



CIP's Approach to Open Data and Research Data Management





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**CIP's Approach to
Open Data &
Research Data
Management**

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Research Data
Management
Workflows

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Open Access
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The role of
donors in
supporting &
accelerating
open data
practice



Open Access at CIP

CGIAR Open Access and Data Management Policy

“CGIAR regards the results of its research and development activities as **international public goods and is committed to their widespread dissemination and use to achieve the maximum impact** to advantage the poor, especially smallholder farmers in developing countries. CGIAR considers Open Access (defined below) to be an important practical application of this commitment as it **enhances the visibility, accessibility and impact of its research and development activities. Open Access improves the speed, efficiency and efficacy of research**; it enables interdisciplinary research; assists novel computation of the research literature;



Open Access at CIP

Immediate, irrevocable, unrestricted and
free online access

Information Products

Articles, books, book chapters, data
Training materials, extension materials
Databases, photos, videos, reports



Findable

Accessible

Interoperable

Re-usable



Deposit Timelines

CIP's towards full compliance of Open Access (OA) in 2018

Type of Information Product	Transition Deposit Schedule (until Oct 1, 2018)	Policy Deposit Schedule (Oct 2, 2018 onwards)
Peer-reviewed versions of articles	As per the Policy Deposit Schedule unless OA is prohibited or subject to a longer embargo period by publisher	Ideally, at time of publication Latest: 6 months from publication
CIP-published journals, books, reports, etc.	Immediately	Immediately
Reports and other papers	As soon as possible Latest: within 6 months of completion	As soon as possible Latest: within 3 months of completion
Books/book chapters	As per Policy Deposit Schedule	As soon as possible Latest: within 6 months of completion
Data and data sets	As per Policy Deposit Schedule	As soon as possible Latest: within 12 months of completion of data collection or appropriate project milestone, or within 6 months of the publication of the information products underpinned by that data

See the CIP Open Access Implementation Plan for further details.



CIP Open Access Launch <http://cipotato.org/open-access/>

BMGF Open Access Policy & Open Access Policy FAQ

- Effective for ALL agreements after January 1, 2015
- Peer-reviewed articles & data underlying published research results
- BMGF policy has a transition period, but it will expire at the end of 2016. After that point, all publications and data must be immediately accessible with no embargo periods.

BILL & MELINDA GATES FOUNDATION OPEN ACCESS POLICY

The Bill & Melinda Gates Foundation is committed to information sharing and transparency. We believe that published research resulting from our funding should be promptly and broadly disseminated. We have adopted an Open Access policy that enables the unrestricted access and reuse of all peer-reviewed published research funded, in whole or in part, by the foundation, including any underlying data sets.

Related
[OPEN ACCESS POLICY FAQ](#)

As of January 1, 2015 our Open Access policy will be effective for all new agreements. During a two-year transition period, publishers will be permitted to apply up to a 12 month embargo period on the accessibility of the publication and its underlying data sets. This embargo period will no longer be allowed after January 1, 2017.

Our Open Access policy contains the following elements:

1. **Publications Are Discoverable and Accessible Online.** Publications will be deposited in a specified repository(s) with proper tagging of metadata.
2. **Publication Will Be On “Open Access” Terms.** All publications shall be published under the [Creative Commons Attribution 4.0 Generic License](#) (CC BY 4.0) or an equivalent license. This will permit all users of the publication to copy and redistribute the material in any medium or format and transform and build upon the material, including for any purpose (including commercial) without further permission or fees being required.
3. **Foundation Will Pay Necessary Fees.** The foundation would pay reasonable fees required by a publisher to effect publication on these terms.
4. **Publications Will Be Accessible and Open Immediately.** All publications shall be available immediately upon their publication, without any embargo period. An embargo period is the period during which the publisher will require a subscription or the payment of a fee to gain access to the publication. We are, however, providing a transition period of up to two years from the effective date of the policy (or until January 1, 2017). During the transition period, the foundation will allow publications in journals that provide up to a 12-month embargo period.
5. **Data Underlying Published Research Results Will Be Accessible and Open Immediately.** The foundation will require that data underlying the published research results be immediately accessible and open. This too is subject to the transition period and a 12-month embargo may be applied.



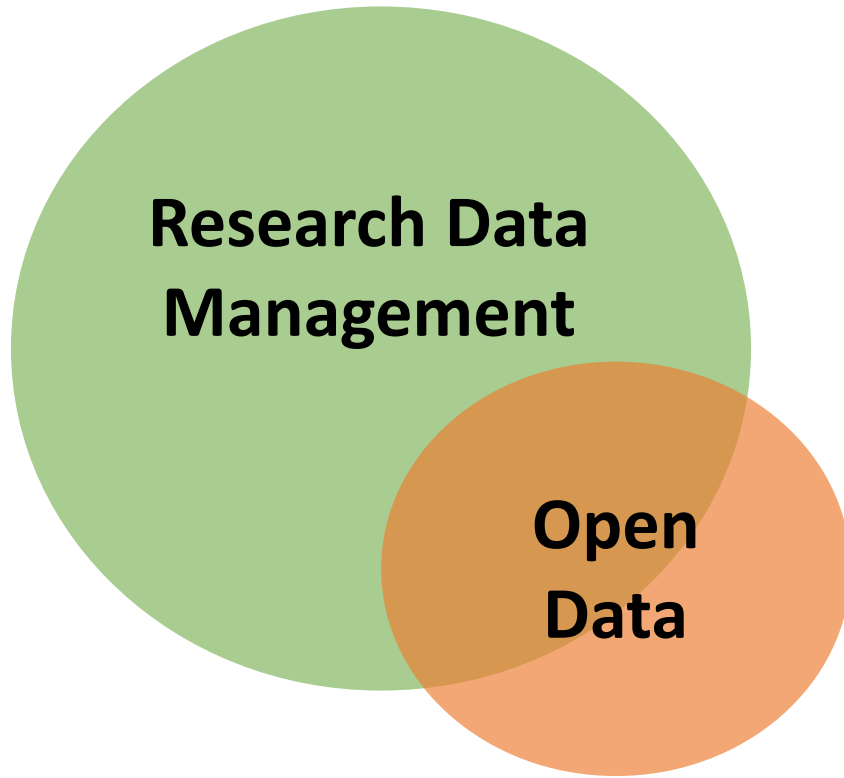
Open Access at CIP

Since the regional meeting held in Cali in August 2015, CIP has achieved several phases in implementing OA.

- CIP is quite new in implementing OA, especially for Open Data (OD).
- CIP has launched formally OA on January 2016.
- The OA Implementation Plan was submitted to the consortium on September 2015.
- CIP has created its own Publications Policy, Open Data and Research Data Management Policy and Guidelines supporting processes and workflows linking to our framework Project Life Cycle.
- CIP has decided to have a local installation of Dataverse. The data repository is able to generate DOIs directly through the application.

Open Access at CIP

- All resources for OA are available at Open Access & Open Data Toolkit (<http://cipotato.org/open-access>) along with training materials to support several aspects of implementing OA at CIP.
- The Research Informatics Unit and the Library had to be realigned to support OA.
- We've benefited from what other centers did while implementing OA and also from the community of Practice for Data Managers.
- DG and DDG-R has a strong role supporting OA to develop greater institutional awareness and invest in technical expertise to implement OA strategies within the institution.



Research Data

Management: All aspects of creating and supporting research data (cleaning, processing, analyzing, archiving, preserving, and retiring datasets)

Open Data: The process of making research data openly-accessible for others to find, access, use, and build upon (disseminating the data through open repositories, using well-described metadata to make it findable)



... integrated approach to support both Research Data Management & Open Data

1

The Research Data Management Policy is described in companion with the Research Data Management Guidelines and Procedures, and CIP's Open Access/Open Data Implementation Plan (aligned with the CGIAR Open Access and Data Management Policy).

2

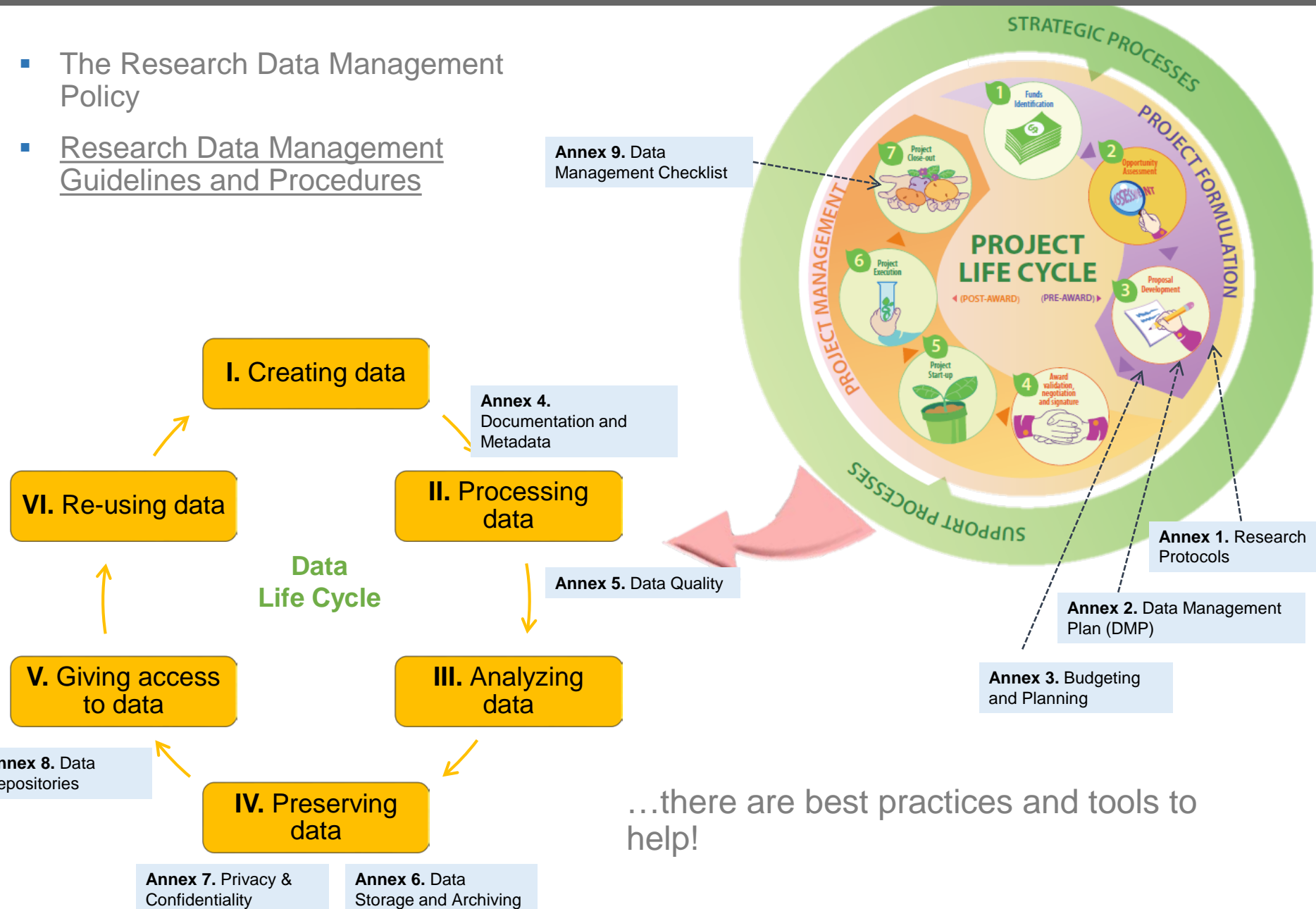
CIP's Research Data Management Policy is based on the Data Life Cycle generated throughout the Project Life Cycle.

3

The policy regulates CIP's creation, processing, analyzing, preserving and giving access of research data to the community.



- The Research Data Management Policy
- Research Data Management Guidelines and Procedures





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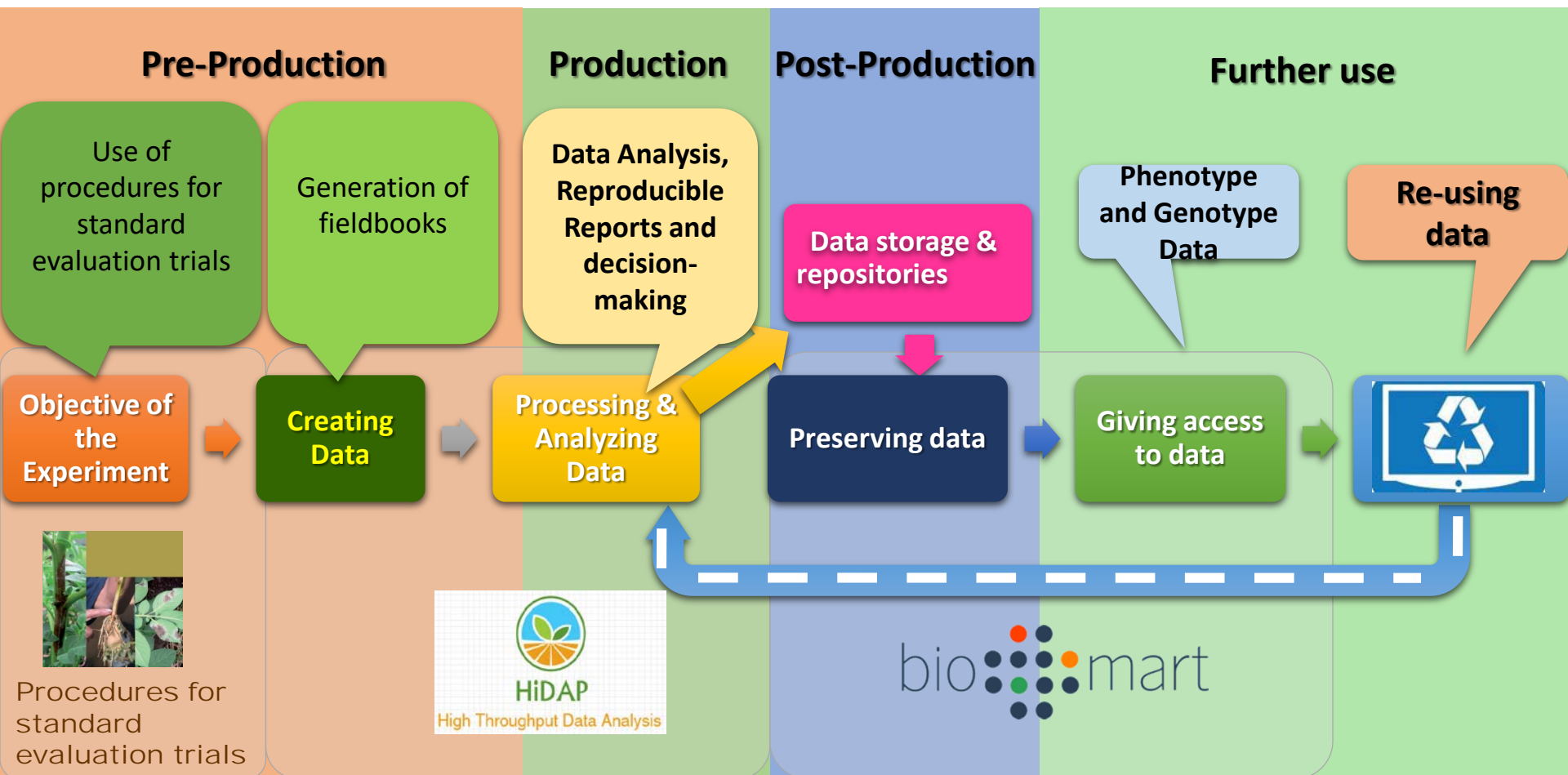
4

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1. Flowchart: Research Data Management

DCE: Genetics and Crop Improvement

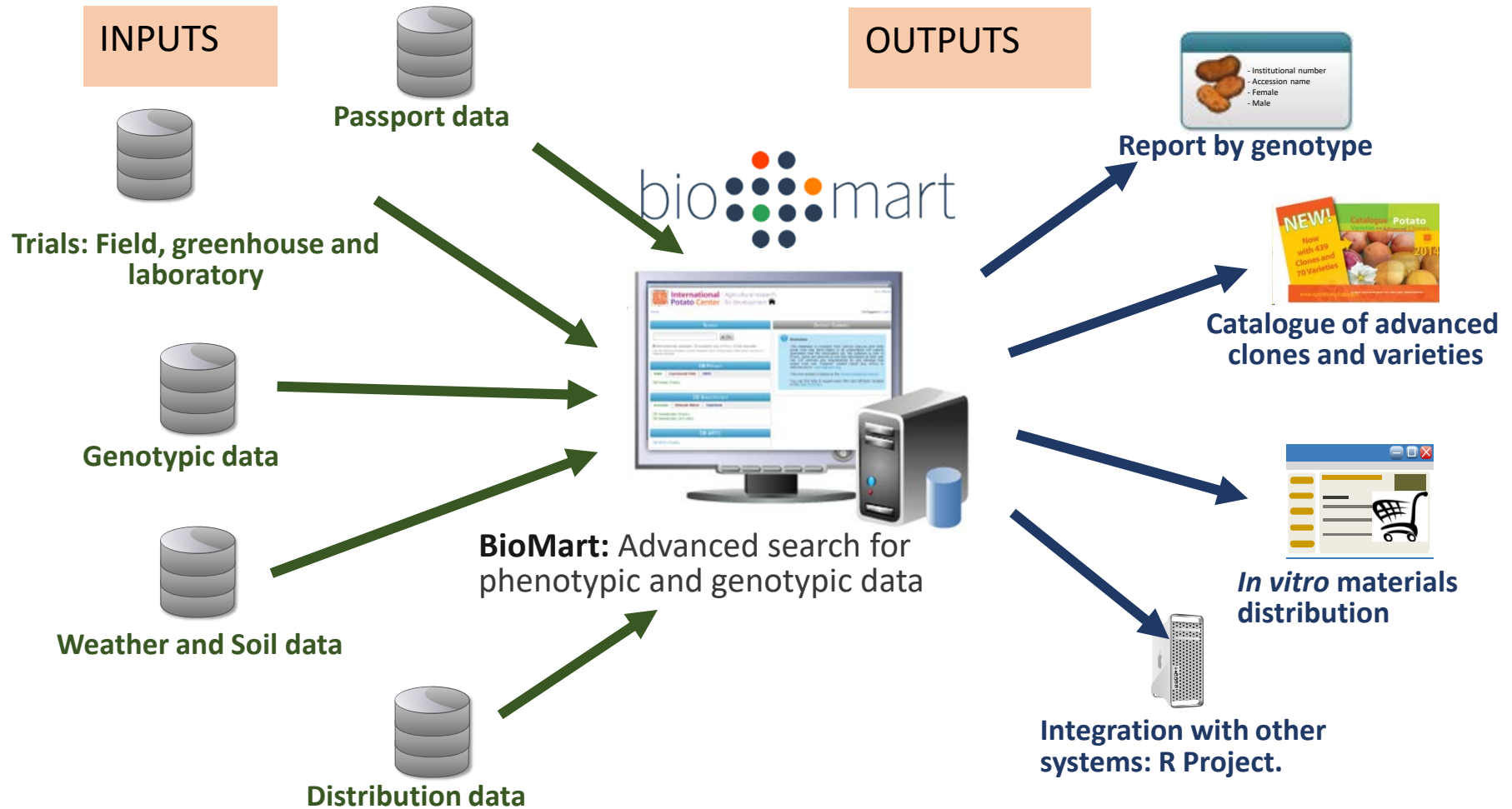


Yield, late blight, PVS, dormancy and sprouting, tuber bulking.



CIP Open Access Launch <http://cipotato.org/open-access/>

BioMart: Institutional Warehouse for Research Data



HiDAP: Creates experimental designs, data quality, statistic analysis and connects with BioMart

HIDAP

Design

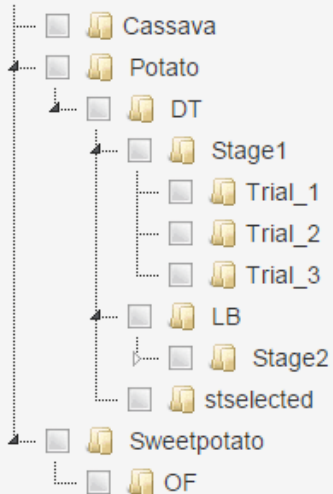
Data

Analysis ▾

R ▾

Quit

Help ▾



Options



Fieldbook Variables



Fieldbook draft

Type of Crop

Potato

Type of Trial (Template)

Potato Trial Healthy Tuber Yield (PTYL)

Date range input: yyyy-mm-dd

2015-08-05

to

2015-08-09



HiDAP

High Throughput Data Analysis

Country

Angola

Localities

Chianga (CHIANGA)

Experimental Environment

Field



CIP Open Access Launch <http://cipotato.org/open-access/>



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Findable (partially)

Accessible (partially)

Interoperable (yes)

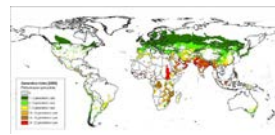
Re-usable (partially)



2. Flowchart: Development of pest risk maps using ILCYM

DCE: Crop Systems Intensification and Climate Change

"Risk mapping"



Distribución potencial a nivel mundial, regional y local



Clima actual: 2000

(1950-2000: www.worldclim.org/)

$$ERI = \frac{(\sum_{i=1}^{365} \hat{R}o_i) / 365}{max(\hat{R}o_i)}$$

$$GI = \frac{(\sum_{i=1}^{365} 365 / \hat{G}L_i)}{365}$$

Con y sin filtros de cultivos

ERI

GI

AI

Clima futuro: 2050

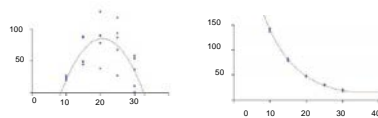
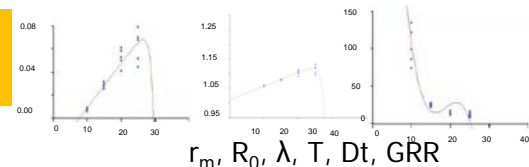
Down-scaled data SRES-A1B, IPCC (2007):
<http://gisweb.ciat.cgiar.org/GCMPPage>

$$AI = \log_{10} \left(\prod_{i=1}^{365} \hat{\lambda}_i \right)$$

Índices de riesgo

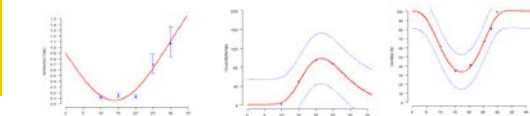
Validación del modelo

Simulación de parámetros de tabla de vida

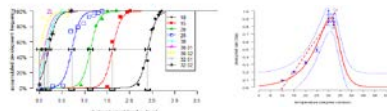


Parámetros poblacionales:

Modelos fenológicos basados en la temperatura

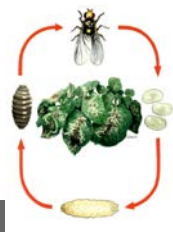


Tasa y tiempo de desarrollo



Estudios de tabla de vida

Tasa de supervivencia, oviposición, mortalidad



A temperaturas constante y fluctuante: Oviposición, tiempo de supervivencia, tiempo de desarrollo, mortalidad

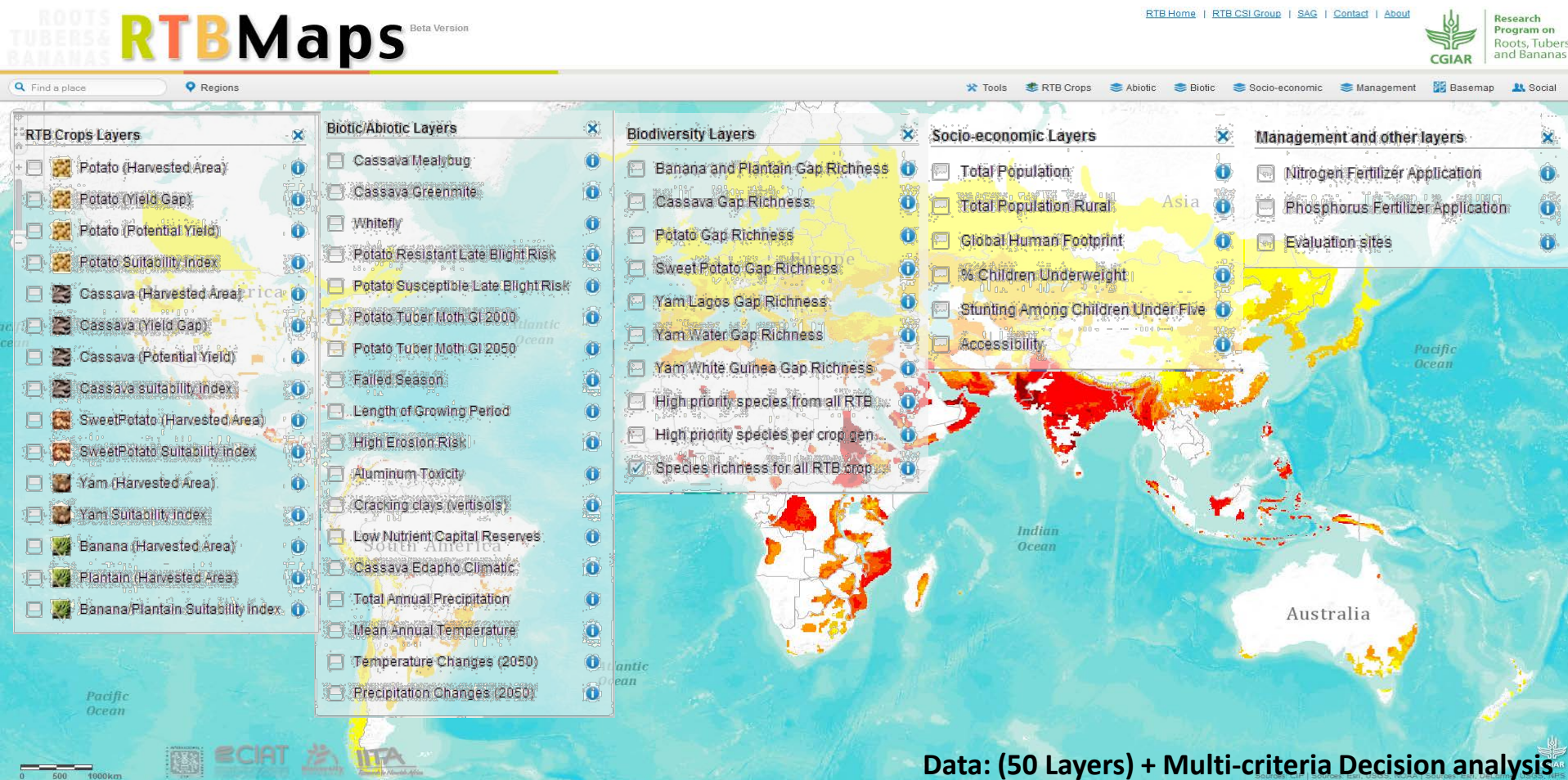


RTBMaps: an Online Atlas of Roots, Tubers and Banana Crops

CRP: RTB

DCE: Crop Systems Intensification and Climate Change

DCE: Social and Health Sciences and Innovation Systems



Potato tuber moth in potato [number of generations / year]

<http://rtb.cgiar.org/RTBMaps>

CIP Open Access Launch <http://cipotato.org/open-access/>



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Findable (partially)

Accessible (partially)

Interoperable (yes)

Re-usable (partially)





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Data Deposit Workflow



1

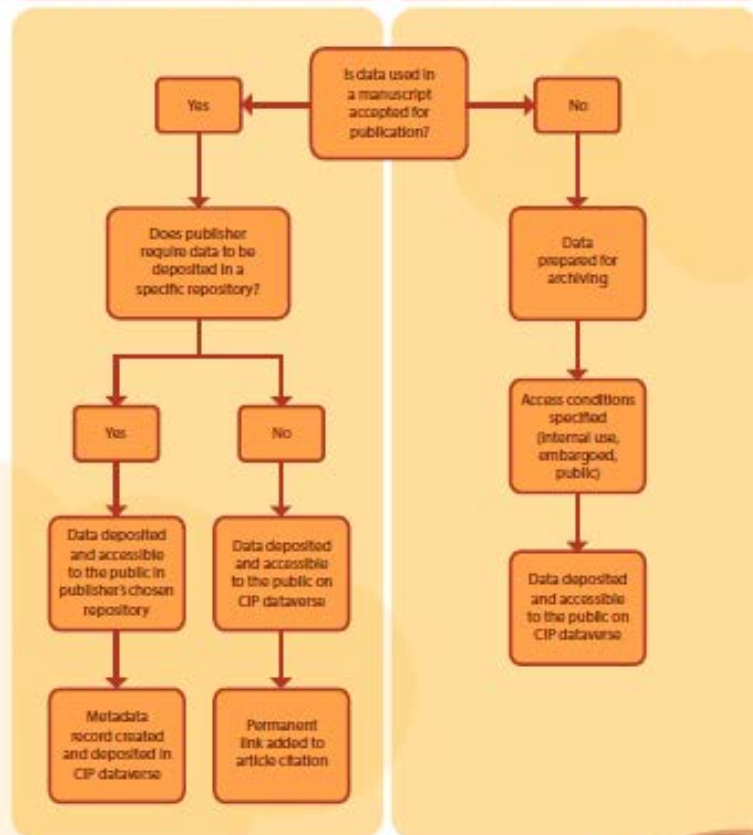
Data Underpinning

Published Research

2

Data Outside Scope

of Published Research



What should be deposited

1. All research data belonging to publications
2. Datasets from projects
3. Legacy data? Depends in their value and resources to make it open.



For more information on Open Access contact:

PUBLISHING: Cecilia Ferrer cferrer@scgla.org
 DATA: Henry Jasser hjasser@scgla.org



International Potato Center

*Agricultural research
for development*

International Potato Center
DataVerse (CIP)

CIP is a member of the CGIAR Consortium, an international organization made up of 15 centers engaged in research for a food secure future.

Metrics

9 Downloads



CIP institutional network of scientific datasets and software repositories.

[Q Find](#)

[Advanced Search](#)

☒ [Dataverses \(4\)](#)

☒ [Datasets \(1\)](#)

☐ [Files \(5\)](#)

Dataverse Category

[Organization or Institution \(2\)](#)

[Research Project \(2\)](#)

Publication Date

[2015 \(5\)](#)

Author Name

[Carhuapoma, Pablo \(1\)](#)

[Gonzales, Juan C. \(1\)](#)

[Juarez, Henry \(1\)](#)

[Kroschel, Jurgen \(1\)](#)

[Simon, Reinhard \(1\)](#)

[More...](#)

Subject

[Agricultural Sciences \(3\)](#)

[Earth and Environmental Sciences \(3\)](#)

1 to 5 of 5 Results

[Sort ▾](#)

[Sweetpotato Dataverse \(CIP\)](#)

Nov 13, 2015 CIP Research Data Dataverse



[CIP Research Software Dataverse \(CIP\)](#)

Nov 13, 2015



[Predicting climate-change-caused changes in global temperature on potato tuber moth Phthorimaea operculella \(Zeller\) distribution and abundance using phenology modeling and GIS mapping](#)

Nov 13, 2015 - Potato Dataverse



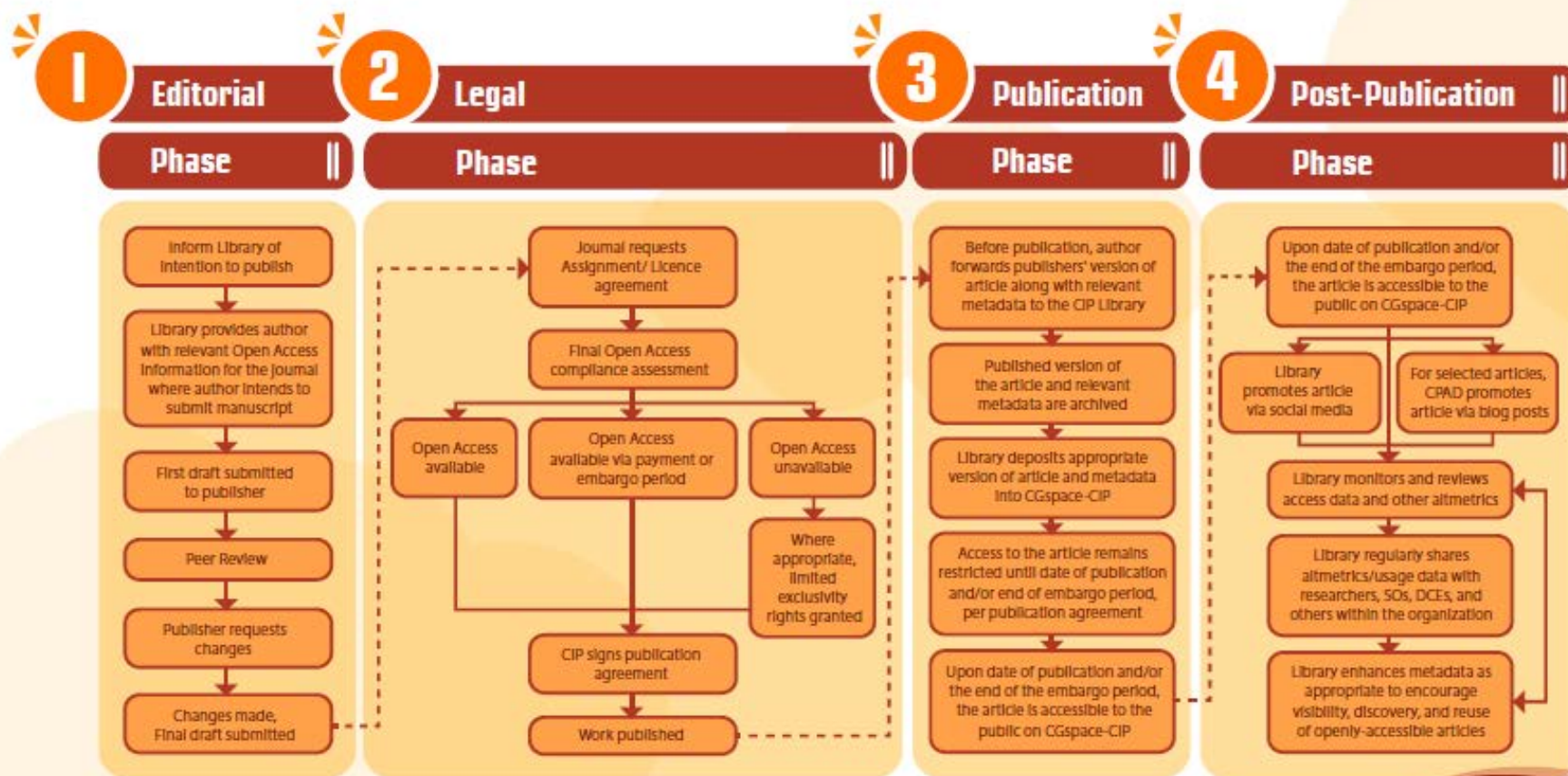
Kroschel, Jurgen; Sporleder, Marc; Tonnang, Henri; Juarez, Henry; Carhuapoma, Pablo; Gonzales, Juan C.; Simon, Reinhard, 2015, "Predicting climate-change-caused changes in global temperature on potato tuber moth Phthorimaea operculella (Zeller) distribution and abundance using phenology modeling and GIS mapping", <http://dx.doi.org/10.5072/FK2/HYMGHM>, International Potato Center Dataverse, V1

Originating from the Andean region and co-evolved with its food plant, the potato (*Solanum* sp.), the potato tuber moth *Phthorimaea operculella* (Zeller) has become an invasive potato pest globally. The hypothesis of our present study was that the future distribution and abundance...

<https://data.cipotato.org/dataverse.xhtml>



CIP Open Access Launch <http://cipotato.org/open-access/>



For more information on Open Access contact:

PUBLISHING: Cecilia Ferreyra c.ferreyra@cg.cgiar.org
DATA: Henry Juarez h.juarez@cg.cgiar.org

CGSpace integration with Dataverse

The screenshot shows the CGSpace website with the International Potato Center (CIP) as the featured community. The header includes the CGSpace logo and navigation links. The main content area features a search bar and a list of collections. On the right, there is a sidebar with a 'Mi cuenta' (My account) section and a 'Descubre' (Discover) section listing authors and their affiliations.

CGSpace
A Repository of Agricultural Research Outputs

DSpace Principal / International Potato Center (CIP)

International Potato Center (CIP)

Buscar en esta comunidad y sus colecciones:

Subscribe to RSS Feed
Subscribe to email alerts

Enter your email address:

Colecciones en esta comunidad

- CIP Book Chapters [58]
- CIP Books [29]
- CIP Briefs [32]

Mi cuenta

- Acceder
- Registro

Descubre

Autor

- Bonifacio, M. (59)
- Kroschel, J. (42)
- Low, J. W. (26)
- Mwanga, R. O. M. (27)
- Ordinola, M. (27)
- Quetz, R. (27)
- Grinlan, M. (26)
- Andrade Pineda, J. (24)
- Forbes, G. (23)
- Schulte-Geldermann, E. (23)
- ... más

Autor affiliations

- International Potato Center (558)
- International Livestock Research Institute (5)
- International Center for Tropical Agriculture (4)
- Food and Agriculture Organization of the United Nations (2)
- World Agroforestry Centre (2)
- Bangor University (1)
- Bioversity International (1)
- Centre de coopération internationale en recherche agronomique pour le développement (1)

Citation to data



Citation to article

The screenshot shows the Dataverse website with search results for the International Potato Center (CIP). The header includes the Dataverse logo and navigation links. The main content area displays the search results for 'CIP', showing a list of datasets and files. The results include a summary of the dataset, the author's name, and the publication date.

Dataverse

International Potato Center
Agricultural research for development

International Potato Center (CIP)

CIP is a member of the CGIAR Consortium, an international organization made up of 15 centers engaged in research for a food secure future.

Search this dataverse...

Dataverses (4)

- Datasets (1)
- Files (5)

Publication Date

2015 (5)

Author Name

- Carhuapoma, Pablo (1)
- Gonzales, Juan C. (1)
- Juarez, Henry (1)
- Kroschel, Jürgen (1)

1 to 5 of 5 Results

Shwepotato Dataverse (CIP)
Nov 13, 2015 - CIP Research Data Dataverse

Predicting climate-change-caused changes in global temperature on potato tuber moth *Phthorimaea operculella* (Zeller) distribution and abundance using phenology modeling and GIS mapping

Kroschel, Jürgen, Sportleder, Marc, Tonnang, Horst, Juarez, Henry, Carhuapoma, Pablo, Gonzales, Juan C., Simon, Reinhard, 2015, "Predicting climate-change-caused changes in global temperature on potato tuber moth *Phthorimaea operculella* (Zeller) distribution and abundance using phenology modeling and GIS mapping", <http://dx.doi.org/10.5072/FK2/HYMD9H>, International Potato Center Dataverse, V1














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Track # of article downloads and # of data sets downloads.






CIP Open Access Launch <http://cipotato.org/open-access/>

Toolkit

-  CGIAR Open Access and Data Management Policy
-  CGIAR OA and DM Implementing Guidelines
-  CIP Publications Policy
-  CIP OA and Data Management Implementation Plan
-  CIP Open Data and Data Management Policy
-  CIP Open Data and Data Management Guidelines and Procedures
-  Annexes for CIP's Open Data & Data Management Guidelines and Procedures
-  Open Access Publisher Information
-  Donor Open Access Information
-  Open Access: Why Open Access Matters
-  Open Access Publications Workflow
-  Open Access Data Workflow
-  Q&A

Training Materials

-  Training Module 1: Background & Context
-  Training Module 2: Open Access for Publications
-  Training Module 3: Open Data

Open access :
Toolkit, training
materials,
CGSpace &
Dataverse

CIP Open Access Toolkit





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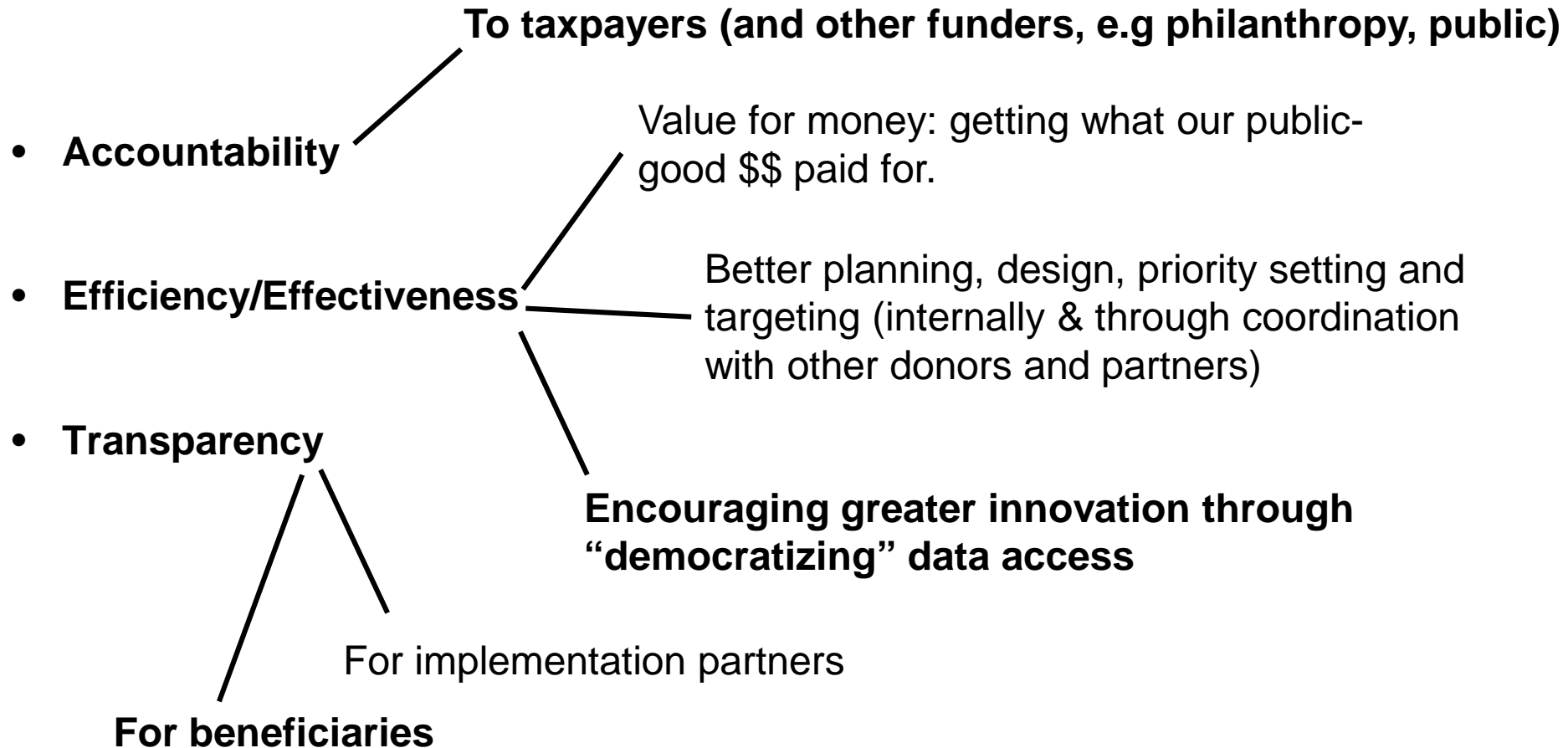
OA Workflows

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What Drives Donors?



The Alarmed Scientist



Share? Open?
Are you kidding?

Stanley Wood, BMGF

- “I spent months collecting and cleaning that data; no way I’m going to share it!”
- “Nope, I haven’t published enough yet.”
- “Well I would, but I know my data has an issue or two...”
- “The more I share, the more questions/critics I get; I hate it.”
- “I’ll lose future research and funding opportunities; it’s my job security!”
- “Who cares; it won’t even get recognized in my performance appraisal.”

The Concerned Scientist



- “Well, yes. But how? I need guidelines I can actually understand!”
- “CG Core? Isn’t that beer? Metadata? Is that like an abstract keyword?”
- “That will take months! Can somebody help me? And who will pay them?”
- “And then where should I put it? Is the data safe there?”
- “Hmmm.. Can I actually share this? Couldn’t sharing this do harm?”
- Is this data worth making open? How can I tell?

How? I’m not a data scientist!
Who pays?

Stanley Wood, BMGF

Donor “Carrots”



- Advocacy, awareness and capacity building
- Investments in improved OD methods, tools, and evidence
- OD implementation funds within grants
- Professional incentives: Promoting scientifically recognized data citations & new performance assessment criteria

Donor “Sticks”



- Additional funding conditions
- Additional implementation and M&E activities
- Auditing of (Open) Data Plans & Compliance
- Payment withholding for non-compliance

The response from CIP

Dear SLT,

Regards from Montpellier, where a meeting about open data/access is taking place with presence of key donors (BMGF, USAID, DFID, etc.), and **there is no way back with this move**. Hence, I would like **to see in your work plans (and those of your direct reports) concrete indicators that we are moving towards open access**. Please include them and we will agree on a minimum set in the next SLT.

Regards.

Oscar.

Wednesday, June 15, 2016