactions

- DivSeek Commons
- Concept Notes
- Task-focused Teams
- Regional Hubs
- DivSeek Connect

Enabling

- Concerted funded efforts
- Tools & Resources for PGR characterization
- Common standards, approaches
- “FAIR” information
- Best practices

Impact

- Global Plant Biodiversity characterised & traceable
- Resilient, added-value, sustainable crops
- Informed access and benefit sharing
https://divseekintl.org/

+ more coming soon

- feedback welcome
Launched Dec 2021

- Please submit content soon + anytime
  - Highlight new tools, initiatives, etc
  - Raise questions, pose challenges!
- + specific items will also be solicited
- Input from postgrads, post-docs
- Aim to increase distribution/stakeholders

Please send any content (with images!) to info@divseekintl.org, with ‘Connect’ in the email subject.

Graham King, Executive Director and Editor
Connecting and communicating

In 2021 DivSeek has become:

A Global Engagement Organization of

https://www.ag2pi.org/

An institutional Supporter of

https://www.usda.gov/oce/sustainability/spg-coalition
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