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# Evaluation of CGIAR Platform for Big Data in Agriculture: Online Survey

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November 2021

Correct citation: CAS Secretariat (CGIAR Advisory Services Shared Secretariat). (2021). Evaluation of CGIAR Platform for Big Data in Agriculture: Online Survey. Rome: CAS Secretariat Evaluation Function. <https://cas.cgiar.org/>

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# 1 Background

In today's connected, data-rich world, big data presents tangible benefits and challenges revolutionizing the Agricultural Research for Development (AR4D) continuum as well as people's lives. To stay at the cutting-edge of the rapidly evolving digital world, the CGIAR invested in the curation and maintenance of its data and knowledge products through a [CGIAR Platform for Big Data in Agriculture](#) (hereinafter, the Platform) approved by the System Council for 2017-2021. "The ultimate goal of the Platform is to harness the capabilities of Big Data to accelerate and enhance the impact of international agricultural research. It will support CGIAR's mission by creating an enabling environment where data are expertly managed and used effectively to strengthen delivery on CGIAR SRF's System Level Outcome (SLO) targets."<sup>1</sup> The Platform aims to increase the impact of agricultural development by embracing big data and ICT approaches to solve development problems faster, better and at greater scale. Its strategy focuses on collaboration among CGIAR Research Programs (CRPs) and Centers, leveraging external expertise to enable unrestricted discoverability of linked open datasets.

In July 2021, an independent evaluation team composed of three Subject Matter Experts (SMEs) and three experts in Monitoring and Evaluation was hired by the [evaluation function](#) under CGIAR Advisory Services Secretariat (CAS) to evaluate the work conducted by the Platform between 2017 through mid-2021, expected to be published by end of 2021. The evaluation is both summative and formative in nature and aims to assess the design, scope, implementation status and the capacity to achieve the Platform objectives.

This independent evaluation of the Platform uses a mixed-method approach, that included both quantitative and qualitative methods. Among quantitative methods, the team administered a Survey through Survey Monkey. Its design and distribution were possible through the excellent collaboration between the Evaluation team, CAS and the Platform team. The latter was very collaborative and checked the design and wording of the Survey, provided the Evaluation team with valuable feedbacks in a timely manner and used its channels for the administration. In the following parts of this document, the design and results of the survey are discussed, with supporting figures.

## 2 Introduction to the Survey

The online survey was released on September 20th and closed on September 30<sup>th</sup>, 2021. The survey was designed in a way that respondents were directed to a set of specific questions based on their respective types of engagement with the Platform. Two versions of the survey were released, one in English and one in Spanish (9 out of 110 responded in Spanish). The survey was sent by the Platform management team to comply with General Data Protection Regulation (GDPR) privacy requirements; contact lists cannot be shared with the evaluation team. The survey was sent to the following groups:

- All subscribers of the Platform Newsletter (2803 subscribers)
- Participants of the annual conventions – those who opted in for correspondence
- External partners (Academia, private companies, NGOs, etc.)
- Internal partners (CRPs, centers, projects.)
- Users of CG labs.

The questionnaire received 110 responses, of which four were incomplete, hence, the evaluation team considered 106 responses for the analysis. The evaluation team asked questions regarding respondents' profile and their type of engagement with the Platform, as well as their opinions regarding the level of satisfaction with the Platform's products and about its relevance, effectiveness, and sustainability. A 5-point Likert scale was used; respondents could use a range from 1 (strongly disagree) to 5 (strongly agree) to express their opinion regarding a specific statement. For some questions, the evaluation team asked the satisfaction rate using a similar scale, with 1 being "not satisfied" and 5 being "fully satisfied". All questions were compulsory, except for open questions that were optional. For most questions, the evaluation team allowed for the answer "I don't know" to guarantee that the completion of the questionnaire could run smoothly. The number of respondents per each question changes given the

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<sup>1</sup> Big Data in Agriculture Coordination Platform: Full Proposal 2017-2020

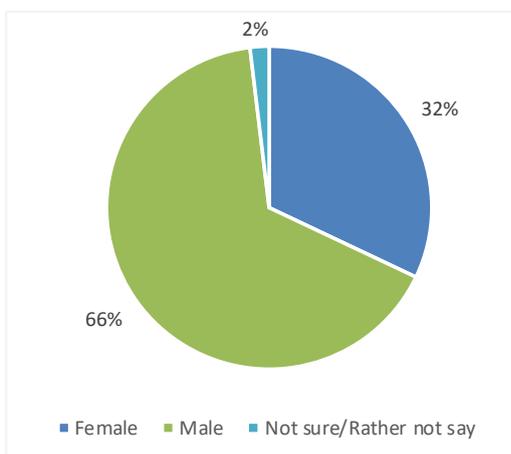
different type of engagement respondents had with the Platform. A descriptive analysis was conducted by the evaluation team using all quantitative questions. For the open-ended questions, the evaluation team identified between 1 and 3 keywords for each respondent and reported the most used ones. The invitation email and full questionnaire are presented as Annex materials to this report.

## 3 Survey Results

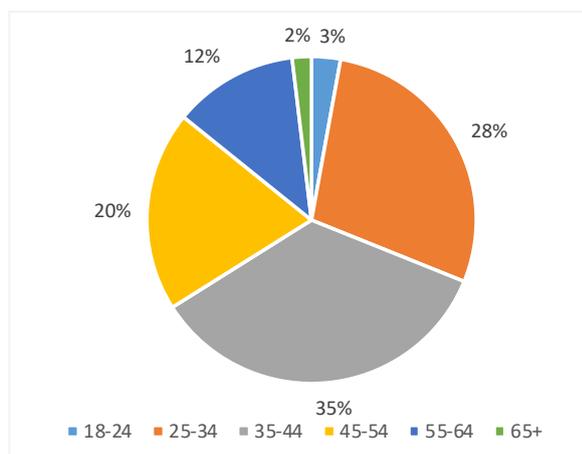
### 3.1 Respondents' profile

The survey received 106 complete answers. The first part of the survey included general questions regarding the respondents' profile and were compulsory for all respondents, hence, 106 responses to all questions were analyzed in this section. Most respondents (66%) were male, while a smaller part (32%) was female, and the remainder did not say (Figure 1). Most respondents were between 25 and 44 years old (Figure 2), were researchers and worked either in international organizations, including CGIAR research Centers, or in universities and other research institutes (Figure 3).

**Figure 1: Gender Distribution of Respondents (n=106)**

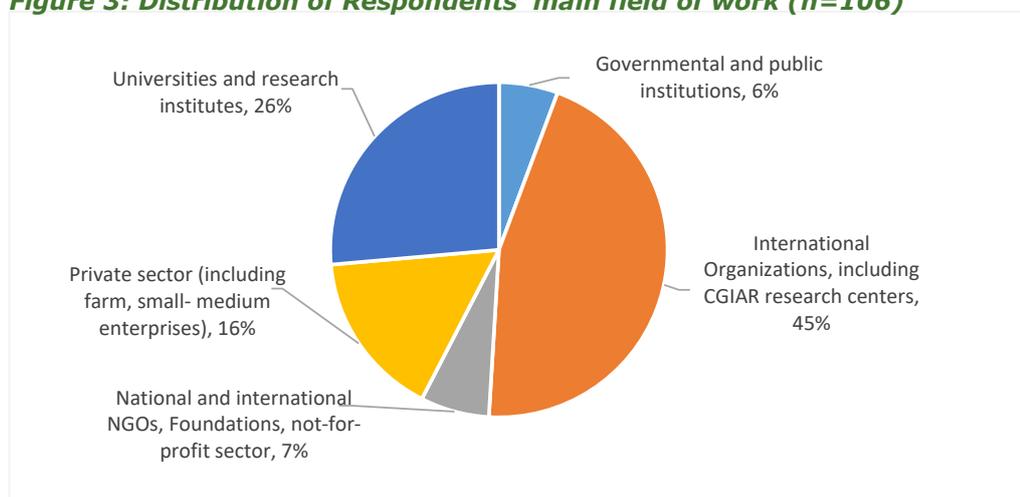


**Figure 2: Age Distribution of Respondents (n=106)**

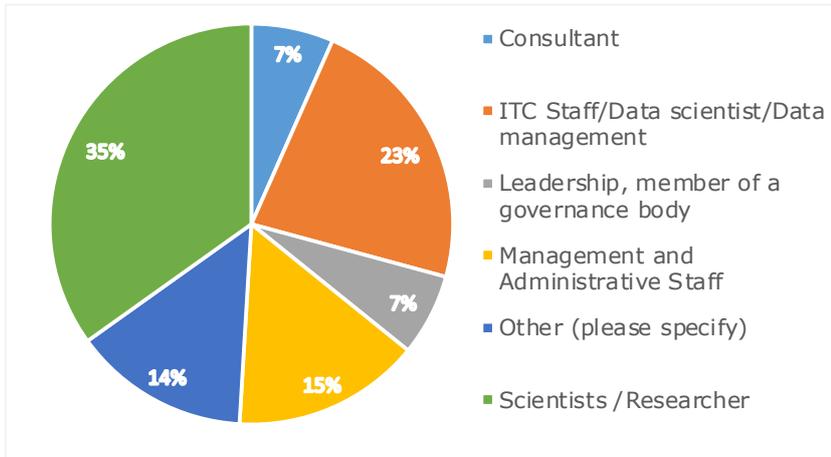


The evaluation team divided the stakeholders into two groups, internal to CGIAR (44 respondents) and external to CGIAR (62 respondents). The first group included those respondents that belonged to a CGIAR Center or a CGIAR Research Program (CRP), while the other respondents were considered external stakeholders. More than 35% of the respondents were researchers or scientists. However, within the group of stakeholders internal to CGIAR only 30% were scientists or researchers and most of them were ICT staff/data managers. On the contrary, 39% of external stakeholders were scientists or researchers and only 15% were ICT staff/data managers (Figures 4 and 5). Finally, figure 6 shows that almost half of the sample had a Masters' degree and that over a third (34%) had a PhD.

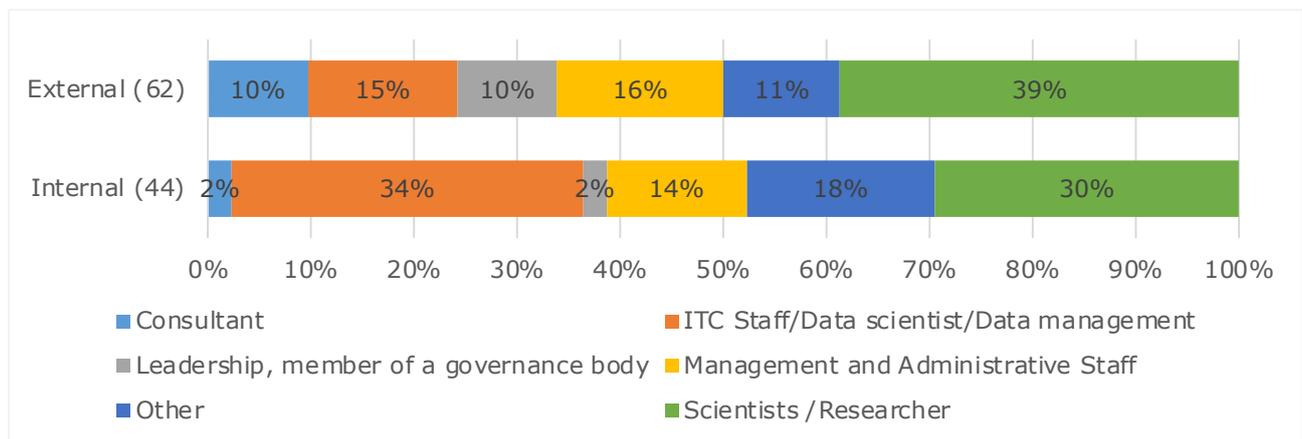
**Figure 3: Distribution of Respondents' main field of work (n=106)**



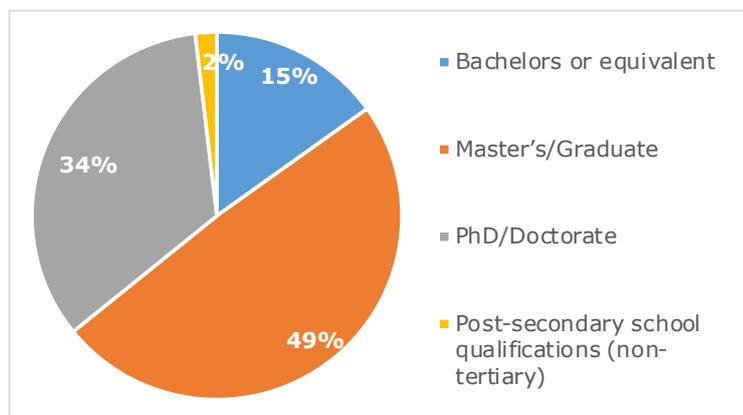
**Figure 4: Distribution of Respondents by their main role in their place of work – all sample (n=106)**



**Figure 5: Distribution of respondents by their main role in their place of work – by internal to CGIAR vs external stakeholders (n=106)**



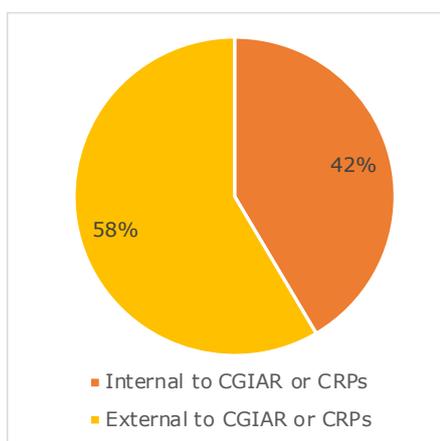
**Figure 6: Highest level of education of respondents (n=106)**



### 3.2 Respondents' relation with the Big Data Platform

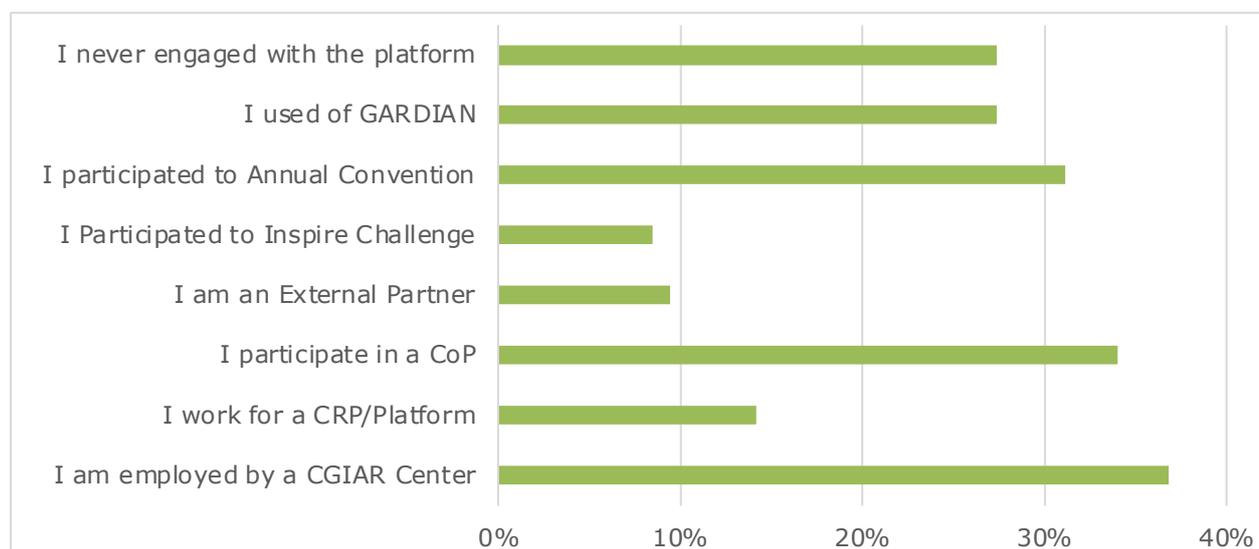
This section covers answers around respondents' relation with the Platform and how and when they engaged with it. The main question was "How do you engage with the CGIAR Platform for Big Data in Agriculture?" and based on their responses, respondents were addressed to specific more in-depth questions. Respondents could answer more than one option and declare to be part of one or more than one category (ex. CGIAR Center and User of GARDIAN). 58% of respondents were external to CGIAR Centers or CRPs (Figure 7). Most internal stakeholders were employed by a CGIAR research Center and/or participated in a Community of Practice (CoP) (Figure 8). There were no responses received from respondents who were employees of ICARDA and ICRAF, as well as by staff who worked on the following CRPs or Platforms: Livestock, FTA, WLE, and Genebanks Platform.

**Figure 7: Distribution of Respondents by Stakeholder Group (n=106)**



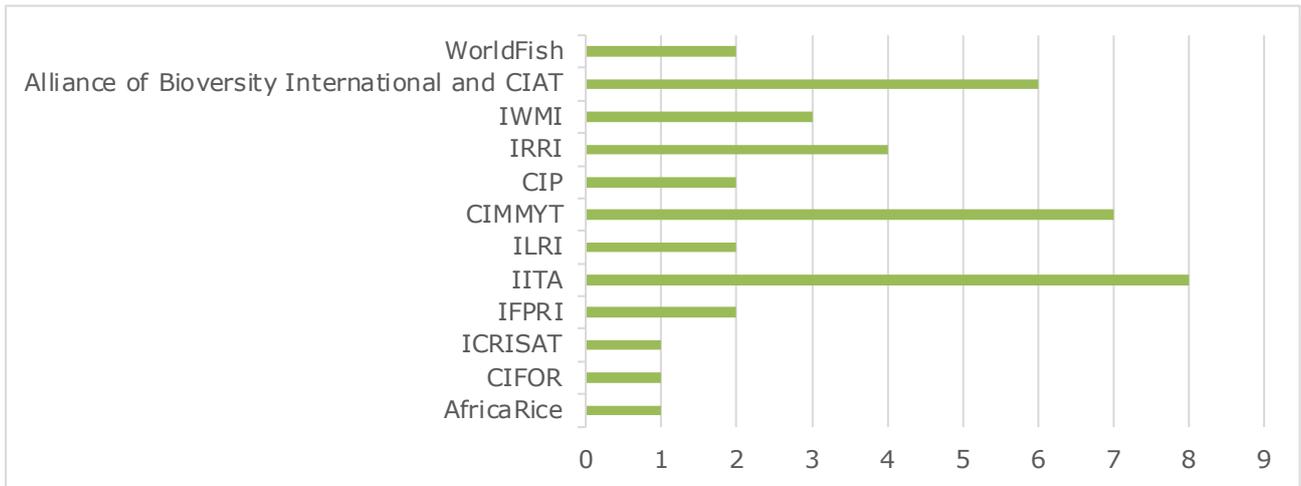
Majority of the respondents participated in at least one Annual Convention and used GARDIAN at least once (Figure 8). Those respondents employed by a CGIAR research Center were mostly from IITA, CIMMYT and the Alliance of Bioversity International and CIAT (Figure 9). Among the 36 respondents who participated in one or more CoPs, the majority were part of the Information and Data Management CoP (Figure 11). Only 10 respondents engaged with the Platform as external partners, namely those who were not employed by CGIAR Centers or CRPs but had a direct partnership with them<sup>2</sup>. Among the 10 respondents, one also declared that (s/he) "has never engaged with the Platform", hence s/he was not redirected to more in-depth questions specifically addressed to external partners. The evaluation team considered these 9 external partners, 2 from research institutes, 3 from academia, 3 from private sector and 1 from an international organization.

**Figure 8: Respondent distribution by type of engagement with the Platform as a percentage of the total sample (n=106)**

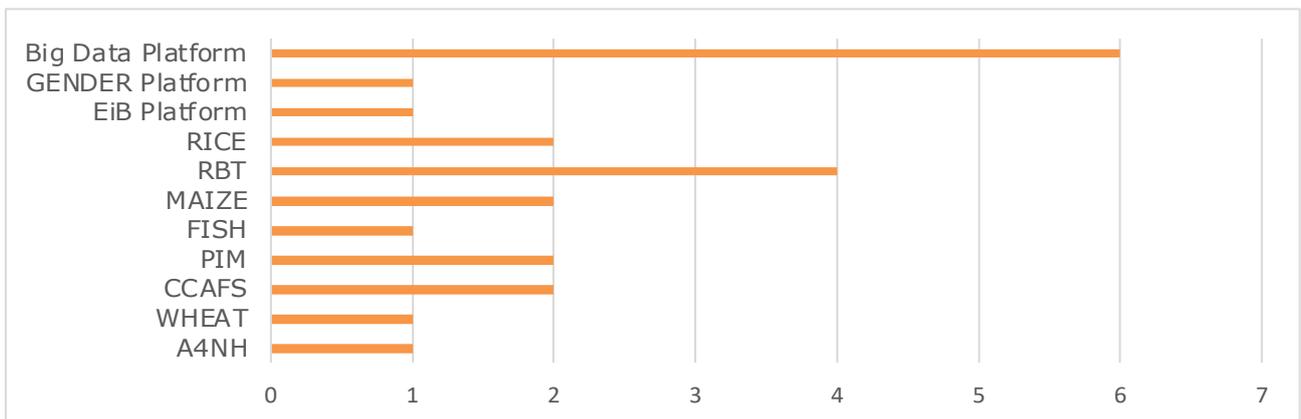


<sup>2</sup> Other respondents external to CGIAR engaged with the Platform as Inspire Challenge Participants, Participants to the annual conventions, Users of GARDIAN or as members of CoP.

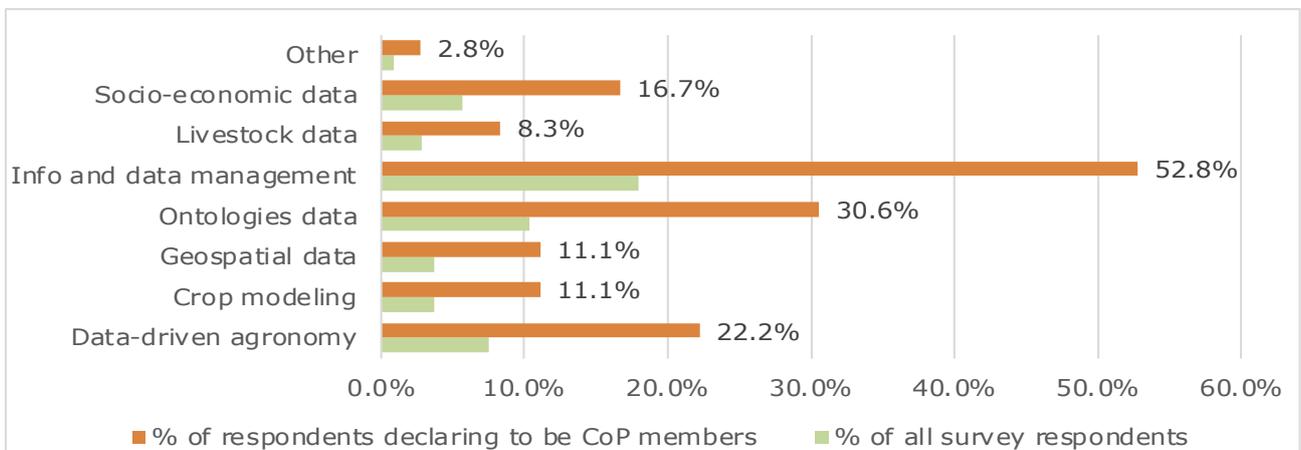
**Figure 9: Distribution of respondents by employment in CGIAR research centers (n=39)**



**Figure 10: Distribution of Respondents who work for one or more CRP or Platform (n=15)**

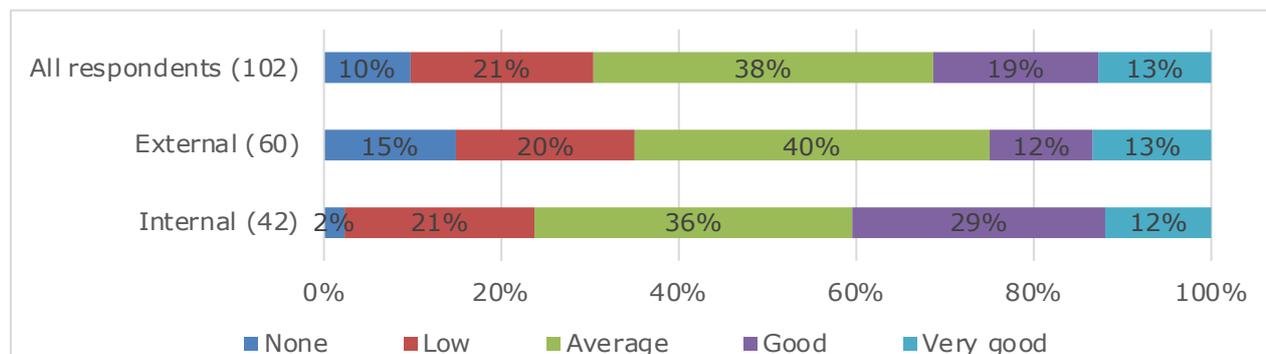


**Figure 11: Comparison of respondents that participate in CoPs (n=36) as a proportion of the survey respondents' vs proportion belonging to specific CoPs.**



Among the 102 people who answered the question regarding their level of knowledge of the Platform’s mandate, more than 38% ranked their knowledge as 3 (Average) on a scale from 1 (None) to 5 (Very good). Results were similar for both internal and external stakeholders, although among internal stakeholders there was a higher percentage of people who stated they had a good knowledge of the Platform mandate (Figure 12).

**Figure 12: Respondents’ self-evaluation of their knowledge of the Platform’s mandate – disaggregated by external and internal stakeholders (n=102)**

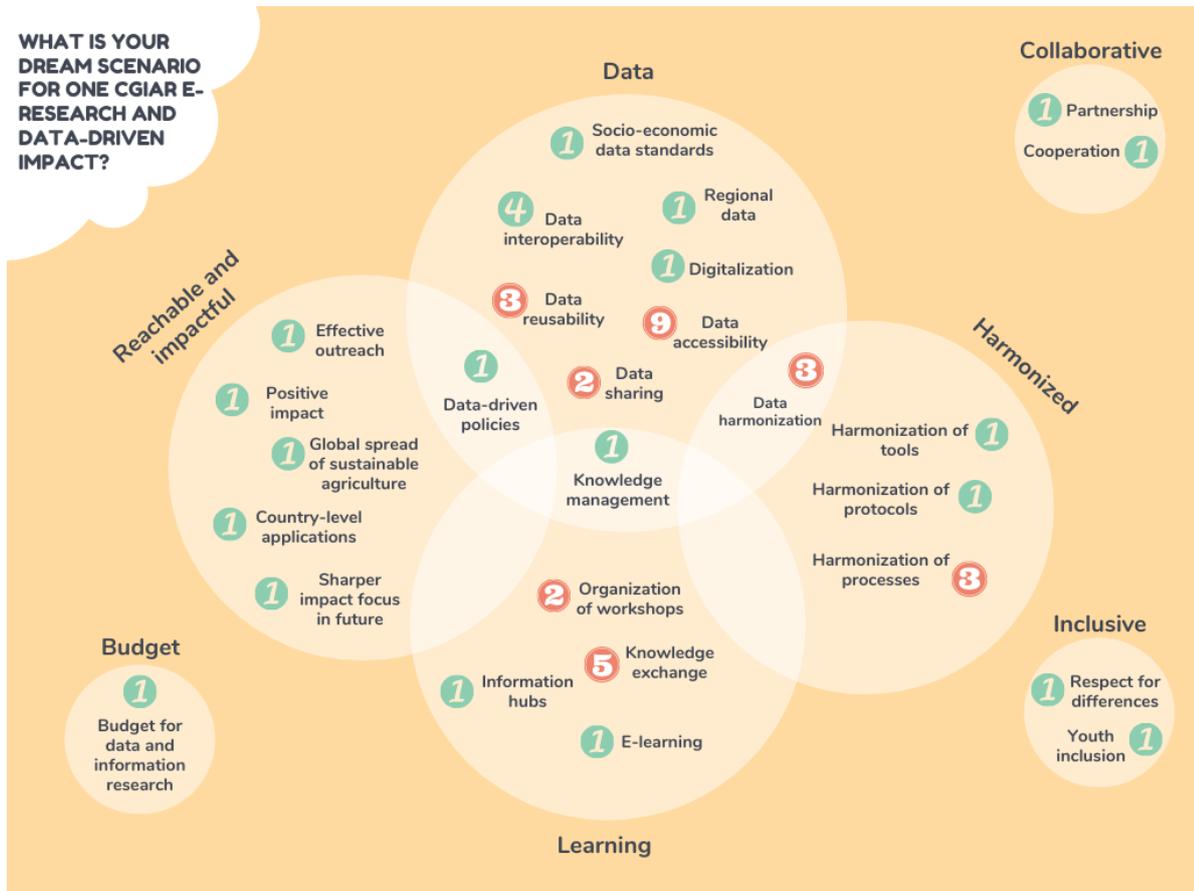


### 3.3 Stakeholders’ opinion about sustainability, relevance, and effectiveness of the Platform

#### 3.3.1 Sustainability and future of CGIAR

In this section the evaluation team asked questions about the future of the CGIAR and its sustainability. Figure 13 shows the main answers to the question “What is your dream-scenario for One CGIAR e-research and data-drive impact?”. The evaluation team identified maximum of three keywords used by respondents and divided them into seven macro-areas: Data, Collaboration, Budget, Reachability and Impact, Harmonization, Inclusion and Learning. Inside each area, represented in the figure as a circular diagram, the diagram shows the keywords and the number of times they appeared. Words related to the Data area were the most common ones (they appeared 23 times) and the most used word was “Data accessibility”, that appeared 9 times. Learning was another very important area and the main word used was “Knowledge exchange”, that appeared 5 times. Some words were grouped in more than one macro-area, like “Data harmonization” that was grouped to both Data and Harmonization areas. In this case, the evaluation team reported the keywords in the intersection between the two circular diagrams.

**Figure 13: Figure 13: Keyword visualization by Macro Areas: Sustainability – Dream-scenario for One CGIAR (Open question)**



\*Numbers represent the number of times keywords appeared. Circles represent the macro-area in which keywords were grouped.

Furthermore, according to figure 14, majority of respondents (67%) claimed that CGIAR is prepared to take on a role of leadership in the international digital agriculture landscape.

**Figure 14: Sustainability – Future of CGIAR – How would you rate CGIAR’s preparedness to take on a role of leadership in the international digital agriculture landscape? (n=59)**

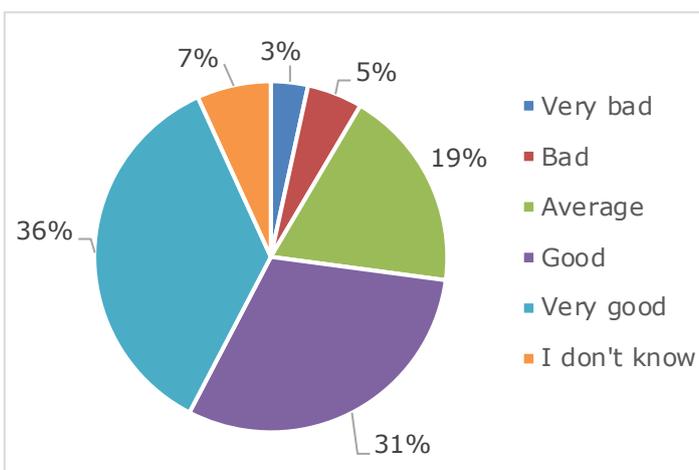


Figure 15 presents answers to the question “What makes CGIAR ready/not ready to take on such a leadership role?”. The evaluation team grouped the answers based on the score provided in the previous question. Mainly, critics were concerned about CGIAR’s willingness to take a firm stand on open data and open science, as well as its inability to engage with a broader group of scientists, the lack of a clear long-term financial plan and the lack of clear governance. On the other hand, the main strengths highlighted by respondents were CGIAR’s instructional and technical expertise for agricultural research and development and its commitment towards bringing positive change for farmers and stakeholders. Some respondents considered important CGIAR’s human resources, network, and technological know-how.

**Figure 15: Sustainability –CGIAR’s preparedness to take on a role of leadership in the international digital agriculture landscape? (open-ended question)**

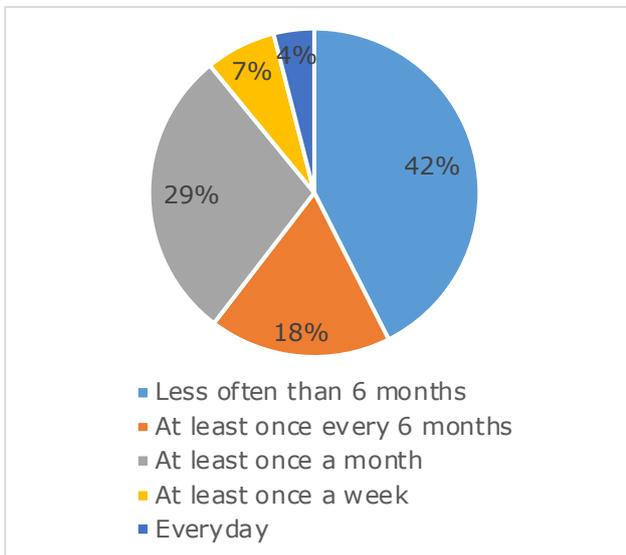
Future of CGIAR	What makes CGIAR ready/not ready to take on such a leadership role?
Green	“CGIAR has the instructional and technical capacity for agricultural research and development, and this makes CGIAR ready to take on such a leadership role.”
	“CGIAR seems well-organized, straightforward and has a clear idea of what it wants to do, so it is ideally placed.”
	“Adequate resources, including technical expertise and commitment towards bringing positive change for farmers and stakeholders.”
	“Access to all the centers across agriculture. It has vast experience on a global level.”
	“Experience, networks, historical and ongoing data collection efforts. Potential to produce standardized, open datasets representing large temporal and spatial scales.”
	“It's human resources and technological know-how.”
	“CGIAR's extremely rich wealth of data on a multitude of research areas, and the teams of professionals that stand with those data.”
	“Continuous improvement, learning, collaboration and innovations.”
	“It already has the tools plus the proactive CoPs.”
Yellow	“Quite fragmented. There is need for more COP wide messages and engagements.”
	“Bringing new members to discover a lot in what they lack skills.”
	“CGIAR has a vast range of expertise and knowledge from staff who come from many areas of the agricultural domain. Most people within the CGIAR are willing to share that knowledge/expertise, and work in multidisciplinary teams towards an objective that will aid the specific stakeholder they are aiming to help. Staff are willing to learn from one another and work together to develop great new tools, products and policies that will be about positive change within the agricultural domain.”
	“Great potential to do so but products are rarely out scaled outside the CGIAR network and region of operation.”
	“We have significant data assets and longstanding experience in agricultural research drawing on a global workforce.”
	“Lack of government and mainstream attention.”
	“Its consistency in stakeholders' management and engagement.”
Orange	“Lack of a clear long-term financial plan that could support a well-defined working plan, transversal and executed by professional that have time and resources to accomplish it.”
	“Pros: lots of smart scientists and innovative capacity. Cons: project cycles don't encourage innovation and leave data work underfunded”
	“Risk that CGIAR will implode in coming years”
	“IRRI as part of CGIAR doesn't even have a data scientist or experts in ML, AI.”
	“Due to its re-organization, the CGIAR is not ready to present visionary and disruptive initiatives.”

Future of CGIAR	What makes CGIAR ready/not ready to take on such a leadership role?
	"In terms of leadership on publications and data management, Big Data/GARDIAN is the front runner for CGIAR, and big challenges await if the One CGIAR transition will imply harmonizing all publications and data libraries. Big Data/GARDIAN is, I think, uniquely well placed to help overcome those challenges."
	"I believe the Platform still is a small community of practice confined to few centers and scientists and has not engaged widely with the broader group of CGIAR centers and Programs"
	"There is no willingness to take a firm stand on open data and open science"

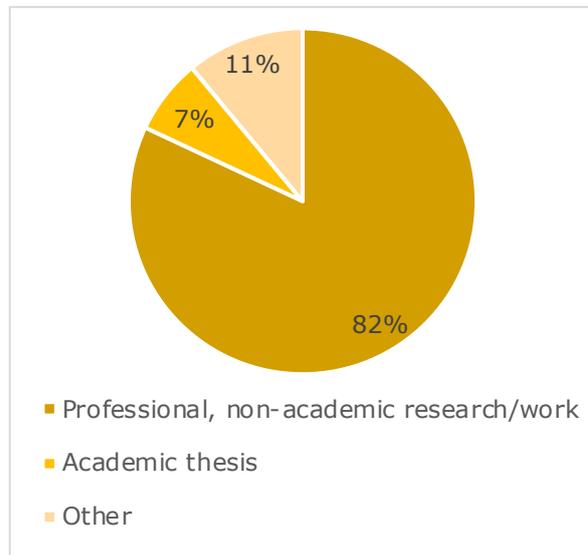
### 3.4 Module 1 – Organize

Twenty-nine (29) respondents claimed to be users of the GARDIAN Portal. However, one of them had also answered "I never engaged to (sic) the Platform", hence, was not asked more in-depth questions regarding his/her use of the Platform. 28 respondents answered more detailed questions regarding their use of the GARDIAN portal. Most of them made occasional use and only 1 person stated that s/he used it daily, since its use was directly related to the work that s/he conducted (Figure 16). 82% of the respondents claimed to use the portal for professional/non-academic research work (Figure 17). 89% of them learned about the GARDIAN through their CGIAR network and 50% made their work available in the GARDIAN, although 10 respondents out of 13 said that they did not know whether the interest in their work increased through GARDIAN or not.

**Figure 16: Frequency and Purpose of using the GARDIAN portal (n = 28)**



**Figure 17: Distribution of Respondent's main reason for using the GARDIAN portal**



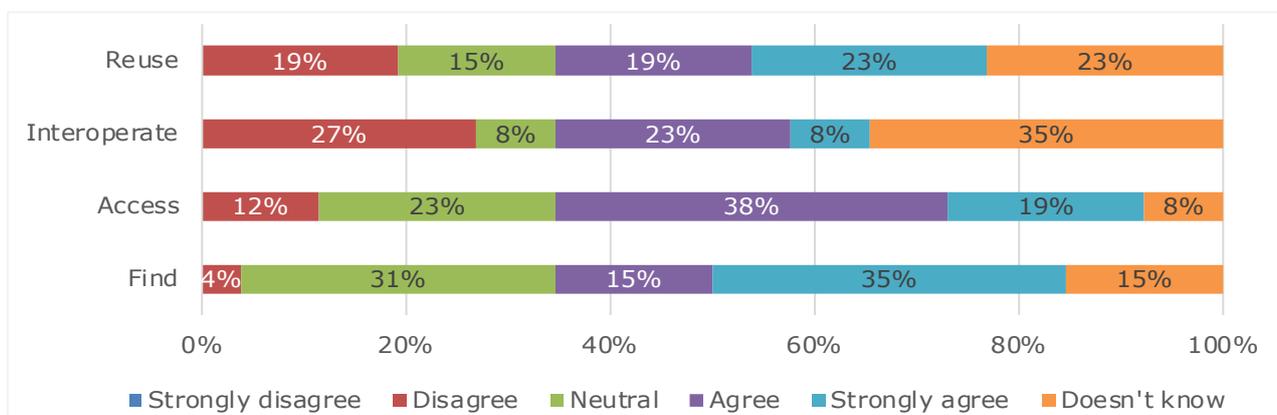
Sixteen respondents answered the optional open question regarding their use of the GARDIAN portal. The majority of them used it to search for data, but also to promote the Platform and raise awareness about its functionalities within their team. Figure 18 reports some of the main words stated by respondents.

**Figure 18: Word Cloud of "How did you use the GARDIAN portal and for what type of projects did you find it useful?" (n=16)**



Next, respondents were asked about their perception regarding the easiness to find, access, interoperate and reuse data through GARDIAN. They were asked whether they agreed or disagreed with the following statements: (1) Using GARDIAN I can easily find metadata and data I am looking for; (2) Using GARDIAN I can easily access the datasets I found; (3) Using GARDIAN I can easily integrate datasets I found with other data; (4) Using GARDIAN I can easily reuse the data I found. These questions were also asked as part of the assessment of the **effectiveness** of the Platform.

**Figure 19: Respondents' perception of easiness to find, access, interoperate and reuse data through GARDIAN (n=26)**



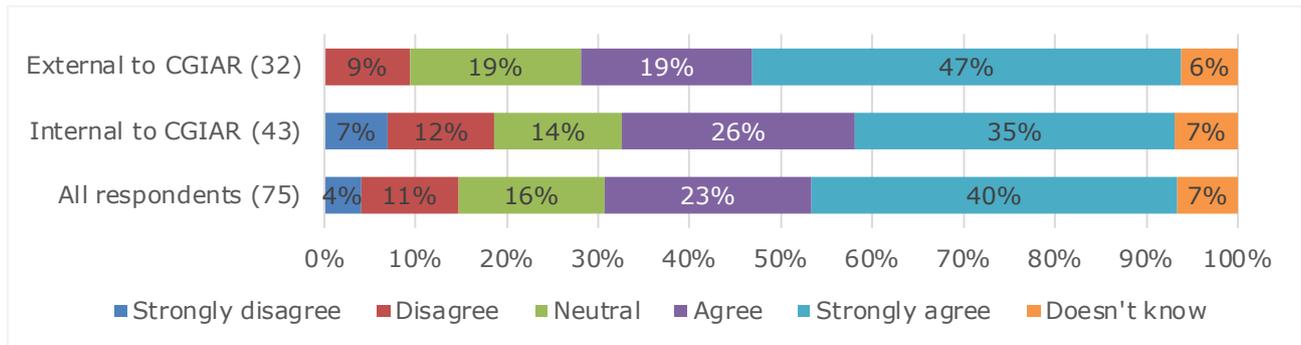
As mentioned above, respondents were asked to answer questions related to the **Relevance, Effectiveness and Sustainability of the Platform**. Respondents had to agree or disagree on a scale from 1 (strongly disagree) to 5 (strongly agree) to specific statements.

### 3.4.1 Relevance

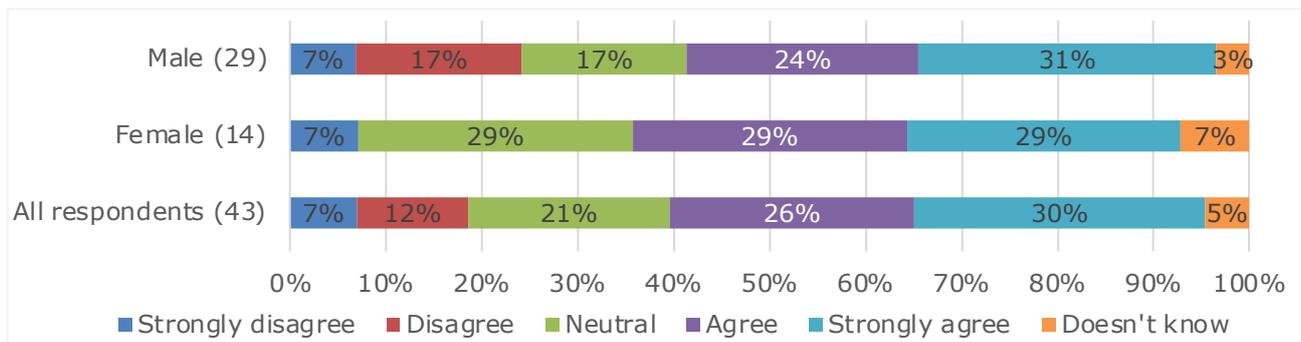
Seventy-five respondents answered with regards their agreement or disagreement with the statement "The Big Data Platform's products, analytical tools and/or activities I engaged in add value to my work." Figure 20 shows that 40% of respondents strongly agreed with the statement. Similar results are reflected also among internal and external stakeholders (47% of stakeholders external to CGIAR and 35% of internal stakeholders strongly agreed with the statement). Among external partners, 7 agreed

with the statement, 1 disagreed and 1 was neutral. In response to the question specifically addressed to staff of CGIAR centers of CRPs: "The Platform's products and activities address my new and evolving needs", most of the sample strongly agreed with it and results showed no statistically significant difference among men and women (Figure 21).

**Figure 20: Relevance - The Big Data Platform's products, analytical tools and/or activities I engaged in add value to my work (n=75)**



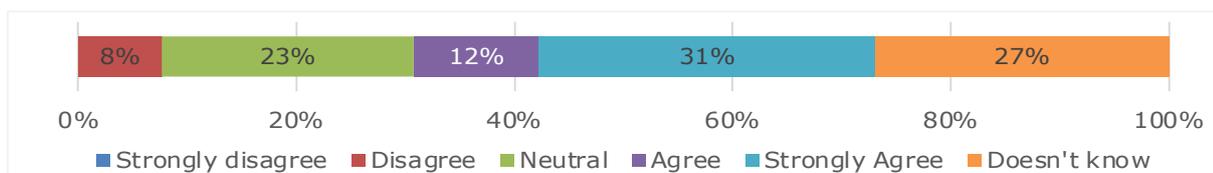
**Figure 21: Responses about: "Relevance of The Platform's products and activities to addressing my new and evolving needs." (n=43)**



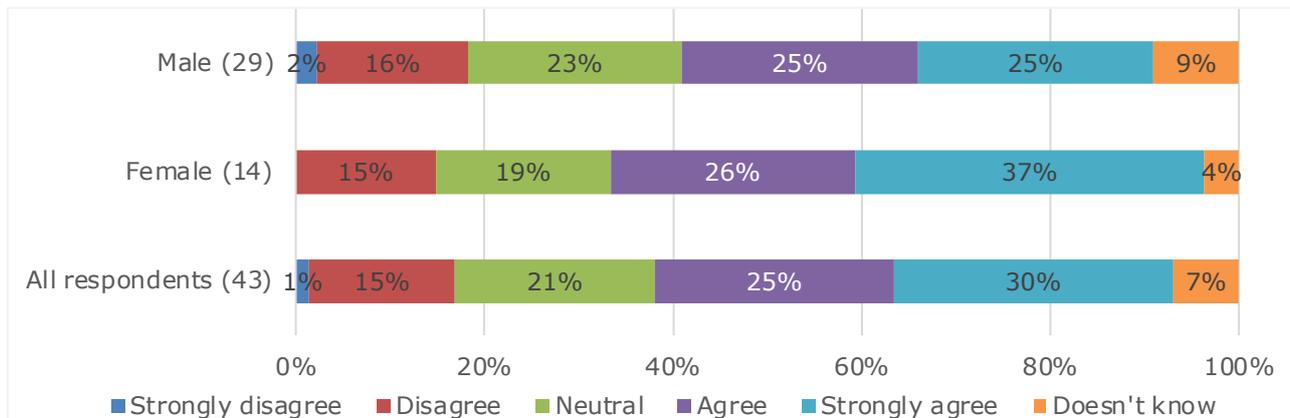
### 3.4.2 Effectiveness

The survey section containing questions about effectiveness was the most dense. When asked a question regarding time efficiency of the search function in the Portal, out of 26 respondents, 11 agreed with the fact that data search via GARDIAN is time efficient compared to other similar portals, 7 did not know, 6 were neutral and 2 disagreed (Figure 22). Then, the evaluation team asked specific questions regarding the ability of the Platform to satisfy specific needs. The questions followed the same format and were asked as statements to which respondents could either agree or disagree using a 1 to 5 scale. Most respondents strongly agreed to the statement "When I engaged with the Platform, I felt that my specific needs at professional level were met" (Figure 23). Results were disaggregated by gender and are similar for female and male, although a higher percentage of women strongly agreed with the statement compared to men. Among the 9 external partners, 6 strongly agreed, 2 agreed and 1 was neutral.

**Figure 22: Distribution of responses: Effectiveness – Data search via GARDIAN is time efficient compared to other similar portals I use (n=26)**

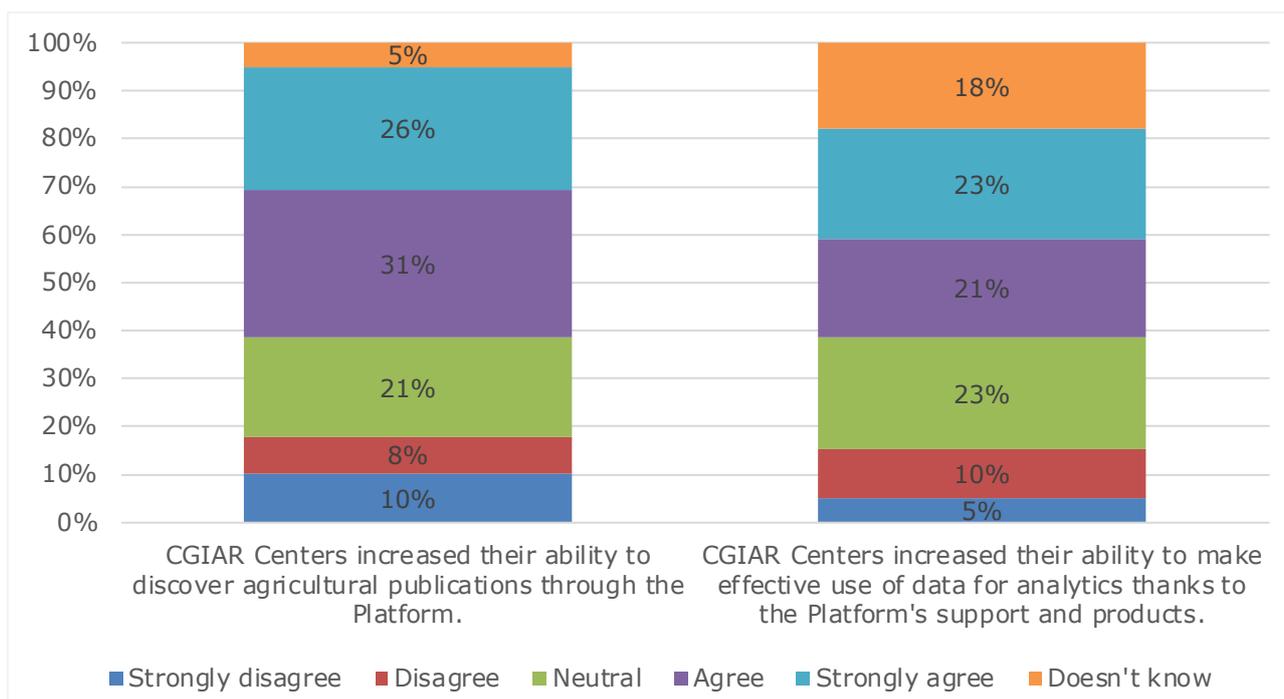


**Figure 23: Effectiveness – When I engaged with the Platform, I felt that my specific needs at professional level were met – whole sample and by gender (n=43)**

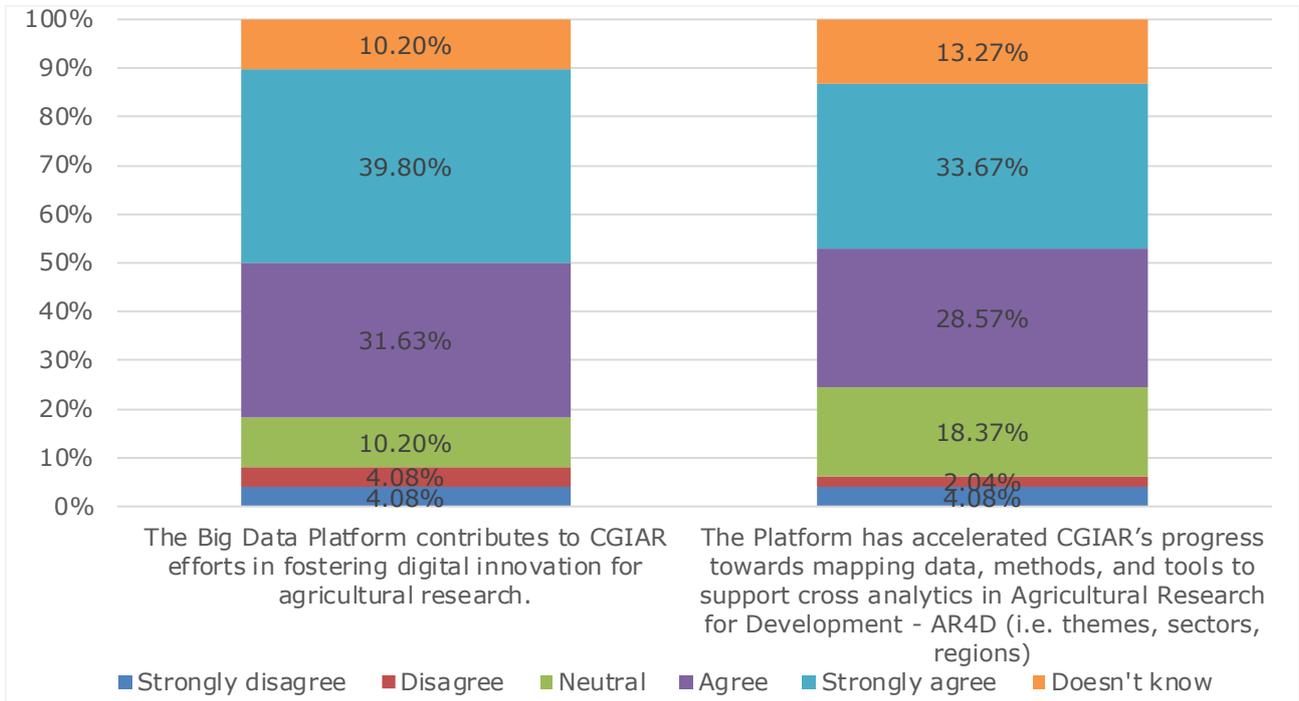


In the figures below, answers to different statements related to Platform’s effectiveness are reported.

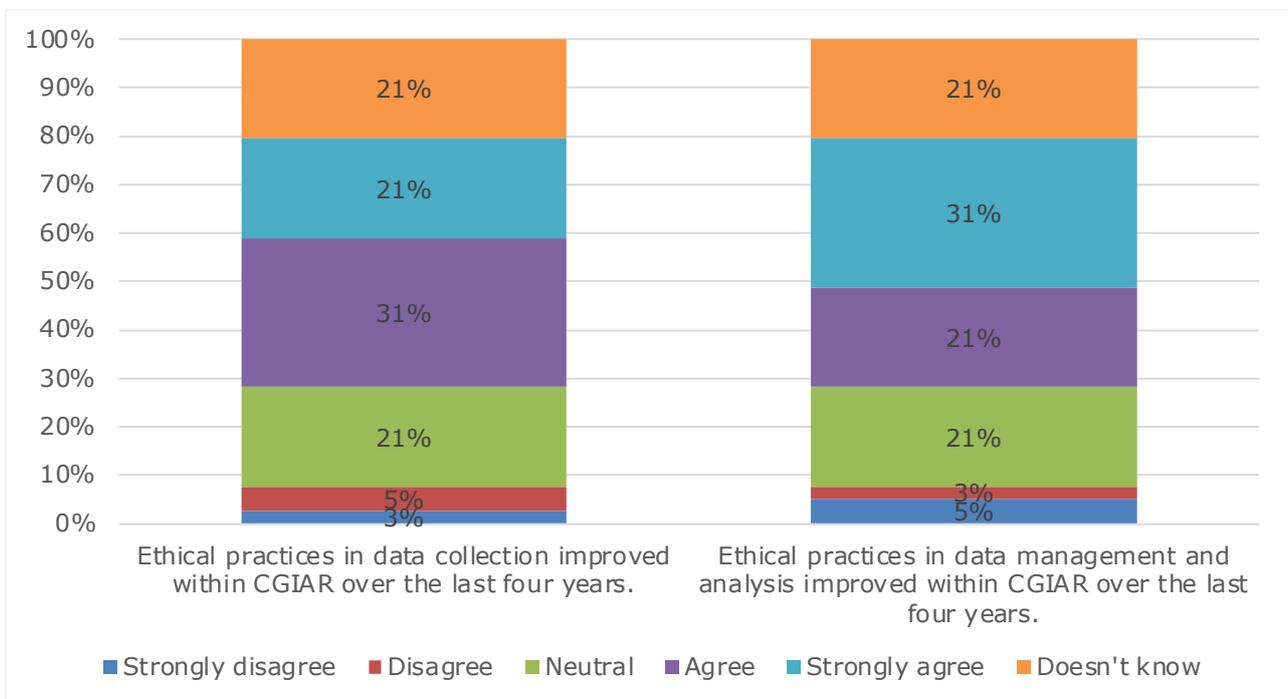
**Figure 24: Distribution of responses: Effectiveness – Increased ability to discover publications and to use data (n=39)**



**Figure 25: Distribution of responses: Effectiveness – Ability of the Platform to foster digital innovation and accelerate progress toward methods for agricultural research (n=98)**



**Figure 26: Distribution of responses: Effectiveness – Ethical practices in data collection and data management (n=39)**



### 3.5 Module 2 – Convene

Among the 106 respondents, 33 participated in the Annual Convention at least once and most of them declared that their expectations were met. 31 respondents answered more detailed questions regarding their participation in the convention (Figures 27 and 28). 17 respondents participated only in one of the four conventions, 7 in two conventions, 6 in three conventions and one participated in all four conventions. 9 respondents participated only in the online Convention, 9 participated only in one of the Conventions in-person and the remaining 13 participated to both the online Convention and at least one in-person. In general, the most attended Convention among respondents was the one held online in 2020, which is coherent with the fact that it was the Convention with the highest number of total participants due to its easy and costless accessibility (Figure 27).

**Figure 27: Distribution of Respondent’s participation in the Annual Convention by Year (n =31)**

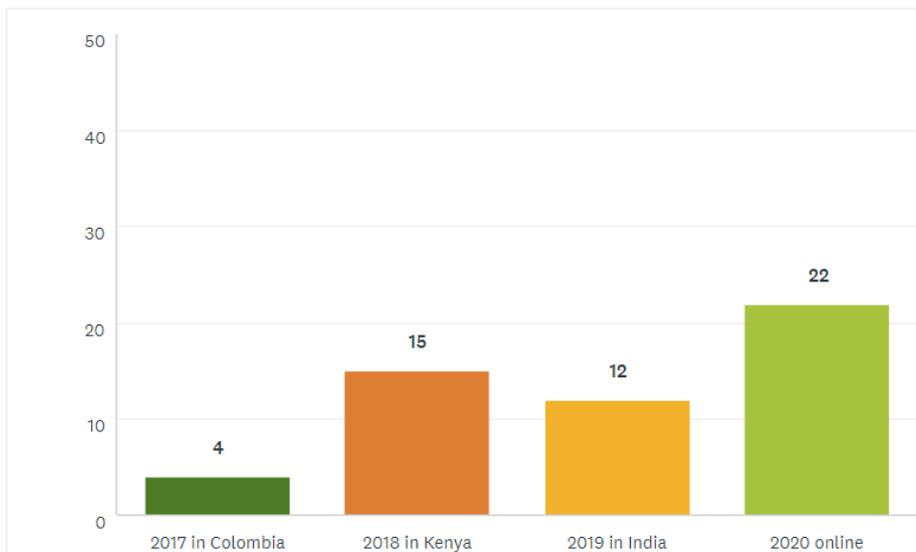
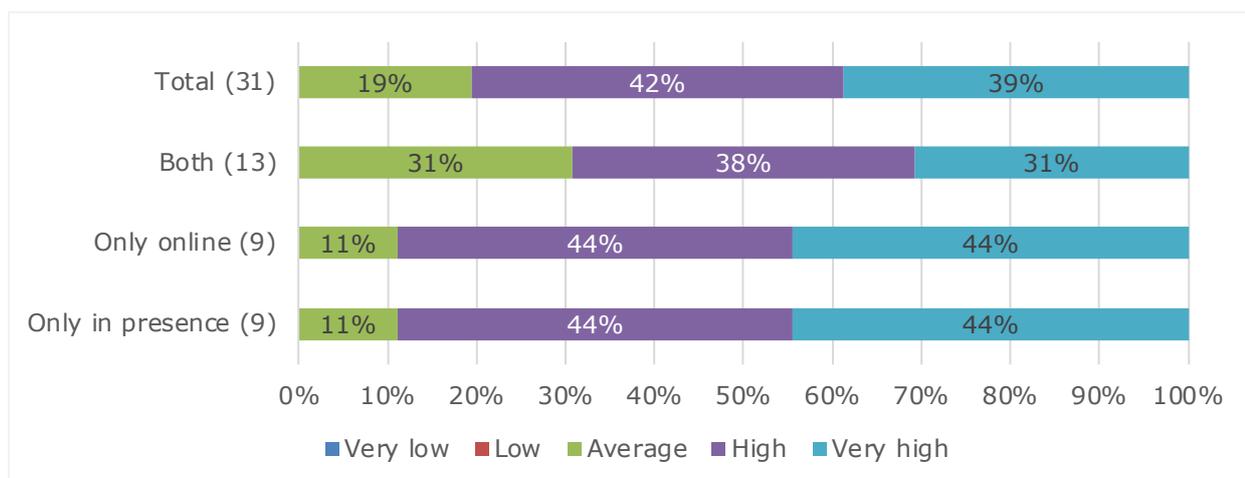


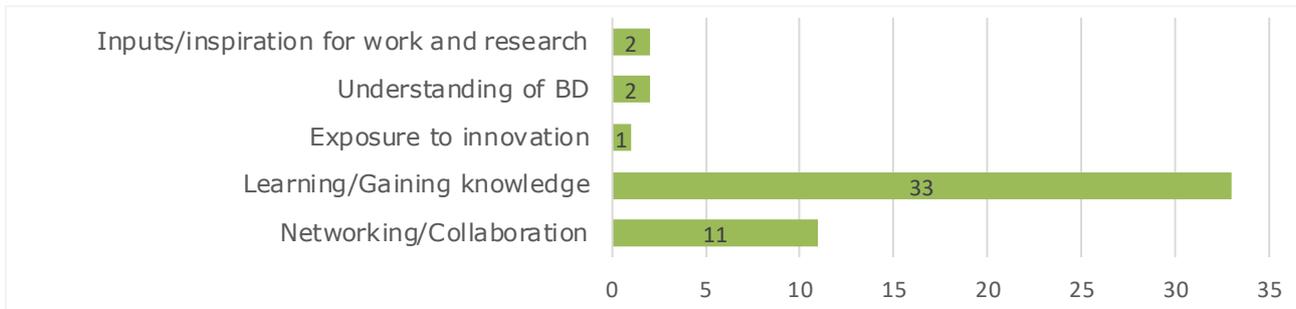
Figure 28 below, presents respondents’ about “To which extent were your expectations met?” with rating from 1 to 5. Most respondents declared that their expectations were met. Results are similar for both people who participated only online or only in-presence. However, 31% of those participants who went to both kinds (online and in-presence) declared that their level of satisfaction with the events was average.

**Figure 28: Distribution of respondent’s level of satisfaction with the Annual Convention (n=31)**



Out of 33 participants to the annual Conventions, 21 people answered the open question “What was the added value of the Conventions to your work?” and most of them used works like “networking”, “partnership”, “learning” and “knowledge sharing” (Figure 29).

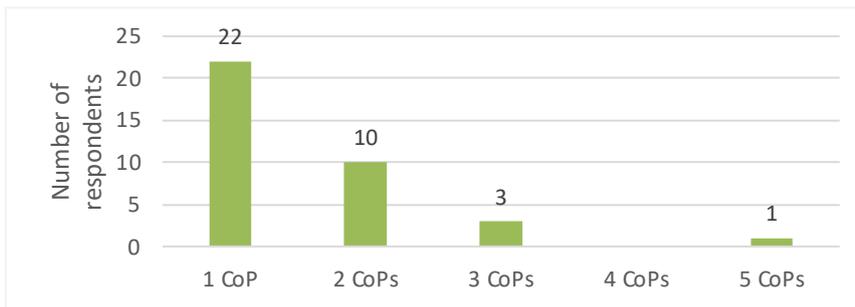
**Figure 29: Opinions of value-added value of the Conventions to respondents’ work (n= 49)**



### 3.5.1 Effectiveness

Thirty-six respondents stated that they were members of the communities of practice. Twenty-two respondents were part of one CoP, 10 respondents were members of 2 CoPs, 3 respondents were part of 3 CoPs and 1 respondent - a member of 5 CoPs. (Figure 30).

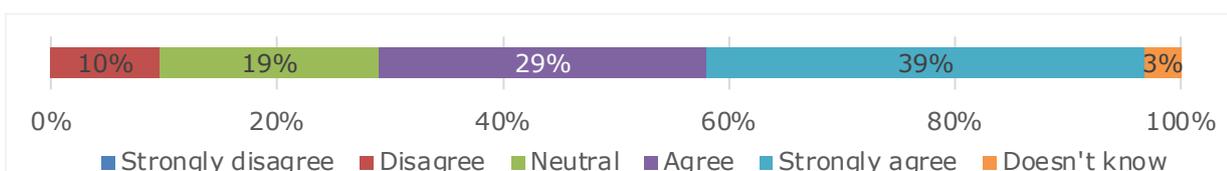
**Figure 30: Total number of CoPs in which respondents participate (n=36)**



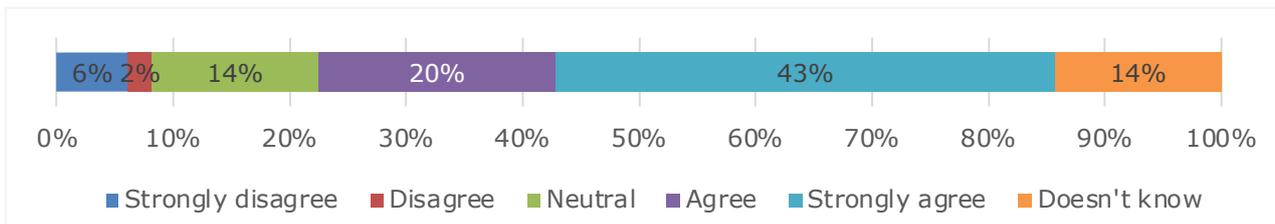
Out of the 36 respondents involved in CoPs, majority (31) answered more detailed questions regarding their satisfaction. 68% felt that their expectations with the engagement in the CoP was met (either agreed or strongly agreed), 19% was neutral, 10% was not satisfied and the remaining 3% did not know (Figure 31). In terms of effectiveness, less than a half (about 43%) of the respondents strongly agreed that “Through the platform it is possible to engage with a wider agriculture data and innovation network” (Figure 32).

Finally, 95 respondents answered the question on whether they had attended any courses and seminars provided by the Platform- 58 answered Yes, of which 9 were external partners. Of the 58 respondents who attended the Platform’s seminars and courses, a half (50%) were satisfied and 21% highly satisfied with the courses (Figure 33). Among external partners, 3 were highly satisfied, 4 satisfied and 1 neutral.

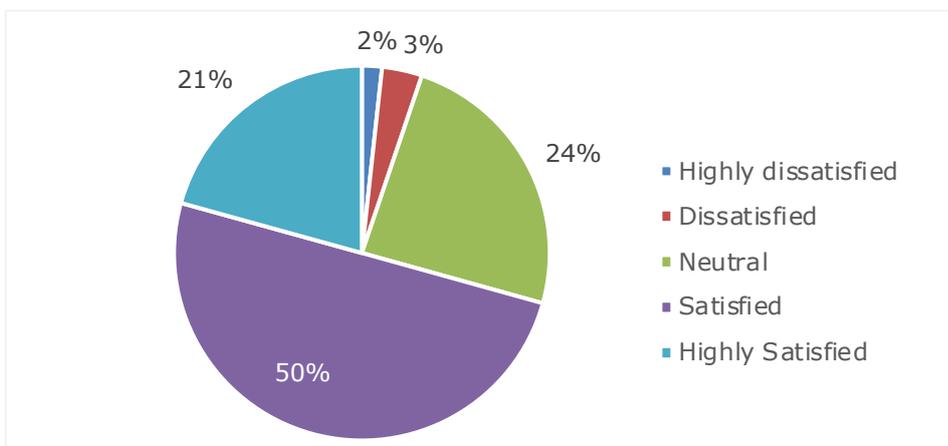
**Figure 31: Effectiveness – Expectations with the Communities of Practice were met (n=31)**



**Figure 32: Effectiveness – Through the platform it is possible to engage with a wider agriculture data and innovation network (n=49)**



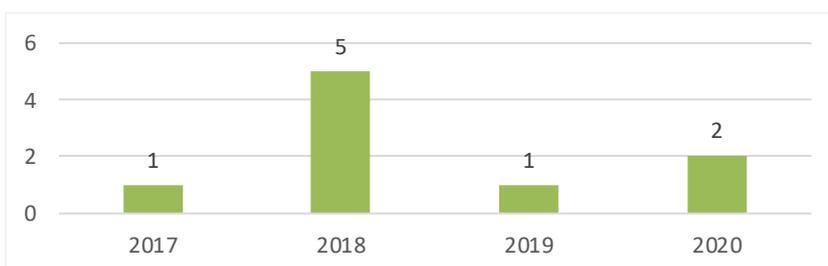
**Figure 33: Respondents' satisfaction with online courses and webinars provided by the Platform (n=58)**



### 3.6 Module 3 – Inspire

Only 9 respondents out of 106 participated in the Inspire Challenge and only one (1) of them was selected as a finalist. On a scale of 1 to 5, this person gave a ranking of 3 to the fairness of the selection process. Among those not selected, only 3 out of 8 received feedback regarding their application.

**Figure 34: Year of first participation in the Inspire Challenge (n=9)**

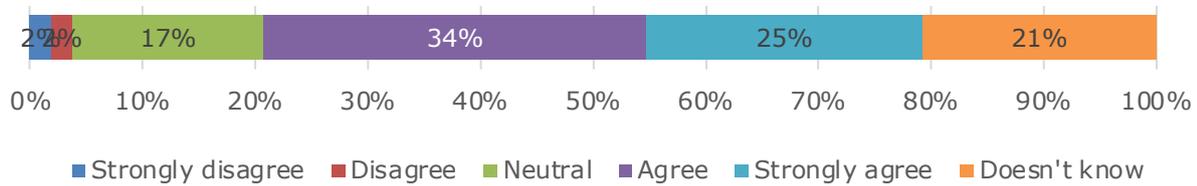


#### 3.6.1 Effectiveness

Fifty-three respondents answered questions regarding the ability of the Inspire Challenge Grant Process to make significant contributions to digital innovations for agricultural research and development. 59% agreed or highly agreed with the statement, 17% was neutral, 21% did not know and the remaining part disagreed or strongly disagreed (Figures 35). Notably, among the 9 participants of the Challenge, five

either strongly or simply agreed with the statement, while one (1) disagreed, one (1) was neutral and one (1) did not know.

**Figure 35: Effectiveness – Ability of the Inspire Challenge Grant Process to make significant contributions to digital innovations for agricultural research and development (n=53)**



### 3.7 Survey Limitations

One of the main limitations of the survey is the limited number of the respondents in selected groups, that prevented a more in-depth and disaggregated analysis. The evaluation team compared answers among age groups, gender, main field of work and main role at work but differences were not statistically significant for any of the answers. In most cases, it was not possible to conduct tests for statistical significance due to small sample size (less than 30 people per group). This limitation was greater for those questions that were addressed only to some specific stakeholders rather than to the whole sample. Comparisons were conducted using a Survey Monkey tool that automatically calculates differences between groups and runs tests to assess their statistical significance.

For gender and age, tests using the software STATA were run. First, the evaluation team conducted the Shapiro-Wilk test for each variable to assess the normality of distribution and then the Lavene’s test to check for homogeneity of variance. Where the sample size was more than 30 respondents per group, parametric (t-test) and non-parametric (Kruskal-Wallis) tests were conducted to assess whether the differences in means were statistically significant. Pairwise differences between groups were also assessed when there were more than two groups. In the case of age, the evaluation team compared first, all groups and then divided the sample into two bigger groups, “Generation 1” including people aged 18-44 and “Generation 2” including people older than 44. Including the common Pearson chi-squared and the likelihood ratio chi-squared, the evaluation team also checked the statistical significance difference by gender and each per each answer category (for example strongly disagree, strongly agree, etc.).

Differences between male and female respondents were not statistically significant for any of the questions asked. In the case of “age” the evaluation team found a statistically significant difference at 5% significance level between generation groups for the statement “The Big Data Platform's products, analytical tools and/or activities I engaged in add value to my work”. Differences in average rankings for other statements were not statistically significant at 5% significance level.

Finally, a core limitation was the extremely limited number of respondents who had participated in the Inspire Challenge. This did not allow the evaluation team to make conclusions on respondents’ views about Module 3.

# Annexes

## A: Survey Invitation email

(Sent in English and Spanish):

Dear BIG DATA Community,

Please receive this survey on behalf of the Evaluation Team of the CGIAR Big Data in Agriculture Platform

The CGIAR Advisory Services Shared Secretariat (CAS Secretariat), per its mandate and approved Workplan, commissioned our external evaluation team to conduct the evaluation of the CGIAR Platform for Big Data in Agriculture. This evaluation will serve the dual purposes of accountability and learning, towards One CGIAR. If you have interacted with the platform, or simply have an interest in the subject, we would like to know your opinions by filling the online survey.

The survey should not take more than 5-10 minutes of your time. Please submit your responses as soon as possible and no later than Thursday, September 30th, 2021, at 11.59 p.m. Anywhere on Earth (UTC - 12). All responses will be kept anonymous and confidential.

If you have any questions or concerns about the survey, please do not hesitate to contact the evaluation team: Ibtissem Jouini: [i\\_jouini@evalchange.com](mailto:i_jouini@evalchange.com); Stefania Sellitti: [S.Sellitti@cgiar.org](mailto:S.Sellitti@cgiar.org)

Sincerely,  
The CGIAR Platform for Big Data in Agriculture Evaluation Team

## B: Questionnaire

### Respondents' profile

Question	Question Type	Answers
Gender	Multiple choice	a) Female b) Male c) Non-binary d) Rather not say/Not sure
Age	Multiple choice	a) Less than 18 b) 18-24 c) 25-34 d) 35-44 e) 45-54 f) 55-64 g) 65+
Nationality	Drop down list	Include all nationalities
Current/Usual Country of Residence (No-Covid location)	Drop down list	Include all nationalities

Question	Question Type	Answers
What is your main field of work?	Multiple choice	a) Universities and research institutes b) Private sector (including farm, small- medium enterprises) c) International Organizations, including CGIAR research centers d) National and international NGOs, Foundations, not-for-profit sector e) Governmental and public institutions f) Other _____
What's your role in your place of work?	Multiple choice	a) Leadership, member of a governance body b) Management and Administrative Staff c) Scientists /Researcher d) ITC Staff/Data scientist/Data management e) Consultant f) Other _____
What is the highest level of education you have completed?	Multiple choice	a) Post-secondary school qualifications (non-tertiary) b) Bachelors or equivalent c) Master's/Graduate d) PhD/Doctorate

### Engagement with the Platform

In this section we would like to learn more about your background and type of engagement with the CGIAR Platform for Big Data in Agriculture.

	Question	Question Type	Answers
A1	How do you engage with the CGIAR Platform for Big Data in Agriculture? <i>Select all that apply</i>	Checkboxes	a) CGIAR Center - <i>Select if you are/have been a staff member of one of CGIAR Centers</i> b) CGIAR Research Program (CRP) or Platform - <i>Select if you are/have been a researcher or staff of one of the CRPs/Platform</i> c) Member of CoPs - <i>Select if you are a leader, coordinator, or member of a Community of Practice</i> d) External partner - <i>Select if you are a partner of the CGIAR Platform for Big Data</i> e) Participant to the Inspire Challenge - <i>Select if you ever applied (whether you were selected or not) to the Innovate Challenge</i> f) Participant in the Annual Convention - <i>Select if you participated to one or more of the Platform Annual Conventions</i> g) User of GARDIAN - <i>Select if you accessed and used the GARDIAN Platform or your publications are in the Guardian Platform</i> h) <i>I have not engaged with the platform</i> _____

	Question	Question Type	Answers
A1.1	In which CGIAR Center/Alliance/Organization do you work?	Checkboxes	<ul style="list-style-type: none"> <li>a) AfricaRice</li> <li>b) CIFOR</li> <li>c) ICARDA</li> <li>d) ICRISAT</li> <li>e) IFPRI</li> <li>f) IITA</li> <li>g) ILRI</li> <li>h) CIMMYT</li> <li>i) CIP</li> <li>j) IRRI</li> <li>k) IWMI</li> <li>l) Alliance of Bioversity International and CIAT</li> <li>m) ICRAF</li> <li>n) WorldFish</li> <li>o) CGIAR System Organization</li> </ul>
A1.2	In which CGIAR Research Programs (CRP) or Platforms do you work?	Multiple choice	<ul style="list-style-type: none"> <li>a) A4NH</li> <li>b) GLDC</li> <li>c) WHEAT</li> <li>d) CCAFS</li> <li>e) Livestock</li> <li>f) PIM</li> <li>g) FISH</li> <li>h) MAIZE</li> <li>i) RTB</li> <li>j) FTA</li> <li>k) RICE</li> <li>l) WLE</li> <li>m) Genebanks Platform</li> <li>n) Excellence in Breeding (EiB) Platform</li> <li>o) GENDER Platform</li> <li>p) Big Data Platform</li> <li>q) Other</li> </ul>
A1.3	Which Community of Practice, coordinated by the Big Data Platform, do you belong to?	Multiple choice	<ul style="list-style-type: none"> <li>a) Data-driven agronomy</li> <li>b) Crop modeling</li> <li>c) Geospatial data</li> <li>d) Ontologies data</li> <li>e) Info and data management</li> <li>f) Livestock data</li> <li>g) Socio-economic data</li> </ul>
A1.4	What is your role within the Community of Practice	Multiple choice	<ul style="list-style-type: none"> <li>a) CoP member</li> <li>b) CoP leader</li> <li>c) CoP administrator</li> <li>d) Other _____</li> </ul>
A1.5	Which type of external partner do you consider yourself affiliated with?	Multiple choice	<ul style="list-style-type: none"> <li>a) Academia</li> <li>b) Private sector</li> <li>c) Policy maker</li> <li>d) International organizations/Foundation</li> <li>e) Research institute</li> <li>f) Other _____</li> </ul>
A1.6	In which year did you participate in the Inspire challenge competition?	Multiple choice	<ul style="list-style-type: none"> <li>a) 2017</li> <li>b) 2018</li> <li>c) 2019</li> <li>d) 2020</li> </ul>
A1.7	Were you selected as a finalist?	Binary	<ul style="list-style-type: none"> <li>a) Yes</li> <li>b) No</li> </ul>

	Question	Question Type	Answers
A1.7.1	Have you received any feedback on you application?	Binary	
A1.7.2	Comment (optional)		
A1.7.3	How soon did you hear about the outcome?	Multiple choice	a) After less than a month b) Between 1 and 3 months c) Between 4 and 6 months d) Between 6 months and a year e) More than a year
A1.7.4	How fair/open would you rate the process? (Please rate 1 to 5, with 1=not fair; 5=highly fair)	Likert scale	
A1.8	When did you participate in the convention?	Multiple choice	e) 2017 f) 2018 g) 2019 h) 2020
A1.8.1	To which extend were your expectations met?	Likert scale	1 to 5
A1.8.2	What was the added value of the Convention to your work? (Optional)	Open question	
A1.9	How often do you make use of the GARDIAN portal?	Multiple choice	a) Every day b) At least once a week c) At least once a month d) At least once every 6 months e) Less often than the above
A1.10	For what purpose did you first start to use the GARDIAN portal?	Multiple choice	a) Academic Thesis, (e.g., Bachelor Masters, Doctoral) b) Professional, non-academic research/work c) Interest not related to academic or professional work d) Other _____
A1.11	How did you learn about GARDIAN?	Multiple choice	a) Search Engine (Google, yahoo, etc.) b) Recommended by a colleague external to CGIAR network c) From my CGIAR network (Center, Research Program, Community of Practice, etc.) d) Social media e) Other _____
A1.12	Do you have your work accessible through GARDIAN	Binary	
A1.12.1	If yes, have you noticed an increased interest in it (i.e., number of consultations)?		A) Yes B) No f) I don't know

## Relevance

Please respond on the extent to which you agree or disagree with the following statements on a scale of 1-5 whereby 1 means "strongly disagree" and 5 means "strongly agree"

#	Statement	Question type	Answer	Audience
B1	The Big Data Platform's products, analytical tools and/or activities I engaged in add value to my work	Likert scale	Points 1-5 + "I don't know"	ALL
B2	The Platform's products and activities address my new and evolving needs.	Likert scale	Points 1-5 + "I don't know"	Centers & CRPS
B3	How did you use the GARDIAN portal? For what type of projects did you find it useful? (Optional)	Open Question		

## Effectiveness

Please rate on a scale from 1 to 5, where 1 is "None" and 5 is "Very good"

#	Statement	Question type	Answer	Audience
C0	How would you rate your level of knowledge about the Platform mandate and results?	Likert scale	Points 1-5 +	ALL

Please respond on the extent to which you agree or disagree with the following statements on a scale of 1-5 whereby 1 means "strongly disagree" and 5 means "strongly agree"

#	Statement	Question type	Answer	Audience
C1	The Big Data Platform contributes to CGIAR efforts in fostering digital innovation for agricultural research.	Likert scale	Points 1-5 + "I don't know"	ALL
C2	When I engaged with the Big Data Platform, I felt that my specific needs at professional level were met.	Likert scale	Points 1-5 + "I don't know"	ALL
C3	The Platform has accelerated CGIAR's progress towards mapping data, methods, and tools to support cross analytics in AR4D (i.e., themes, sectors, regions)	Likert scale	Points 1-5 + "I don't know"	ALL
C4	The Platform has accelerated progress towards better data management and stewardship in CGIAR.	Likert scale	Points 1-5 + "I don't know"	CGIAR, CRPs, External Partners
C5	Through the platform it is possible to engage with a wider agriculture data and innovation network	Likert scale	Points 1-5 + "I don't know"	CGIAR Centers, CRPs, Partners
C6	CGIAR Centers increased their ability to discover agricultural publications through the Platform.	Likert scale	Points 1-5 + "I don't know"	CGIAR Centers and CRPs

#	Statement	Question type	Answer	Audience
C7	CGIAR Centers increased their ability to make effective use of data for analytics thanks to the Platform's support and products.	Likert scale	Points 1-5 + "I don't know"	CGIAR Centers and CRPs
C8	Ethical practices in data collection, improved within CGIAR over the last four years.	Likert scale	Points 1-5 + "I don't know"	Centers and CRPs
C9	Ethical practices in data management and analysis improved within CGIAR over the last for years.	Likert scale	Points 1-5 + "I don't know"	Centers and CRPs
C10	Data search via GARDIAN time efficient compared to other similar portals I used.	Likert scale	Points 1-5 + "I don't know"	ALL
C11	Using GARDIAN I can easily <b>find</b> Metadata and data I am looking for	Likert scale	Points 1-5 + "I don't know"	ALL
C12	Using GARDIAN I can easily <b>access</b> the datasets I found (including authentication and authorization)	Likert scale	Points 1-5 + "I don't know"	ALL
C13	Using GARDIAN I can easily Integrate data sets I found with other data (including <b>interoperate</b> with applications or workflows for analysis, storage, and processing)	Likert scale	Points 1-5 + "I don't know"	ALL
C14	Using GARDIAN I can easily <b>reuse</b> the data I found (i.e., Data was well-described, so it was possible to replicate and/or combine it in different settings).	Likert scale	Points 1-5 + "I don't know"	ALL
C15	My expectations were met with my engagement in the Community of Practice	Likert scale	Points 1-5 + "I don't know"	Members of the CoP
C16	The inspire challenge made significant contributions to digital innovations for research	Likert scale	Points 1-5 + "I don't know"	CGIAR Centers, CRPs, Partners, participants to the challenge, CoPs

### Sustainability

Please rate the following questions using a scale from 1 to 5. How would you rate...?

#	Statement	Question type	Answer	Audience
D1	CGIAR's preparedness to take on a role of leadership in the international digital agriculture landscape?	Likert scale	Points 1-5 + "I don't know"	CGIAR, CRPs, External partners, Members of CoPs

D1.1	What makes CGIAR ready/not ready to take on such a leadership role?	Open question		CGIAR Centers, CRPs, Partners, CoP members
D2	Did you attend any courses or webinars provided by the Platform?	Binary	Yes/No	All
D2	How satisfied are you with online courses and webinars provided by the Platform?	Likert scale	Points 1-5 + "I don't know"	All

### Looking forward

#	Question	Type of question	Answer	Audience
D1	Are you aware of any initiatives that showcase the value of (big) data analytics in Agriculture Research for development (AR4D) developed by the Platform or CGIAR?	Multiple choice	Y/N	ALL
D1.1	If yes, can you share title, website, organization/institute...?	Open Question		
D2	What is your dream-scenario for One CGIAR e-research and data-drive impact?	Open Question	_____	CGIAR, CRPs, External partners, Members of CoPs
D3	In which directions or shape should the Platform for Big Data in Agriculture evolve?	Open Question	_____	CGIAR, CRPs, External partners, Members of CoPs

### End of the Survey

If you would like an individual interview (remote), or if you are willing to be contacted for follow-up, please leave your E-mail address (optional)	Open question
Are there any people that you think would have insight on these questions and to whom we should also send the survey?	Open question