



## **Monitoring and Evaluation Framework**

# **Data Collection, Handling and Storage Arrangements**

**Companion document to:**  
2030 Research and Innovation Strategy  
2024-26 Program of Work  
The Indicators Reference Manual

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## 1.0 Introduction

In early 2024, ICARDA adopted the [2030 Research and Innovation Strategy](#) and the 2024-26 Program of Work. Both contained explicitly listed performance indicators, and the latter also contained targets. The MEL team developed an elaborate [Indicators Reference Manual](#) to help create a shared understanding of the indicators and ultimately contribute to consistent measuring and reporting. This data collection and storage arrangements document elaborates the methods required to achieve the systematic gathering and recording of data needed for the computation and reporting the indicators, the data storage arrangements, and the contribution and collaboration of ICARDA teams towards the efficient implementation of the monitoring and evaluation framework (**Error! Reference source not found.**). It is envisioned that if ICARDA team leaders and staff refer to this document, it will enable them to clearly align their work to the ICARDA key performance indicators and enhance the visibility of their work and the ICARDA's portfolio as a whole. Research teams are encouraged to utilise this document right from project proposal stage, to aid selection of project indicators, and budget for data collection activities as guided by the data collection methods in this document.

Table 1: Contribution of ICARDA teams to the measurement and reporting of ICARDA indicators

Team	Link to team contribution section
Breeding & Scaling Improved Varieties (Breeding)	<a href="#">Breeding</a>
Capacity Development Unit (CDU)	<a href="#">CDU</a>
Communications	<a href="#">Communications</a>
Country Managers/ conveners	<a href="#">Country managers/ Conveners</a>
Finance and PGU	<a href="#">Finance and PGU</a>
Genetic Resources, Conservation, Characterization & Use (GRS)	<a href="#">GRS</a>
Geo BigData Driven Digital Augmentation for Sustainable Agro-Ecosystems (GeoAgro)	<a href="#">GeoAgro</a>
Monitoring, Evaluation & Learning (MEL)	<a href="#">MEL</a>
Resilient Agro-silvo-pastoral Systems (RASPS)	<a href="#">RASPS</a>
Research Ethics Committee	<a href="#">Research Ethics Committee</a>
Social Economy and Policy (SEP)	<a href="#">SEP</a>
Seed Systems, International Nurseries & Seed Health (SINH)	<a href="#">SINH</a>
Soil, Water, Agronomy (SWA)	<a href="#">SWA</a>

## 2.0 Data Collection Methods

Data collection is one of the most important activities for a functional monitoring and evaluation system as the quality of the monitoring and evaluation results is greatly influenced by the quality and completeness of the data collected. We elaborate six data collection approaches that shall be used to collect data for purposes of measuring and reporting on ICARDA key performance indicators, namely: (1) routine recording; (2) desk review; (3) email survey and key informant interview; (4) GPS mapping and remote sensing; and (5) field survey; presented below. Particularly for method 3 and 5, the data collection requests should be authorized by the Research Ethic Committee (REC). If Personally Identifiable Information (PIIs) are collected, the research team must provide a detailed description of the chain of custody of the survey material from the enumerator(s) to the data processor(s), specifying who is responsible for the destruction of any physical copies of the survey material, digitalization and anonymization of the data.

## **2.1 Routine recording**

Routine reporting is facilitated when requisite data is part of the routine business processes, such as routine use of systems such as the International Nurseries System, OCS, and the MEL Platform, among others. Routine recording of data will mostly be performed independently by ICARDA teams and shall be a basis for further data collection efforts, such as desk review.

## **2.2 Desk review**

The desk review approach entails analysing existing primary and secondary data sources for data related on the indicator(s) of interest. The sources of data may include a review of knowledge products published by ICARDA staff or retrieval of data from information systems routinely used by ICARDA staff during routine business processes. During the desk review process, ICARDA teams will collaborate with the MEL team to extract key indicators data and record them in data collection forms developed by the MEL team.

## **2.3 Email survey and Key Informant Interviews**

Email surveys will entail the development of a questionnaire using an online tool and periodically circulating it to a mailing list developed by the MEL team based on the partnerships reported by ICARDA research teams. Email surveys tend to have low response rates, however, if the contact information of partner institutions and points of contact are well maintained, the email surveys will have a wide reach, and given their relatively low cost to administer, they will make a tremendous contribution to the data gathered on the outcomes of ICARDA's work.

Given that email surveys are unable to investigate issues to any great depth, this approach will be a two-stage method that entails (1) sending of e-mail surveys with dichotomous (Yes-No) questions on the indicators of interest and open-ended follow-up questions, and subsequently (2) key informant interviews. The purpose of the key informant interviews will be to obtain more information that may not have been captured by the responses to the survey.

In cases where there are limitations with email surveys and remote key informant interviews, the key informant interviews shall be conducted through physical visits. Although the later proposition is more costly in monetary terms, it may be necessary as a way to close data gaps that may lead to incomplete reporting. Partnerships between the MEL team and in-country teams such as the country manager/convener can help address budget limitations to the implementation of physical visits.

## **2.4 Geographic Information Systems (GIS) and Remote Sensing**

Geographic information systems (GIS) are computerized systems that analyze and display geographically referenced information. Remote sensing involves obtaining information about the Earth's surface from a distance. Satellites and sensors capture data beyond the visible spectrum, revealing insights about vegetation, land cover, and environmental changes- all of which are key phenomena that ICARDA's work seeks to influence. The MEL team will partner with the GeoAgro team to deploy GIS and remote sensing for monitoring outcomes and impact of ICARDA's work that align with the key performance indicator(s).

## **2.5 Field survey**

Field surveys entail the collection of primary data directly from the source; in this case, next-users and end-users of ICARDA innovations. This data collection approach tends to be more costly as it involves elaborate planning and extensive logistical arrangements for field teams. To promote efficiency, this

approach entails the use of small but statistically significant sample sizes and concise questionnaires that are designed to obtain insights on key outcome and impact results rather than extensive science and socio-economic inquiry on themes not related to ICARDA indicators. To this end, the MEL team will utilise evaluation matrices built around the indicators of interest to select interview questions that can be included in questionnaires, and in cases where research teams would like to incorporate questions outside the realm of the performance indicators, options to leverage resources, from the proponents of the extra research questions, will be explored. Complementary research methods such as focus group discussion and the use of diaries may be used to gain in-depth understanding of observed phenomena.

### 3.0 Data handling and storage

It is vital to follow best practices for storing and handling data to ensure the integrity of the data in alignment with ICARDA, national, and donor policies. The following will be the key tenets of handling and storing data meant for measuring and reporting ICARDA indicators:

1. Use of standardised templates for recording and collation of indicators data as a prerequisite/basis for computing summary statistics for routine data;
2. Use of mobile data collection systems and applications for field data collection and the storage of resultant data on institutionally sanctioned servers/storage systems, constant data quality checks during the course of the data collection, and curation of datasets.
3. Consistent use of institutionally-mandated cloud storage system for all data, where it is accessible to authorized personnel and it is possible to generate audit trails to track data access.

### 4.0 Data collection arrangements

In this section, we present the contribution of each of the ICARDA teams to the measurement of indicators relevant to their work. For each indicator, we provide details of the data sources, description of the data to be collected, data collection tools, data repositories and collaborating ICARDA teams. Besides the detailed team contributions in sections 4.1 to 4.13, the following positions and teams have central roles:

- Deputy Director General- Research (DDGR) leads, in collaboration with the MEL team leader, the development of an effective monitoring and evaluation system to ensure that ICARDA meets its research for development targets, and ultimately, impact. The DDGR will exercise an oversight and guidance role over the implementation of the data collection arrangements, coordinating research team leaders, to ensure their adhere and contribution. The DDGR will routinely utilize the compiled indicator results to update the board on ICARDA's progress and take strategic programmatic decisions.
- The MEL team will
  - coordinate data collection and reporting for all indicators. The MEL team will work hand-in-hand with research team leaders and project managers and exercise quality control over data including minimizing multiple counting of results.
  - guide on the methodology and lead the development of data collection tools, and exercise data quality control.
  - exercise sole responsibility for the aggregation of indicator values to generate reliable data to monitor progress against the ICARDA strategy.

- Research Team Leaders provide technical inputs on both the details of the indicators (how they are written and planned), and also lead the contribution of their teams to the primary collection and reporting of data.
- Project Managers: These will be responsible to report results mapped to their projects, outputs and outcomes

#### 4.1 Breeding & Scaling Improved Varieties (Breeding)

The Breeding team develops new crop varieties that offer higher, and better-quality yields through improved tolerance and resistance to diseases, insect pests, drought, heat, cold, parasitic weeds, and other stress factors. The breeding team develops climate-smart crops alongside National Agricultural Research Systems country partners and follow CGIAR guidelines. The breeding team will contribute to 10 output indicators, 5 outcome indicators and 1 impact indicator (Table 2).

Table 2: Data collection responsibility for the Breeding team

Indicator	Data source	Data collection approach	Data Collection Frequency/Schedule	Description of data (to be obtained)	Data collection tool	Data repository	Collaborating team(s)
OP-01: Breeding response time to an outbreak	Breeding team	Routine recording	Real-time or monthly	Outbreak name, outbreak description, crop, geographic location, name of germplasm or variety released to national breeders, attributes of germplasm/ variety, duration from outbreak to germplasm/variety release	Excel, Android field book, QBMS	Breeding Data Management System	
	Breeding/ international nurseries system	Desk review	Quarterly		Data collection form developed in Excel	SharePoint	MEL
OP-03: Number of germplasm lines developed and transferred to NARS	Breeding team	Routine recording	Real-time or monthly	Crop, attributes, recipient institution/partner, country	International Nurseries Data Management System	International Nurseries Data Management System	
	Breeding/ international nurseries system	Desk review	Quarterly		Data collection form developed in Excel	SharePoint	MEL
OP-05: Number of innovations developed (/co-developed)	Breeding team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-06: Number of policy and institutional recommendations developed	Breeding team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <small>Error! Bookmark not defined.</small>	Journal articles, policy briefs, outreach products	MEL Platform	
	Journal articles, policy briefs, outreach products	Desk review	Quarterly		Data collection form developed in excel	SharePoint	MEL
OP-07.1: Number of ISI publications	Breeding team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	Breeding team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products <small>Error! Bookmark not defined.</small>	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	Breeding team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc) OP-09.2: Number of PhDs defended  OP-10.1: Number of partner institutions whose personnel participate in individual capacity	Breeding team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	MEL Platform  Data collection form developed in excel	MEL Platform  SharePoint	CDU, MEL



Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
building activities (Bachelors, Masters) OP-10.2: Number of partner institutions whose personnel are supported for PhD studies							
OP-09.3: Number of people participating in non-degree capacity sharing activities  OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities	Breeding team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	Attendance list, MEL Platform, PRMS  Data collection form developed in excel	MEL Platform/ MELSpace, PRMS  SharePoint	CDU, MEL
OP-12.2: Number of knowledge generation partnerships	Breeding team	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform	MEL Platform	MEL
OP-12.3: Number of innovation development partnership	Breeding team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-13: Number of outreach events organized	Breeding team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles  Outreach event reports	Social media  MEL Platform	Communications team, MEL
OC-04: Realized genetic gains in farmer-relevant conditions	Breeding team	Routine recording	Real-time or monthly	Crop, genetic unit (Hybrid, Inbred), stage of testing, market segment, breeding pipeline, trait	Excel, Android field book, QBMS	Breeding Data Management System	MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope,	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, CDU, Country Managers/ conveners
	Breeding team	Routine recording	Quarterly		Data collection form developed in Excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, CDU, Country Managers/ conveners
OC-09: Number of ICARDA-derived climate-resilient varieties released by NARS	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Names of varieties released and attributes	Online survey tool	SharePoint	MEL, SINH, Country Managers/Conveners
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Country Managers/ conveners

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
	Farm households / farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, CDU, Country Managers/ conveners

## 4.2 Capacity Development Unit (CDU)

ICARDA's Capacity Development Unit (CDU) ensures that our innovations are deployed by the communities we work with, and helps national and international organizations and farmers build the capacity to manage their goals. The CDU works alongside national ministries and local authorities, NGOs, global universities, National Agricultural Research Systems, and the private sector. The CDU will contribute to 5 output indicators, 4 outcome indicators and 1 impact indicator (Table 3). It will co-lead the coordination of data collection on capacity development indicators (2 output indicators, and 1 outcome indicator).

Table 3: Data collection responsibility for the CDU team

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-08: Number of studies & assessments conducted	CDU	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
<p>OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc)</p> <p>OP-09.2: Number of PhDs defended</p> <p>OP-10.1: Number of partner institutions whose personnel participate in individual capacity building activities (Bachelors, Masters)</p> <p>OP-10.2: Number of partner institutions whose personnel are supported for PhD studies</p>	CDU	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	MEL Platform Data collection form developed in excel	MEL Platform SharePoint	All research teams, MEL
<p>OP-09.3: Number of people participating in non-degree capacity sharing activities</p> <p>OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities</p>	CDU	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS Data collection form developed in excel	MEL Platform, PRMS SharePoint	MEL
OP-12.2: Number of knowledge generation partnerships	CDU	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform	MEL Platform	MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-13: Number of outreach events organized	CDU	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles Outreach event reports	Social media MEL Platform	Communications team, MEL
OC-03: Number of ICARDA-supported masters and doctor of philosophy students going on to be employed	Alumni of ICARDA-supported individual degree programs	Email survey and key informant interviews	Annually	Student name, university, start date, end date, institution of employment, employment start date, duration of on-going employment contract, nationality, gender, location	Online survey tool	SharePoint	MEL
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners
	CDU	Routine recording	Quarterly		Data collection form developed in Excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, Country

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
				the method or recommendation			Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners
IM-04: Number of people using ICARDA innovations	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners

### 4.3 Communications

The communication team will contribute to 5 output indicators (Table 4).

Table 4: Data collection responsibility for the communications team

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-07.2: Number of outreach products developed	Communications team	Routine recording	Real-time or monthly	Outreach product type, date of publication, authors, institutional affiliation	MEL Platform ICARDA social media handles	MEL Platform Social media	MEL
	ICARDA social media handles	Desk review	Quarterly	Outreach product type, date of publication, authors, institutional affiliation	Data collection form developed in excel	SharePoint	MEL
OP-09.3: Number of people participating in non-degree capacity sharing activities  OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities	Communications team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS  Data collection form developed in excel	MEL Platform, PRMS  SharePoint	MEL
OP-12.2: Number of knowledge generation partnerships	Communications team	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform	MEL Platform	MEL
OP-13: Number of outreach events organized	Communications team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles	Social media	MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
	ICARDA social media handles	Desk review	Quarterly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	Data collection form developed in excel	SharePoint	MEL

#### 4.4 Country Managers/ conveners

Country managers/ conveners will contribute to 8 output indicators, 5 outcome indicators and 1 impact indicator (Table 5).

Table 5: Data collection responsibility for country managers/ conveners

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-04: Quantity of early generation seed produced	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Crop, variety, quantity produced	Online survey tool	SharePoint	MEL, SINH
OP-06: Number of policy and institutional recommendations developed	All research team members in country of responsibility	Key informant interviews (with ICARDA teams in country of responsibility)	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products	Data collection form developed in excel	SharePoint	MEL
OP-07.2: Number of outreach products developed	Country managers & conveners	Routine recording	Real-time or monthly	Outreach product type, outreach event title, outreach event date	Country coordination reports MEL Platform	SharePoint MEL Platform	MEL



Indicator	Data source	Data Collection Approach	Data Collection Frequency/schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
	Country coordination reports	Desk review	Quarterly	Outreach product type, outreach event title, outreach event date	Data collection form developed in excel	SharePoint	MEL
OP-08: Number of studies & assessments conducted	Country managers & conveners	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.3: Number of people participating in non-degree capacity sharing activities	Country managers & conveners	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS	MEL Platform, PRMS	MEL
OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities					Data collection form developed in excel	SharePoint	
OP-12.2: Number of knowledge generation partnerships	Country managers & conveners	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform	MEL Platform	MEL
OP-13: Number of outreach events organized	In-country research teams	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	Country coordination reports	SharePoint	MEL
	Country coordination reports	Desk review	Quarterly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	Data collection form developed in excel	SharePoint	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU
	Country Managers	Routine recording	Quarterly		Data collection form developed in excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU
OC-09: Number of ICARDA-derived climate-resilient varieties released by NARS	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Names of varieties released and attributes	Online survey tool	SharePoint	MEL, SINH, Breeding

Indicator	Data source	Data Collection Approach	Data Collection Frequency/schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OC-11: Quantity of certified and quality-declared seed produced by public and private seed sector partners	Seed companies	Email survey and key informant interviews	Semi-annually	Quantity of certified seed produced by seed companies	Online survey tool	SharePoint	MEL, SINH
	Community seed enterprises/ Farmer groups	Email survey and key informant interviews	Semi-annually	Quantity of quality-declared seed produced by community seed enterprises/farmer groups	Online survey tool	SharePoint	MEL, SINH
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding
	Farm households/ farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding
	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, GRS, Breeding

## 4.5 Finance and PGU

The finance team and the PGU will contribute to 1 output indicator and 2 outcome indicators (Table 6).

Table 6: Data collection responsibility for the Finance and PGU team(s)

Indicator	Data source	Data collection approach	Data Collection Frequency/schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-12.1: Number of partnership agreements signed or renewed	PGU	Routine recording	Real-time or monthly	Agreement number, partners, monetary value	Finance system (OCS)	Finance system (OCS)	MEL
OC-01: Value of investment in ICARDA agrifood systems research	Finance team	Routine recording	Real-time or monthly	Donor, amount received, disbursement date	Finance system (OCS)	Finance system (OCS)	MEL
OC-02: Total budget	Finance team	Routine recording	Real-time or monthly	Amount spent, BUS, project/program, country	Finance system (OCS)	Finance system (OCS)	MEL

## 4.6 Genetic Resources, Conservation, Characterization & Use (GRS)

The GRS Team plays a crucial global role in conservation and use of dryland genetic resources, making ICARDA a center of excellence for capacity building and technical support on all aspects related to conservation and sustainable use of dryland agro-biodiversity. Core activities include developing and applying best practices for acquisition, pre-breeding, regeneration, conservation, distribution and documentation of genetic resources. The GRS team will contribute towards 10 output indicators, 4 outcome indicators and 1 impact indicator (Table 7).

Table 7: Data collection responsibility for GRS team

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-02: Number of trait-specific subsets developed and made available	GRS team	Routine recording	Real-time or monthly	Crop, count of trait-specific subsets developed	GRS database/ Genesys	GRS database/ Genesys	
	GRS database/ Genesys	Desk review	Quarterly		Data collection form	SharePoint	MEL
OP-05: Number of innovations developed (/co-developed)	GRS team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-06: Number of policy and institutional recommendations developed	GRS team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Journal articles, policy briefs, outreach products	MEL Platform	MEL
	Journal articles, policy briefs, outreach products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Data collection form developed in excel	SharePoint	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-07.1: Number of ISI publications	GRS team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	GRS team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products <small>Error! Bookmark not defined.</small>	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	GRS team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc) OP-09.2: Number of PhDs defended  OP-10.1: Number of partner institutions whose personnel participate in individual capacity building activities (Bachelors, Masters)	GRS team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	MEL Platform  Data collection form developed in excel	MEL Platform  SharePoint	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-10.2: Number of partner institutions whose personnel are supported for PhD studies							
OP-09.3: Number of people participating in non-degree capacity sharing activities  OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities	GRS team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS  Data collection form developed in excel	MEL Platform, PRMS  SharePoint	MEL
OP-11: Number of accessions added to Genebank	GRS team	Routine recording	Real-time or monthly	Crop, accession identifier, date added to genebank	GRS database/ Genesys	GRS database/ Genesys	
	GRS team	Desk review	Quarterly		Data collection form developed in excel	SharePoint	MEL
OP-12.2: Number of knowledge generation partnerships	GRS team	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform	MEL Platform	MEL
OP-12.3: Number of innovation development partnership	GRS team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-13: Number of outreach events organized	GRS team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation,	ICARDA social media handles  Outreach event reports	Social media  MEL Platform	Communications team, MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
				designation), event date			
OC-05: Number of accessions accessed	GRS team	Routine recording	Real-time or monthly	Crop, species, biological status, recipient typology, country, user category	GRS database/ Genesys	GRS database/ Genesys	
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, Breeding, CDU, Country Managers/ conveners
	GRS team	Routine recording	Quarterly		Data collection form developed in excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, Breeding, CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GeoAgro, Breeding, CDU, Country



Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
							Managers/ conveners
IM-05: Number of plant genetic accessions available and safely duplicated	GRS team	Routine recording	Real-time or monthly	Crop, number of accessions	GRS database/ Genesys	GRS database/ Genesys	

#### 4.7 Geo BigData Driven Digital Augmentation for Sustainable Agro-Ecosystems (GeoAgro)

The GeoAgro Team combines geoinformatics, big data, climate change modelling, mapping farming systems dynamics, and citizen science, to support and accelerate research for development for sustainable agroecosystem solutions that ensure food, nutrition, and ecological security and better livelihoods in the dry areas. The GeoAgro team will contribute to 8 output indicators, 3 outcome indicators and 1 impact indicator (Table 8).

Table 8: Data collection responsibility for GeoAgro team

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-05: Number of innovations developed (/co-developed)	GeoAgro team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-06: Number of policy and institutional recommendations developed	GeoAgro team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Journal articles, policy briefs, outreach products	MEL Platform	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
	Journal articles, policy briefs, outreach products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Data collection form developed in excel	SharePoint	MEL
OP-07.1: Number of ISI publications	GeoAgro team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	GeoAgro team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products <sup>Error! Bookmark not defined.</sup>	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	GeoAgro team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc) OP-09.2: Number of PhDs defended  OP-10.1: Number of partner institutions whose personnel participate in individual	GeoAgro team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	MEL Platform  Data collection form developed in excel	MEL Platform  SharePoint	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
capacity building activities (Bachelors, Masters) OP-10.2: Number of partner institutions whose personnel are supported for PhD studies							
OP-09.3: Number of people participating in non-degree capacity sharing activities  OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities	GeoAgro team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS  Data collection form developed in excel	MEL Platform, PRMS  SharePoint	MEL
OP-12.2: Number of knowledge generation partnerships	GeoAgro team	Routine recording	Real-time or monthly	Number of partner institutions to whom co-authors of knowledge products are affiliated	MEL Platform, PRMS	MEL Platform, PRMS	MEL
OP-12.3: Number of innovation development partnership	GeoAgro team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	
OP-13: Number of outreach events organized	GeoAgro team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles  Outreach event reports	Social media  MEL Platform	Communications team, MEL
OC-06: Number of new or significantly updated policies, strategies, legal	Staff of partner	Email survey and key	Semi-annually	Title and description of policy, strategy, legal instrument, program,	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GRS,

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	research institutions	informant interviews		budget or investment; geographic scope			Breeding, CDU, Country Managers/ conveners
	GeoAgro team	Routine recording	Quarterly		Data collection form developed in excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GRS, Breeding, CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GRS, Breeding, CDU, Country Managers/ conveners
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, RASPS, GRS, Breeding, Country Managers/ conveners

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SINH, SWA, SEP, RASPS, GRS, Breeding, Country Managers/ conveners
	Farm households/ farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	MEL, SINH, SWA, SEP, RASPS, GRS, Breeding, Country Managers/ conveners

#### 4.8 Monitoring, Evaluation & Learning (MEL)

Besides the overarching role of the MEL team coordinating and performing oversight/quality control of the entire data collection and reporting, the MEL team will be responsible to report results from the team's work. The MEL team will contribute to 7 output indicators and 1 outcome indicator (Table 9).

Table 9: Data collection responsibility for the MEL team

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-05: Number of innovations developed (/co-developed)	MEL team	Desk review	Quarterly	Innovations profiled by ICARDA researchers	Data collection form developed in excel	SharePoint	
OP-06: Number of policy and institutional recommendations developed	Journal articles, policy briefs, outreach products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <small>Error! Bookmark not defined.</small>	Data collection form developed in excel	SharePoint	
OP-07.1: Number of ISI publications	MEL team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	
OP-07.3: Number of other information products/ data assets	MEL team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products <small>Error! Bookmark not defined.</small>	MEL Platform	MEL Platform	
OP-08: Number of studies & assessments conducted	MEL team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	
	Minutes of research ethics committee	Desk review	Quarterly	Count of studies and assessments conducted with the approval of the Research Ethics Committee	Data collection form developed in excel	SharePoint	Research Ethics Committee
OP-09.3: Number of people participating in non-degree capacity sharing activities	MEL team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS	MEL Platform, PRMS SharePoint	CDU

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities					Data collection form developed in excel		
OP-12.2: Number of knowledge generation partnerships	MEL team	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform, PRMS	MEL Platform, PRMS	
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email surveys and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	

#### 4.9 Resilient Agro-silvo-pastoral Systems (RASPS)

The Resilient Agro-Silvo-Pastoral Systems (RASPS) team develops integrated innovation packages for livestock-based systems in low rainfall areas to improve livelihoods and increase system resilience. The team conducts research related to small ruminant (sheep and goats) genetics, breeding, feeding and health, dryland forages, rangeland ecology and management and ecosystem restoration. The RASPS team will contribute to 8 output indicators, 5 outcome indicators and 3 impact indicators (Table 10).

Table 10: Data collection responsibility for the RASPS team

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-05: Number of innovations developed (/co-developed)	RASPS team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-06: Number of policy and institutional recommendations developed	RASPS team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products	Policy briefs, presentations, project report and outreach knowledge products	MEL platform	MEL
	Policy briefs, presentations , project report and outreach knowledge products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products	Data collection form developed in excel	SharePoint	MEL
OP-07.1: Number of ISI publications	RASPS team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	RASPS team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	RASPS team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.1: Number of people supported through	RASPS team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR	MEL Platform	MEL Platform	CDU, MEL



Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
<p>individual capacity building activities (Bachelors, MSc) OP-09.2: Number of PhDs defended</p> <p>OP-10.1: Number of partner institutions whose personnel participate in individual capacity building activities (Bachelors, Masters) OP-10.2: Number of partner institutions whose personnel are supported for PhD studies</p>				PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	Data collection form developed in excel	SharePoint	
<p>OP-09.3: Number of people participating in non-degree capacity sharing activities</p> <p>OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities</p>	RASPS team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS  Data collection form developed in excel	MEL Platform, PRMS  SharePoint	CDU, MEL
OP-12.2: Number of knowledge generation partnerships	RASPS team	Routine recording	Real-time or monthly	Number of partner institutions to whom co-authors of knowledge products are affiliated	MEL Platform, PRMS	MEL Platform, PRMS	MEL
OP-12.3: Number of innovation development partnership	RASPS team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS	MEL

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
						WOCAT database	
OP-13: Number of outreach events organized	RASPS team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles Outreach event reports	Social media MEL Platform	Communications team, MEL
OC-04: Realized genetic gains in farmer-relevant conditions	RASPS team	Routine recording	Quarterly	Livestock, genetic unit (Hybrid, Inbred), trait	Data collection form developed in Excel	SharePoint	MEL
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email surveys and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
	RASPS team	Routine recording	Quarterly		Data collection forms developed in excel	SharePoint	
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email surveys and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email surveys and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, GeoAgro, GRS, Breeding, CDU, Country

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
							Managers/ conveners
OC-12: Percent change in productivity of ICARDA-mandate crops, forages and livestock	Farm households/ farms	Field survey	Annually	Farming system, crop or livestock produced, total production, total inputs (e.g cultivation area, herd size etc)	Household questionnaire	SharePoint	MEL, SINH, SEP
IM-01: Number of people with improved income	Valuechain actors	Field survey	Annually	Household size, total household income, income from ICARDA-promoted innovation	Value chain actors questionnaire	SharePoint	MEL, SEP, SWA
	Farm households/ farms	Field survey	Annually	Household size, total household income, income from ICARDA-promoted innovation	Household questionnaire	SharePoint	MEL
IM-02: Area of land under improved management	Geographic information system (GIS)	ArcGIS  Data collection form developed in excel	Semi-annually	Area under improved varieties & agronomic practices Area under improved water management Area under improved ecosystem management models	ArcGIS  Data collection form developed in excel	SharePoint	MEL, SINH, SWA, GeoAgro, SEP
	Farm households/ farms	Field survey	Annually	Description of improved variety, agronomic practice, water management practice, or improved ecosystem management model. Area under improved varieties & agronomic practices.	Annually	Household questionnaire	MEL, SINH, SWA, GeoAgro, SEP

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
				Area under improved water management practices. Area under improved ecosystem management models.			
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email surveys and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SINH, SWA, SEP, GeoAgro, GRS, Breeding, Country Managers/ conveners
	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SINH, SWA, SEP, GeoAgro, GRS, Breeding, Country Managers/ conveners
	Farm households/ farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	MEL, SINH, SWA, SEP, GeoAgro, GRS, Breeding, Country Managers/ conveners

#### 4.10 Research Ethics Committee

The Research Ethics Committee will be a focal point for reporting research studies for which ethical approval has been sought and/or granted, contributing to reporting of indicator OP-08 (Table 11).

Table 11: Data collection responsibility for the Research Ethics Committee

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-08: Number of studies & assessments conducted	Research ethics committee	Routine recording	Real-time or monthly	Count of studies and assessments for which ethical approval has been granted	Minutes of research ethics committee	SharePoint	
	Minutes of research ethics committee	Desk review	Quarterly	Count of studies and assessments conducted with the approval of the Research Ethics Committee	Data collection form developed in excel	SharePoint	MEL team

#### 4.11 Social Economy and Policy (SEP)

The Social, Economy and Policy (SEP) team plays a crucial role in analyzing the adoption of ICARDA’s innovations and their impact on poverty alleviation, food security, systems resilience and social inclusiveness. The team also works on innovative solutions for more inclusive markets and value chains, natural resource management governance, context-sensitive targeting and scaling of sustainable land and livestock management options and gender transformative approaches. The SEP team will contribute to 8 output indicators, 4 outcome indicators and 1 impact indicator (Table 12).

Table 12: Data collection responsibility for the SEP team

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-05: Number of innovations developed (/co-developed)	SEP team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-06: Number of policy and institutional recommendations developed	SEP team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Journal articles, policy briefs, outreach products	MEL Platform	MEL
	Journal articles, policy briefs, outreach products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Data collection form developed in excel	SharePoint	MEL
OP-07.1: Number of ISI publications	SEP team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	SEP team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products <sup>Error! Bookmark not defined.</sup>	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	SEP team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc) OP-09.2: Number of PhDs defended	SEP team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	MEL Platform  Data collection form developed in excel	MEL Platform  SharePoint	CDU, MEL

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-10.1: Number of partner institutions whose personnel participate in individual capacity building activities (Bachelors, Masters) OP-10.2: Number of partner institutions whose personnel are supported for PhD studies							
OP-09.3: Number of people participating in non-degree capacity sharing activities  OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities	SEP team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	MEL Platform, PRMS	MEL Platform, PRMS	CDU, MEL
OP-12.2: Number of knowledge generation partnerships	SEP team	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform, PRMS	MEL Platform, PRMS	MEL
OP-12.3: Number of innovation development partnership	SEP team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-13: Number of outreach events organized	SEP team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles	Social media  MEL Platform	Communications team, MEL

Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
					Outreach event reports		
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SINH, SWA, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
	SEP team	Routine recording	Quarterly		Data collection form developed in excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SWA, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SWA, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
OC-10: Change in Weighted average varietal age in famers' fields	Farm households/ farms	Field survey	Annually	Crop area under cultivation of various crop varieties	Household questionnaire	SharePoint	MEL, SINH, Country Managers/ conveners



Indicator	Data Source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SINH, SWA, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners
	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SINH, SWA, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
	Farm households/ farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	MEL, SINH, SWA, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners

#### 4.12 Seed Systems, International Nurseries & Seed Health (SINH)

The SINH aims at developing a functional pluralistic and inclusive seed system operating across ‘open-borders’ for easy movement of varieties and seeds. It is involved in diverse and broad range of activities that collectively addresses seed system constraints working in an integrated holistic approach with emphasis on emerging challenges in seed sector development. The SINH team will contribute to 9 output indicators, 7 outcome indicators and 2 impact indicators (Table 13).

Table 13: Data collection responsibility for the SINH team

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-04: Quantity of early generation seed produced	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Crop, variety, quantity produced	Online survey tool	SharePoint	MEL
OP-05: Number of innovations developed (/co-developed)	SINH team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-06: Number of policy and institutional recommendations developed	SINH team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products	Policy briefs, presentations, project report and outreach knowledge products	MEL platform	MEL
	Journal articles, policy briefs, outreach products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <small>Error! Bookmark not defined.</small>	Data collection form developed in excel	SharePoint	MEL
OP-07.1: Number of ISI publications	SINH team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	SINH team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	SINH team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or	Data collection form developed in excel	SharePoint	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
				in which ICARDA research teams are involved			
<p>OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc)</p> <p>OP-09.2: Number of PhDs defended</p> <p>OP-10.1: Number of partner institutions whose personnel participate in individual capacity building activities (Bachelors, Masters)</p> <p>OP-10.2: Number of partner institutions whose personnel are supported for PhD studies</p>	SINH team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc or PhD studentship. Data includes names, university, scientific coordinator, contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location	MEL Platform  Data collection form developed in excel	MEL Platform  SharePoint	CDU, MEL
OP-09.3: Number of people participating in non-degree capacity sharing activities	SINH team	Routine recording	Real-time or monthly	List of internships, individual non-degree, group trainings, conference/workshop participants	MEL Platform, PRMS	MEL Platform, PRMS	CDU, MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities							
OP-12.2: Number of knowledge generation partnerships	SINH team	Routine recording	Real-time or monthly	Number of partner institutions to whom co-authors of knowledge products are affiliated	MEL Platform	MEL Platform	MEL
OP-12.3: Number of innovation development partnership	SINH team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-13: Number of outreach events organized	SINH team	Routine recording	Real-time or monthly	Location, target audience/attendance list (gender, institutional affiliation, designation), event date	ICARDA social media handles  Outreach event reports	Social media  MEL Platform	Communications team, MEL
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
	SINH team	Routine recording	Quarterly		Data collection form developed in excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed	Staff of partner	Email survey and key	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product,	Online survey tool	SharePoint	MEL, SWA, SEP, RASPS, GeoAgro, GRS, Breeding,

Indicator	Data source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
methods and recommendations	research institutions	informant interviews		institution using the method or recommendation			CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
OC-09: Number of ICARDA-derived climate-resilient varieties released by NARS	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Names of varieties released and attributes	Online survey tool	SharePoint	MEL, Breeding, SINH
OC-10: Change in Weighted average varietal age in famers' fields	Farm households / farms	Field survey	Annually	Crop area under cultivation of various crop varieties	Household questionnaire	SharePoint	MEL, SEP, SINH, Country Managers/ conveners
OC-11: Quantity of certified and quality-declared seed produced by public and private seed sector partners	Seed companies	Email survey and key informant interviews	Semi-annually	Quantity of certified seed produced by seed companies	Online survey tool	SharePoint	MEL
	Community seed enterprises/ Farmer groups	Email survey and key informant interviews	Semi-annually	Quantity of quality-declared seed produced by community seed enterprises/farmer groups	Online survey tool	SharePoint	MEL

Indicator	Data source	Data Collection Approach	Data Collection Frequency/Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OC-12: Percent change in productivity of ICARDA-mandate crops, forages and livestock	Farm households / farms	Field survey	Annually	Farming system, crop or livestock produced, total production, total inputs (e.g cultivation area, herd size etc)	Household questionnaire	SharePoint	MEL, SEP, RASPS
IM-02: Area of land under improved management	Geographic information system (GIS)	GIS & remote-sensing	Semi-annually	Area under improved varieties & agronomic practices Area under improved water management Area under improved ecosystem management models	ArcGIS  Data collection form developed in excel	SharePoint	MEL, SWA, GeoAgro, SEP, RASPS
	Farm households / farms	Field survey	Annually	Area under improved varieties & agronomic practices Area under improved water management Area under improved ecosystem management models	Household questionnaire	SharePoint	MEL, SWA, GeoAgro, SEP, RASPS
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners
	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country

Indicator	Data source	Data Collection Approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
							Managers/ conveners
	Farm households / farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	MEL, SWA, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners

### 4.13 Soil, Water, Agronomy (SWA)

The SWA Team conducts research to build resilience and sustainably improve water productivity of rainfed and irrigated production systems in dry areas. We work to diversify and intensify these systems in the face of changing climate by combining soil health management techniques, water-saving technologies, and agronomic practices into contextualized solutions for impact at scale. The SWA team will contribute to 8 output indicators, 4 outcome indicators and 4 impact indicators (Table 14).

Table 14: Data collection responsibility for the SWA team

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-05: Number of innovations developed (/co-developed)	SWA team	Routine recording	Real-time or monthly	Innovations profiled by ICARDA researchers	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OP-06: Number of policy and institutional recommendations developed	SWA team	Routine recording	Real-time or monthly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Journal articles, policy briefs, outreach products	MEL Platform	MEL
	Journal articles, policy briefs, outreach products	Desk review	Quarterly	Count of policy and institutional recommendations made by ICARDA researchers in policy briefs, presentations, and outreach knowledge products <sup>Error! Bookmark not defined.</sup>	Data collection form developed in excel	SharePoint	MEL
OP-07.1: Number of ISI publications	SWA team	Routine recording	Real-time or monthly	Journal articles published in ISI journals	MEL Platform	MEL Platform	MEL
OP-07.3: Number of other information products/ data assets	SWA team	Routine recording	Real-time or monthly	All knowledge products other than ISI journals and outreach products <sup>Error! Bookmark not defined.</sup>	MEL Platform	MEL Platform	MEL
OP-08: Number of studies & assessments conducted	SWA team	Routine recording	Real-time or monthly	Count of studies and assessments conducted by or in which ICARDA research teams are involved	Data collection form developed in excel	SharePoint	MEL
OP-09.1: Number of people supported through individual capacity building activities (Bachelors, MSc)	SWA team	Routine recording	Real-time or monthly	List of on-going and completed BSc and MSc OR PhD studentship. Data includes names, university, scientific coordinator,	MEL Platform  Data collection form developed in excel	MEL Platform  SharePoint	CDU, MEL



Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be obtained)	Data collection tool	Data repository	Collaborating team(s)
<p>OP-09.2: Number of PhDs defended</p> <p>OP-10.1: Number of partner institutions whose personnel participate in individual capacity building activities (Bachelors, Masters)</p> <p>OP-10.2: Number of partner institutions whose personnel are supported for PhD studies</p>				contact information (email), start date, end date, <i>institutional affiliation</i> , nationality, gender, location			
<p>OP-09.3: Number of people participating in non-degree capacity sharing activities</p> <p>OP-10.3: Number of partner institutions whose personnel participate in non-degree capacity sharing activities</p>	SWA team	Routine recording	Real-time or monthly	List of internships, group trainings, conference/workshop participants	Attendance list, MEL Platform, PRMS	MEL Platform, PRMS	CDU, MEL
OP-12.2: Number of knowledge generation partnerships	SWA team	Routine recording	Real-time or monthly	Partners listed in metadata of knowledge products uploaded in the MEL Platform	MEL Platform	MEL Platform	MEL
OP-12.3: Number of innovation development partnership	SWA team	Routine recording	Real-time or monthly	Partners listed as contributing to profiled innovations	MEL Platform PRMS WOCAT database	MEL Platform PRMS WOCAT database	MEL
OP-13: Number of outreach events organized	SWA team	Routine recording	Real-time or monthly	Location, target audience/attendance list	ICARDA social media handles	Social media	Communications team, MEL

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
				(gender, institutional affiliation, designation), event date	Outreach event reports	MEL Platform	
OC-06: Number of new or significantly updated policies, strategies, legal instruments, programs, budgets, or investments, partially or wholly informed by ICARDA research	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of policy, strategy, legal instrument, program, budget or investment; geographic scope	Online survey tool	SharePoint	MEL, SINH, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
	SWA team	Routine recording	Quarterly		Data collection form developed in excel	SharePoint	MEL
OC-07: Number of institutions using ICARDA-developed methods and recommendations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Title and description of method or recommendation, link to ICARDA knowledge product, institution using the method or recommendation	Online survey tool	SharePoint	MEL, SINH, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners
OC-08: Number of innovations (supported by ICARDA) being used by next users	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, innovation type, description of innovation, partners using the innovation	Online survey tool	SharePoint	MEL, SINH, SEP, RASPS, GeoAgro, GRS, Breeding, CDU, Country Managers/ conveners

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
OC-13: Percent change in energy-use efficiency	Farm households/ farms	Field survey	Annually	Farming system, total production of crop and/or livestock or cultivation area, total energy used in production	Household questionnaire	SharePoint	MEL, SEP
IM-01: Number of people with improved income	Valuechain actors	Field survey	Annually	Household size, total household income, income from ICARDA-promoted innovation	Value chain actors questionnaire	SharePoint	MEL, SEP, RASPS
	Farm households/ farms	Field survey	Annually	Household size, total household income, income from ICARDA-promoted innovation	Household questionnaire	SharePoint	MEL
IM-02: Area of land under improved management	Geographic information system (GIS)	GIS & remote-sensing	Semi-annually	Area under improved varieties & agronomic practices Area under improved water management Area under improved ecosystem management models	ArcGIS  Data collection form developed in excel	SharePoint	MEL, SINH, GeoAgro, SEP, RASPS
	Farm households/ farms	Field survey	Annually	Description of improved variety, agronomic practice, water management practice, or improved ecosystem management model. Area under improved varieties & agronomic practices.	Household questionnaire	SharePoint	MEL, SINH, GeoAgro, SEP, RASPS

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be) obtained	Data collection tool	Data repository	Collaborating team(s)
				Area under improved water management practices. Area under improved ecosystem management models.			
IM-03: Percent change in water productivity	Weather stations	Email survey and key informant interviews	Annually	Rainfall data	Online survey tool	SharePoint	MEL, Country Managers/ Conveners
	Farm households/ farms	Field survey	Annually	Quantity of water supplied or used, monetary value of a unit of water, crop and/or livestock production for the period, monetary value of the crop and/or livestock produced	Household questionnaire	SharePoint	MEL, SEP, RASPS
IM-04: Number of people using ICARDA innovations	Staff of partner research institutions	Email survey and key informant interviews	Semi-annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Online survey tool	SharePoint	MEL, SINH, SEP, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners
	Valuechain actors	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Value chain actors questionnaire	SharePoint	MEL, SINH, SEP, RASPS, GeoAgro, GRS, Breeding, Country

Indicator	Data source	Data collection approach	Data Collection Frequency/ Schedule	Description of data (to be obtained)	Data collection tool	Data repository	Collaborating team(s)
	Farm households/ farms	Field survey	Annually	Innovation title, description of innovation, number of people using the innovation, geographic location	Household questionnaire	SharePoint	Managers/ conveners  MEL, SINH, SEP, RASPS, GeoAgro, GRS, Breeding, Country Managers/ conveners

## 5.0 Conclusion and Recommendations

Given the DDGR's aim to increase the focus of research teams on RBM, we propose modification of the country coordination reports and research team leader reports to explicitly include reporting on (relevant) ICARDA indicators.

The DG and Director of Finance and Administration to include in the staff performance appraisal forms the contribution of senior research team leaders to policy, i.e number of policy and institutional recommendations made. HR and MEL work data sharing modalities to utilise this data for indicators reporting without compromising the confidentiality of the performance appraisal.

The MEL team's role in reviewing proposals needs to be strengthened. By developing a rubric that mandates certain M&E tools and frameworks with incremental complexity based on grant amount. For example, all project's with budget in the 2<sup>nd</sup> quartile of project budgets can be required to have a logical framework, projects in the 3<sup>rd</sup> quartile of project budgets can be required to have both a logical framework and a theory of change; and then projects in the 4<sup>th</sup> quartile have the later and in addition to develop an elaborate MEL Plan at project inception and a project MEL Officer/focal point co-supervised by a member of the ICARDA MEL team. The MEL Officer continuously oversees the implementation of MEL activities and contribute to/review the project donor report, leveraging relevant data for institutional reporting.

ICARDA proactively looks for funding for surveys to collect indicators data on outcome and impact results (e.g people moved out of poverty or with improved incomes; area of land under improved management, average varietal age on farmers' fields e.t.c), with the major unit of analysis being the country program, and utilising the innovations disseminated in the country. The estimated budget for these studies is around USD 25,000 per country program per year or every two years. A pilot with 2 country programs can be planned in 2025.

For the successful implementation of the reporting process, there is need for convergence of data from all data collection approaches and data repositories to one system. The MEL platform is the system of choice for this task being an interoperable system with others in use e.g PRMS, OCS. The indicators will be recorded at the highest planning level and retrieved/linked at subordinate result levels and mapped projects.