

Global Monitoring & Evaluation Framework of the EU-funded initiative “Development Smart Innovation through Research in Agriculture” (DeSIRA) - Methodology-

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Table of Contents

ACRONYMS	ERROR! BOOKMARK NOT DEFINED. 2
EXECUTIVE SUMMARY	3
INTRODUCTION	5
HOW THE GLOBAL DESIRA MONITORING AND EVALUATION FRAMEWORK WAS BUILT	6
Step 1 - Identification of common project-level results and extraction of corresponding indicators.....	6
Step 2 - Comparison of selected project indicators and formulation of Global DeSIRA Indicators	7
Step 3 – Alignment of projects with the Global DeSIRA M&E framework by establishing links.....	9
Step 4 – Development of the global DeSIRA logframe matrix	13
DESCRIPTION AND FUNCTIONING OF THE GLOBAL MONITORING & EVALUATION FRAMEWORK....	14
The Global DeSIRA Indicators	14
Global DeSIRA Indicators and EU Result Framework Indicators	14
Attributing a value to a Global DeSIRA Indicator	16
Description of the content of the Excel file underpinning the global M&E framework	22 21
Annual data collection process and sources of verification for the Global DeSIRA Indicator values.....	22 21
RESULT REPORTING FORMAT FOR THE GLOBAL ANNUAL REPORT OF THE DESIRA INITIATIVE	25 24
THE GLOBAL DESIRA LOGFRAME MATRIX – VERSION 1 - NOVEMBER 2022	27 26

List of tables

Table 1 – Comparison of selected project indicators, examples of formulation of Global DeSIRA Indicators .	7
Table 2 - Situation A/ Examples of DIRECT LINKS	10
Table 3 - Situation B/ Examples of COMPATIBLE LINKS	10
Table 4 - Situation C/ Examples of IMPLICIT LINKS	11
Table 5 - Number of links between DeSIRA projects (contracts signed in 2019) and the global DeSIRA M&E framework as at November 2022.....	12
Table 6 - Correspondence between EURF Indicators and Global DeSIRA Indicators	15
Table 7 - Number of DeSIRA projects (based on contracts signed in 2019), which can potentially inform Global DeSIRA Indicators as at November 2022	16
Table 8 - Example 1 - Attributing a value to a GDI via a DIRECT LINK	1918
Table 9 - Example 2 - Attributing a value to a GDI via a COMPATIBLE LINK.....	2019
Table 10 - Example 3 - Attributing a value to a GDI via a COMPATIBLE LINK.....	2120
Table 11 - Example 4 - Attributing a value to a GDI via an IMPLICIT LINK.....	2120
Table 12 - DeSIRA PROJECTS – START MONTH/YEAR as at January 2022	2322
Table 13 - How to read the summary of values for the GDIs attached to a result at initiative level.....	2524
Table 14 – Format for the overview of a DeSIRA project’s contribution to a specified result at initiative level	2625

List of figures

Figure 1 - Examples of links between a DeSIRA project result and the global M&E framework	9
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Acronyms

AD	Action Document
ASRAFS	Advisory Services for Resilient Agri-Food Systems
CAADP	Comprehensive Africa Agriculture Development Programme
DG-INTPA	Directorate-General for International Partnerships of the European Commission
DeSIRA	Development Smart Innovation through Research in Agriculture
DeSIRA-LIFT	Leveraging the DeSIRA Initiative for Agri-Food Systems Transformation
EURF	EU Result Framework
FAO	Food and Agriculture Organisation
GERF	Global Europe Results Framework
GDI	Global DeSIRA Indicator
IPs	Implementing Partners
LFM	Logical Framework Matrix (or Logframe matrix)
M&E	Monitoring & Evaluation
RACER	Relevant, Acceptable, Credible, Easy and Robust
SDG	Sustainable Development Goal
V1	Version 1 (of the global logframe matrix)

Executive summary

The EU-funded « Development Smart Innovation through Research in Agriculture » (DeSIRA) initiative aims at contributing to the climate-relevant, productive, and sustainable transformation of agriculture and food systems in low and middle-income countries. The Directorate-General for International Partnerships of the European Commission (DG INTPA) has designed, and is implementing, a global Monitoring and Evaluation (M&E) framework to steer and monitor the DeSIRA initiative, to determine the extent to which its overarching objectives are being achieved, and to report and communicate more efficiently on new approaches to agricultural innovation and research. This methodological document explains how the global M&E framework of DeSIRA was built, how it functions, and its limitations. Underpinned by a LogFrame Matrix (LFM) and Global DeSIRA Indicators (GDIs), the global M&E framework is a tool supporting INTPA with the identification of relevant GDIs, the tracking of data to inform those indicators, and the reporting on progress towards stated goals and objectives captured by the GDIs. It does not pretend to reflect the diversity of projects or the complexity of innovation processes but rather to provide an overarching results framework for the DeSIRA initiative. Not mandatory at project level, GDIs are not meant to substitute existing indicators or to support project-level monitoring processes. They build on existing and approved project indicators and were selected on the basis of their relevance to the DeSIRA initiative as a whole, and the availability of data at project level. Formulating and defining a GDI entailed a bottom-up process of comparison, analysis and synthesis of project indicators, leading to a simple, consensual, global indicator which several projects -but not necessarily all projects- can relate to and inform on, without any need for additional data collection by the implementing partners. Furthermore, GDIs have been designed in a way that minimizes the amount of calculation and consolidation needed to inform and update them.

Each project is related to the global M&E framework through a specified number of links, aimed at capturing those of its results that contribute to expected results at initiative (DeSIRA) level. A link is a relationship that connects a project result -explicit or implicit- to a GDI. It may be based on one or several project indicators, in which case the link can be either “direct” or “compatible”, which determines whether the attribution of a value to the GDI is a straightforward process (direct link) or requires further analysis and calculation (compatible link). A link can also be established between a DeSIRA project result and a GDI in the absence of a project indicator (implicit link), as long as the Implementing Partner confirms that project activities contribute to the global-level expected result to which this GDI is attached. Project indicators that do not inform any GDI are not involved in any link. The number of links between a given project and the set of GDIs is an indication of the extent to which a particular project is aligned with the global M&E framework. As project LogFrame Matrices (LMFs) and indicators are improved, links can be modified, added or cancelled.

Despite an atypical development process, mostly focused on building GDIs to capture already agreed project-level results/indicators rather than first formulating expected results at global (initiative) level and then developing indicators, the global LFM strives to propose a coherent results chain with corresponding GDIs that are relevant to the result they intend to capture. However, the formulation of GDIs based on the identification of common project-level results and attached indicators leaves gaps in the global results chain, especially at impact level. This was mitigated by developing impact GDIs aimed at better reflecting and encouraging projects to pursue the long-term, higher-level objectives of the DeSIRA initiative. In addition, meta-indicators -counting projects having achieved a specified explicit or implicit result- have been developed to capture strictly qualitative information or more complex quantitative project data.

As of November 2022, Version 1 of the global DeSIRA LFM is comprised of 28 key (or core) GDIs: 7 impact indicators, 13 indicators attached to 4 outcomes and 8 indicators attached to 6 outputs. Each project informs several GDIs and each GDI is informed by several projects. The monitoring exercise conducted with 25 projects started in 2019 and early 2020 has demonstrated that each project can inform between 13 to 29 GDIs (corresponding to the number of links between a given project and the global M&E framework), except for one project. Conversely, the majority of GDIs can be informed by at least 9 projects. Attributing a value to a GDI is part of the global monitoring exercise. This is not always a straightforward process. It often requires the perspective of the Implementing Partner (IP) and, sometimes, a judgment call from the monitoring expert designing and implementing the global M&E framework on behalf of DG INTPA. Besides, data quality at global level depends on data quality at project level. An Excel file underpins the global M&E

DeSIRA framework, as well as the annual data collection process. It incorporates a detailed definition for each GDI as well as a full description of each link for each project. It also connects GDIs to the EU Results Framework indicators. A reporting format for the Annual Global Report of the DeSIRA initiative has also been proposed. Based on an analysis of the start date of the current 75 DeSIRA projects/interventions, the optimal period of the year to collect data for the global annual reporting is between February and May.

Introduction¹

About the DeSIRA Initiative. The overall objective of the EU-funded « Development Smart Innovation through Research in Agriculture » (DeSIRA) initiative is to contribute to the climate-relevant, productive and sustainable transformation of agriculture and food systems in low and middle-income countries. DeSIRA aims at supporting research and innovation projects in Africa, Asia and Latin America, and strengthening research capacities and governance, involving key actors at national and international levels.

Structure of the DeSIRA initiative and project design. As of 05/01/2022, DeSIRA was comprised of 75 interventions (source DG INTPA/F3), including “SUPPORT TO CAADP AR&EO”, a programme broken down into support to 5 regional or continental African organisations. The interventions are based on three decisions (2018, 2019, 2020) and the corresponding Action Documents (AD), which form the backbone of the DeSIRA initiative. The first projects started in March 2019, and the most recent ones in February 2022. All contribute to the overall objective of DeSIRA. However, DeSIRA is an initiative, not a programme, and all interventions were designed and are managed independently from each other. IPs report to EU Delegations in Africa, Latin America and Asia, except for a few projects directly managed by DG INTPA. Each project has its own theory of change/intervention logic. The intervention logic, LogFrame Matrix (LFM), and indicators that underpin the Monitoring and Evaluation (M&E) framework are specific to each project. The diversity of DeSIRA interventions (in terms of theme, scope and methodology) contributes to a multitude of project-level indicators, whether projects belong to the same thematic cluster or not (e.g. agroecology and sustainable agriculture, livestock management and pastoralism, etc.).

The need for a global M&E framework. The diversity and the stand-alone nature of projects does not facilitate the overall steering/monitoring of the initiative at DG INTPA level. In order to steer and monitor the DeSIRA initiative as a whole and determine the extent to which the overarching objectives of the initiative are being achieved, and to communicate more efficiently internally and externally, there is a need for a global monitoring system, located at DG INTPA/F3, based on a set of indicators related to the implementation of DeSIRA interventions. This document presents the global M&E framework of the DeSIRA initiative, including its LFM and indicators. It explains the approach, guided by INTPA, that underpinned the development of the M&E framework and how it articulates with the LFM and indicators of the various DeSIRA projects. It describes the framework and methodology for the global monitoring process on a yearly basis, with a view to producing an annual progress report that describes and analyses achievements and progress towards the expected results and objectives of the DeSIRA initiative.

How the global M&E framework positions itself vis-à-vis project LFMs and how the global monitoring of the DeSIRA initiative differs from specific support to projects. The global M&E framework identifies and informs on **core indicators** at initiative level, the Global DeSIRA Indicators (GDIs). These are used to monitor the DeSIRA initiative as a whole, and to report to the European Commission, Member States and civil society on new approaches to agricultural innovation and research and their potential impact. The DeSIRA initiative is comprised of a diversity of projects: some are research-oriented, some are more development-oriented, some are strictly institutional. Each project has a unique combination of results (outputs, outcomes, impact) underpinned by a unique intervention logic and summarized in a unique LFM, which the global M&E framework cannot reflect. GDIs do not and cannot account for the diversity of innovation processes at play at field level and between the different project actors. These global indicators, developed by ASRAFS with guidance from INTPA and DeSIRA LIFT (Leveraging the DeSIRA Initiative for Agri-Food Systems Transformation), do not substitute project-level indicators and are not meant to support monitoring processes at project level. Regarding project support, this role strictly falls to DeSIRA LIFT, which has been tasked with improving projects’ ability to do research differently by building on their initial proposal with a view to helping them to specify/refine their intervention logics and improve their LFMs, and by proposing methods and tools to support innovation processes.

¹ In this document, “project” and “intervention” are used as synonyms.

How the global DeSIRA monitoring and evaluation framework was built

Understanding how the global DeSIRA M&E framework was developed is necessary to understand its functioning and limitations. This section presents the guiding principles and key steps behind the development of the framework, including the Global DeSIRA Indicators (GDIs) and the global DeSIRA LogFrame Matrix (LFM).

Bottom-up approach. Given that all DeSIRA projects have their own M&E system and a third of them were already at least two years into implementation when the development of the global M&E framework started, a bottom-up approach was deemed appropriate and pragmatic. Rather than imposing theoretical indicators, which many projects may not be able to report against, the global M&E framework adjusts to, and builds on, existing project-level indicators to develop GDIs and a global LFM.

No-Interference approach. DeSIRA-LIFT is a service facility supporting the DeSIRA Initiative and is aimed - amongst others- at equipping DeSIRA projects with monitoring, evaluation and learning tools and processes, according to their needs and on a demand driven basis. Initial discussions between ASRAFS, D-LIFT and DG-INTPA made it clear that developing an overarching M&E system for the DeSIRA initiative should not interfere with project-level design and monitoring processes: while interacting with IPs, ASRAFS should not comment upon the quality of project LFMs and indicators, and gathering information for the global M&E framework should be based on what is already available at project level, i.e. it should not require any additional data collection by the project team. This was also made clear by ASRAFS to IPs: GDIs are not mandatory at project level; they are not meant to substitute existing project indicators which are needed to reflect the essence and specificities of projects. However, the no-interference approach does not mean the interaction between ASRAFS and IPs is neutral. When exposed to the global M&E system -as they were between February and April 2022- IPs may have been influenced by the choice of indicators at global level and may choose to incorporate some of them into the project LFM, or to align the definition of project indicators with GDIs, as appropriate.

A reasonable number of relevant global indicators. A key challenge when designing the global M&E framework was to keep the number of GDIs at a reasonable level, while reflecting the two dimensions of the DeSIRA initiative (projects largely focused on action-oriented research and innovation with many also having institutional capacity outcomes vs. purely institutional projects), the thematic diversity of the projects (e.g. agroecology and sustainable agriculture, pre-production and technology development, etc.) and the many areas in which results are expected: development of innovations, capacity development, policy advocacy, production of knowledge, multistakeholder approaches, etc. The number of indicators in the 25 LFMs attached to contracts signed in 2019 ranges from 11 (FAREI, TAERA) to 102 (CSARIDE). Most project LFMs have between 15 and 35 indicators. The global DeSIRA M&E framework currently has 28 key (or core) indicators.




Step 1 - Identification of common project-level results and extraction of corresponding indicators

The first step was to closely examine 52 LFMs (25, 18 and 9 LFMs attached to contracts signed respectively in 2019, 2020, 2021). Although there is a multitude and diversity of project indicators, all projects incorporate similar kinds of activities that lead to similar kinds of results: e.g., technologies or systems developed, people trained, information produced (etc.). The focus was therefore placed on what these projects had in common rather than what differentiated them. When the same kind of expected result was found in several LFMs (at impact, outcome or output level) and when it reflected what the DeSIRA initiative is trying to achieve at global level, as per the ADs, the corresponding project indicators were extracted and compared. Indicators, which are strictly activity-related (e.g. number of trainings) or too specific and thus unique to a specified project were left aside. In other words, the selection of indicators for the global DeSIRA M&E framework is mostly based two criteria: relevance to the DeSIRA initiative and availability of data.

Step 2 - Comparison of selected project indicators and formulation of Global DeSIRA Indicators

The existence of commonalities between project results does not mean indicators attached to these results are identical, far from it. The main challenge when designing a GDI stems from the fact that indicators aimed at capturing similar kinds of results across various DeSIRA projects can differ vastly from one another, complicating data aggregation. This is problematic because aggregating data for a specified GDI across projects is needed to measure how these projects are collectively progressing towards the set goal (expected result) captured by that GDI. In practice, project indicators are often too dissimilar to be simply aggregated at global level. Consequently, formulating and defining a GDI entails a process of comparison, analysis and synthesis, leading to a simple, agreed global-level indicator, which several projects can relate to and inform without requiring additional data collection. The table below illustrates this process for two expected results:

Table 1 – Comparison of selected project indicators, examples of formulation of Global DeSIRA Indicators

Expected Result 	Example 1: Change in capacity to sustain livelihoods and/or to address climate-change related shocks at farm level	Example 2: Change in institutional capacity
Examples of indicators at project level (as formulated in logframe matrices) which capture the expected result, as confirmed by Implementing Partners 	Number of farmers that are adversely affected by new food safety regulation and/or climate change (CLIMA-LOCA)	Number of national organisations whose capacity is strengthened...to contribute to the achievement of program objectives and of CAADP (SUPPORT TO CAADP AR&EO)
	Number of dairy farmers who claim to have increased capacity to cope with climate change risks (CSARIDE)	Structures mastering the carbon assessment tools (<i>« Structures maîtrisant les outils du bilan C »</i>) (CASSECS)
	The innovative AEI technical systems implemented by the producers allow them to increase their income (FAIR SAHEL) (<i>« Les systèmes techniques innovant d'IAE mis en place par les producteurs permettent d'augmenter les revenus »</i>)	By the end of the project, research institutions in the 6 countries have strengthened their innovation and research capacities. AGRO INNOVA (<i>« Al finalizar el proyecto las instituciones de investigación de los 6 países han fortalecido sus capacidades en innovación e investigación »</i>)
	Percentage of beneficiaries who are satisfied with the innovations introduced (ACCEPT) (<i>« Pourcentage des bénéficiaires qui sont satisfaits des innovations introduites »</i>)	Percentage completion of investment plans in each of the 3 countries (ABEE) (<i>« Pourcentage de réalisation des plans d'investissement dans chacun des 3 pays »</i>)
Global DeSIRA Indicator, formulated on the basis of project-level indicators 	Number of smallholder farmers who claim socio-economic gains, a positive impact on agroecosystems and/or feel better equipped to cope with climate change-related shocks	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems

Project-level indicators are sourced from project LFM's; when the LFM is not in English, an English translation is proposed for the selected indicator, followed by the original indicator title (in italics).

Example 1: formulation of the Global DeSIRA Indicator “Number of smallholder farmers who claim socio-economic gains, a positive impact on agroecosystems and/or feel better equipped to cope with climate change-related shocks”. Many projects monitor farmers’ income, expecting it to increase as farmers take up innovations, allowing them to better sustain livelihoods in the face of climate-related risks. But projects approach farm income from different angles and use different measurement methodologies. The only common point is that income is expected to increase for a number of small farmers, and it can be a matter of perception in those cases where the project does not have a protocol to measure a quantitative change in farm or household income. Therefore, an income-related GDI was initially envisaged to aggregate the numbers of farmers claiming an increase in income. However, income is only one dimension of the impact expected from innovations taken up by smallholder farmers: 1/ several projects do not intend to measure income changes, focusing instead on improvements on productivity, food security, agroecosystems (etc.); 2/ projects measuring income typically monitor changes in other key areas of impact, such as productivity, capacity to cope with climate-change related shocks (etc.). To avoid counting several times the same farmers who claim multiple benefits, it was decided to have only one main GDI capturing all forms of potential impact at farm level. This GDI is a simplified version of more complex and more diversified project-level indicators.

Example 2: formulation of the Global DeSIRA Indicator “Number of organisations increasing their capacity to innovate in the area of agriculture and food systems”. As compared to Example 1, the process leading to the formulation of the GDI capturing a change in institutional capacity is easier because most project indicators pertain to a “number of institutions”. For those which do not count institutions, a discussion with the IP was needed to confirm that the project indicator does provide evidence of a change in institutional capacity and that the number of strengthened organisations is available (e.g. in the above table, one indicator measures a “percentage completion of investment plans in each of the 3 countries”, with a view to provide evidence of an increased capacity of 3 targeted institutions).

Development of additional impact-level Global DeSIRA Indicators. The formulation of GDIs based on the sole identification of common project-level results and the comparison of project indicators attached to these common results leads to gaps in terms of expected impact, at DeSIRA initiative level. These gaps emerged more clearly when a preliminary (draft) version of the global LFM was developed and compared to the long-term expectations of INTPA vis-à-vis DeSIRA projects. More specifically, preliminary impact GDIs (which built on project indicators) were exclusively focused on benefits for smallholder farmers, failing to capture the expected impact on the transformation of agriculture and food systems at macro-level (national or international), potentially stemming from a change in policies and/or institutional capacities. This is because the LFM of DeSIRA projects do not include such indicators of impact, likely to materialise -in most cases- well after projects have ended. Similarly, most DeSIRA projects work closely with small groups of farmers (direct beneficiaries) to develop innovations and do not intend to measure an uptake beyond these target groups: either they do not have a scale-up strategy or -if they do- they do not plan to measure wider impact, i.e. beyond targets groups. However, INTPA wants the global LFM to better reflect the long-term, higher level and wider objectives of the DeSIRA initiative and to encourage projects to pursue these objectives. To this end, a few indicators have been designed at initiative level (GDIs), to highlight and characterize these objectives, poorly reflected or not captured in the LFM of DeSIRA projects. For instance: “Number of endorsed policies, strategies or plans supported by DeSIRA projects and demonstrating a positive impact on the transformation of agriculture and food systems at national or international level”; “Number of smallholder farmers expected to benefit from innovations disseminated beyond the projects’ target groups”.

No complex Global DeSIRA Indicators and the role of meta-indicators. Though all GDIs are measured by a quantitative value, they provide a mix of quantitative and qualitative information, which is explicit in the definition of each GDI. To allow for value aggregation at DeSIRA initiative level, no complex, composite or strictly qualitative indicators have been included in the global M&E framework: all are straightforward, absolute values (no percentages). Acknowledging the difficulty of formulating GDIs capturing complex quantitative project-level data or strictly qualitative data, a few meta-indicators have been introduced: they count the number of DeSIRA projects having achieved a specified result (explicit or implicit), rather than counting what characterizes this expected result (e.g. number of farmers, institutions, policies, innovations

etc.). The current version (1) of the global LFM incorporates 4 meta-indicators: “Number of DeSIRA projects claiming a positive, documented impact on agroecosystems at farm level”; “Number of DeSIRA projects claiming a positive, documented contribution to the status and role of smallholder female farmers or food entrepreneurs”; “Number of DeSIRA projects for which the expected rate of implementation of innovations by targeted farmers has been met”; “Number of DeSIRA projects having at least one documented strategy to disseminate or scale up innovations beyond the projects' target groups of smallholder farmers”. All GDIs have been formulated in such a way that their baseline value is “0”. The amount of calculation and consolidation needed to inform and update the Global DeSIRA Indicators (GDI) is not nil but is as limited as possible.

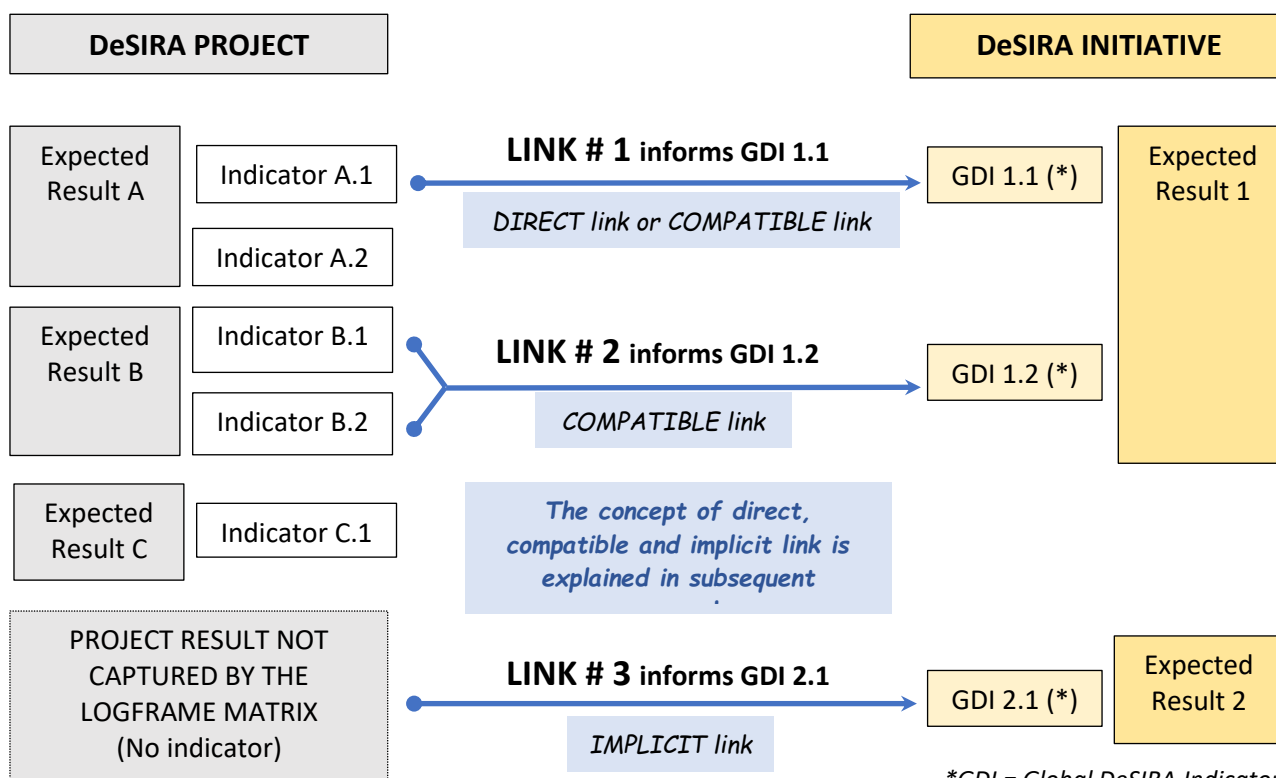
Definition of Global DeSIRA Indicators. The title of a GDI is as concise as possible. A detailed definition is available for each GDI. This definition is available in a separate pdf file, as well as in an Excel document, which also includes all the data of the Global M&E framework.

Creating new Global DeSIRA Indicators. The global LFM (Version 1 or V1) has 28 GDIs. As project LFMs are modified and as more projects are incorporated into the global M&E framework of the DeSIRA initiative, additional GDIs can be created, if necessary, using the same process.

Step 3 – Alignment of projects with the Global DeSIRA M&E framework by establishing links

Definition of a link. Once GDIs are defined, the next step consists of connecting the set of GDIs to each project through a number of “links”. A link is a relationship between a Global DeSIRA M&E framework indicator and a project result. It captures -via a GDI- a project result (output, outcome or impact; explicit or implicit) that contributes to an expected result at global level. At one end of the relationship/link, there is always a GDI. At the other end, it depends: 1/ there can be one project-level indicator if this indicator is present in the project LFM and is sufficient to inform the GDI (see the diagram below, e.g. Link #1); 2/ there can be several project-level indicators if they all contribute to informing the same GDI (this relationship counts for one link, e.g. Link #2); 3/ there can be no project indicator at all if the project happens to produce results similar to those expected at DeSIRA initiative level, but does not have any indicator to capture these results (e.g. implicit result, Link #3). Consequently, a link is more than a connection between a GDI and a project indicator, given that it can be established even in the absence of a project indicator (Link #3). Note that project indicators that do not inform any GDI are not involved in any link (e.g. Indicator A.2 or C.1 in the diagram below).

Figure 1 - Examples of links between a DeSIRA project result and the global M&E framework



For each DeSIRA project, links are established by the M&E expert, based on a close examination of the project LFM (using the latest version approved by the EU) and an interaction with the IP, which validates the relationships. A link shows how the project contributes to the GDI and where (or how) the value for the GDI is to be found. A link is created every time one of the following situations occurs: direct match between a project indicator and the GDI (Situation A); compatibility between a project indicator and the GDI (Situation B); there is no project indicator corresponding to the GDI, but the project is implicitly trying to achieve what the GDI aims at capturing (Situation C).

Situation A - Direct link. The project LFM includes an indicator, which is similar to the GDI (definition, measurement unit), even though the titles of the project indicator and of the GDI may slightly differ. Given the complex process that underpins the formulation of GDIs, a direct match between a GDI and a project indicator is not the most frequent situation. In the above diagram, direct links are illustrated by Link # 1.

Table 2 - Situation A/ Examples of DIRECT LINKS

Global DeSIRA Indicator	Project Indicator	Comment
Number of individuals supported to earn a post-graduate diploma	Number of PhD officers trained, disaggregated by gender and age (ACCEPT) <i>«Nombre de Cadres thésards formés, ventilé par sexe et âge»</i>	The project indicator counts the number of institutional officers trained to obtain a PhD. The GDI is disaggregated by kind of diploma (Master, PhD) and sex.
Number of multistakeholder innovation platforms/mechanisms developed or strengthened	Number of Functional Innovation Platforms (BIORISQUES) <i>« Nombre de Plateformes d'Innovations fonctionnelles »</i>	Under BIORISQUES, platforms are at national level. The GDI is disaggregated (international, national, sub-national).
Number of organisations increasing their capacity to innovate in the area of agriculture and food systems	Number of organizations per country with strengthened capacity to provide AIS services (SUPPORT TO TAP)	AIS = Agriculture Innovation Systems. The GDI is disaggregated (international, national).

Project-level indicators are sourced from project LFMs; when the LFM is not in English, an English translation is proposed for the selected indicator, followed by the original indicator title (in italics).

Situation B - Compatible link. The project LFM includes an indicator, which is not similar to the GDI but is compatible because both characterize the same expected result (project and global levels). This is a frequent situation. More than one project indicator can be associated with a specified GDI, in which case the relationship counts for one link only. In the above figure, compatible links are illustrated by Link #1 or Link #2.

Table 3 - Situation B/ Examples of COMPATIBLE LINKS

Global DeSIRA Indicator	Project Indicator	Comment
Number of multistakeholder innovation platforms/mechanisms developed or strengthened	For the second year of the project, inter-institutional CAFs have been set up in each country. (AGRO-INNOVA) <i>(“Para el segundo año del proyecto se encuentran conformados los CAFs interinstitucionales en cada país”.)</i>	CAFs = National Agroforestry Technical Committees (<i>“Comité Técnico Agroforestales Nacionales”</i>). The project confirms CAFs are multistakeholder innovation platforms, and thus validates the link.
Number of smallholder farmers who claim socio-economic gains, a positive impact on agroecosystems and/or feel better equipped to	Annual productivity/yield from integrated rice-fish farming systems of small-scale food producers, in particular women (IRFFS)	The project indicator does not match the GDI but the IP confirms the number of farmers will be known and thus validates the link.

cope with climate change-related shocks		
Number of food value chains strengthened	Number of market output strategies developed with the private sector (IRFFS)	This link was established after a discussion with the IP, which confirms support to 2 value chains (rice and fish).
Number of climate-smart or agroecological innovations under development (At farm level: products, technologies, models, systems, strategies)	- Seed from social and agro-ecologically adapted rice varieties - Improved quality seeds and Pest Integrated Protection Programme are available, and inputs are accessible in local markets. - Number of farming and water management technologies identified (MALMON)	The project develops 3 kinds of innovations, each described by a specific indicator. The GDI captures all innovations at farm level (products, technologies, models, systems, strategies), therefore all 3 project indicators contribute to inform the GDI, which aggregates their values. The IP confirms the indicators are compatible with the GDI and validates the link.
Number of innovations under development (Beyond farm level, including at institutional level)	An adoptable and implementable model of how to catalyze pro-poor and by-poor change in agri-food research and innovation systems by leveraging agro-biodiversity/forgotten foods is developed and shared with the international community (GFAR)	The IP confirms the compatibility with the GDI and validates the link.

Project-level indicators are sourced from project LFM; when the LFM is not in English, an English translation is proposed for the selected indicator, followed by the original indicator title (in italics).

Situation C - Implicit link. Even though the project LFM does not include any indicator similar to or compatible with the GDI, the IP confirms the existence of a link because the GDI captures a result which the project implicitly pursues. The IP also confirms a value can be provided for the GDI. Implicit links are frequent. Many have emerged during the data collection process: during virtual meetings, IPs were presented with the list of GDIs and possible links (pre-established on the basis of LFM analysis by the monitoring expert) which they were asked to validate or invalidate; by examining the list of GDIs, IPs acknowledged that some GDIs reflect an expected result not explicitly described in the LFM, therefore they suggested additional links, even in the absence of corresponding project indicators. In the above diagram, implicit links are illustrated by Link # 3.

Table 4 - Situation C/ Examples of IMPLICIT LINKS

Global DeSIRA Indicator	Project Indicator	Comment
Number of multistakeholder innovation platforms/mechanisms developed or strengthened	None (FAIR SAHEL)	The project strengthens one (already existing) innovation platform in each country (Burkina Faso, Mali, Senegal).
Number of organisations increasing their capacity to innovate in the area of agriculture and food systems	None (UOM INNOVATION & TRAINING)	The project is entirely dedicated to increasing the capacity of the University of Mauritius (UOM).
Number of small farmers reached by research & innovation initiatives	None (ACCEPT)	The project targets about 700 households. There is no corresponding project indicator, but the project confirms small farmers are reached.

Project profiles: unique and flexible. Each project is reflected in the global M&E framework through its “profile”, which consists of direct, compatible and implicit links. The total number of links, calculated by adding the relationships, is an indication of the extent to which a given project aligns with the global

framework. As project LFM and indicators are improved or modified, links can be modified, added or cancelled. For each project (contracts signed in 2019), the number of links is provided in the table below. The global LFM (Version 1 or V1) has 28 GDIs, including 9 GDIs further disaggregated into several criteria (e.g. kind of beneficiary, innovation, scale of operation, diploma, knowledge and communication product, policy output, etc.). Including all disaggregation levels (except for the sex criterion), there are 44 lines of indicators in the current global LFM. Therefore, the maximum number of links per project is 44. As noted above, GDIs have been developed with a bottom-up approach, to ensure that they -together- capture most key project results. Consequently, most DeSIRA projects signed in 2019 are reasonably aligned with the global M&E framework. As at November 2022, the number of links per project ranges from 5 (ONE PLANET) to 29 (AGROFORESTRY RWANDA). All projects (except ONE PLANET) are related to the global M&E framework through at least 13 links. As for future projects to be incorporated into the global M&E framework: 1/ if one project alone is not aligned (no link or very limited number of links), its relevance to the overall objective of DeSIRA should be questioned; 2/ if several projects are not aligned, then the global M&E framework should be adjusted to better reflect the results of these projects. Note that the number of links for a specified project is not related to the number of project indicators, given that profiles may involve several implicit links. For instance, compare LIDISKI and COCOA4FUTURE which both have 21 links with the global M&E framework, but respectively 12 and 41 indicators.

Table 5 - Number of links between DeSIRA projects (contracts signed in 2019) and the global DeSIRA M&E framework as at November 2022

Project ID (DeSIRA LIFT)	Contract CRIS #	Project (short title)	Number of project indicators	Number of links with the global DeSIRA M&E framework
1	412627 & 412408	AGROFORESTRY RWANDA	17	29
2	412107	IRFFS	17	28
3	410203	AGRO-INNOVA	28	25
4	412095	FAIR-SAHEL	53	28
5	412700	MALMON	20	17
6	411732	INV-NIGER	32	21
7	412132	COCOA4FUTURE	41	21
8	412605	TAERA	11	17
9	404348	ACCEPT	25	27
10	410957	LIDISKI	12	21
11	413069	ASLIPS-ZIM	29	27
12	410169	CASSECS	24	24
13	411806	CSARIDE	102	31
14	413081	CLIMATE-SMART INNOVATION	30	23
15	407158	CLIMA-LOCA	17	32
16	410172	ABEE	23	19
17	407715	APSAN	46	24
18	411531	BIORISQUES	35	22
19	406180	FAREI	11	15
20	406182	UOM INNOVATION & TRAINING	35	22
21	410794	BIOSTAR	51	20
Pillar II	407682	SUPPORT TO CAADP AR&EO	35	17
Pillar II	406569	ONE PLANET	36	5

Pillar II	410670	SUPPORT TO GFAR	39	18
Pillar II	406734	SUPPORT TO TAP	17	13

(Source: Global DeSIRA M&E framework)

Step 4 – Development of the global DeSIRA logframe matrix

Typically, a logframe matrix is developed by first drawing up a problem/objective tree², then formulating an intervention logic and a results chain, then defining indicators. However, the bottom-up approach that underpins the development of the global M&E framework of DeSIRA led to a reverse process. Firstly, GDIs were selected and defined on the basis of a multitude of project indicators. Secondly, GDIs were categorized into output, outcome and impact indicators and were organized (grouped) according to the results they refer to. Lastly, a results chain was formulated (statements), taking into account the project ADs. The global DeSIRA LFM is therefore not a perfect intellectual construction, but it is a pragmatic one. It strives to reflect the essence of the DeSIRA initiative as depicted in the ADs and to provide a framework for reporting on the progress of DeSIRA projects, without putting an additional monitoring burden on IPs. The risks inherent to this bottom-up construction have been mitigated to the extent possible.

Coherence of the global DeSIRA logframe matrix. The first risk was a possible lack of coherence of the global M&E framework with regard to the ADs. Even if adequately categorized and grouped, the GDIs might not form a consistent “whole”: there could have been gaps in the results chain (missing results) and indicators. This risk was mitigated by 1/ including a substantial, yet reasonable, number of global results and indicators, always keeping in mind the need to capture the overall performance of a diversity of both purely institutional and mostly action-oriented research and innovation interventions, while reflecting the essence of the DeSIRA initiative in line with the ADs; 2/ designing global impact indicators (GDIs) that do not stem from a bottom-up approach but reflect the long-term, higher level and wider objectives of the DeSIRA initiative; 3/ incorporating “meta-indicators” to address the difficulty of formulating global indicators aimed at capturing important but complex quantitative project-level data or strictly qualitative information (refer to “ Step 2 Comparison of selected project indicators and formulation of Global DesIRA Indicators”).

A single global logframe matrix to report on all DeSIRA Interventions. The second risk was to have a complex global results chain, with too many results statements, owing to the multitude and diversity of projects the global M&E framework builds on. The initial plan was to mitigate this risk by developing two LFMs, including one for institutional interventions, which are part of Pillar II of the DeSIRA initiative “Research Infrastructure Conducive to Innovation” and one for action-oriented research and innovation interventions, which are part of Pillar I “Research and Innovation in Agricultural and Food Systems”. However, there are too few strictly institutional (Pillar II) DeSIRA interventions and these are quite different from each other. Besides, many Pillar I interventions also have an institutional dimension, i.e. a global LFM dedicated to Pillar I interventions would have needed to incorporate indicators measuring institutional performances. After weighing several design options, it was concluded that a single LFM with well identified and hierarchized groups of indicators can serve the purpose of reporting on the achievements of both institutional and research-oriented DeSIRA interventions.

Quality of the global DeSIRA logframe matrix. The third risk was related to the many quality issues identified in project LFMs. The main weaknesses identified include: the hierarchy within the results chain (impact, outcomes, outputs) is not always clear and the same indicator is repeated across the results chain; many indicators are poorly defined (and thus not measurable); indicators do not always reflect the result statement they are attached to; target values are not always consistent with the definition of the indicator. This quality risk was mitigated by carefully crafting each GDI and by ignoring the hierarchy of project-level results when developing the global results chain. For instance, an output-level project indicator may inform an outcome-level GDI: e.g. “Number of households who have adopted integrated rice-fish production practices” is an output indicator for one of the projects (IRFFS), which informs the outcome GDI “Number of smallholder farmers who have taken up at least one climate-smart or agroecological innovation”. The global DeSIRA LFM

² Or similar tool that identifies strategy options to address the identified problem

includes a coherent results chain in which GDIs are properly hierarchized, are not repeated and are relevant to the result they intend to capture. There is a detailed definition and measurement unit for each GDI. GDIs have no target value of their own and their baseline value is always “0”.

Description and functioning of the global Monitoring & Evaluation framework

As noted above, the DeSIRA M&E system is underpinned by the “Global DeSIRA Indicators” (GDIs). The GDIs are aligned with each DeSIRA project through a series of links. GDIs are defined and informed on in an Excel document that comprises several interconnected sheets. They are also hierarchized and organized into a global LFM, also presented in the Excel document. In addition, the Excel file includes a list of organisations involved in the implementation of each DeSIRA project (as at April 2022, list updated only for projects signed in 2019) and a table with the number of researchers involved in implementation, per project.

The Global DeSIRA Indicators

List and definition of Global DeSIRA Indicators. Currently the M&E system includes 28 core GDIs including 7 Impact indicators, 13 Outcome indicators and 8 Output indicators. They are listed, including full definitions, sources of verification, unit, and frequency of measurement, in the aforementioned Excel document, as well as in a separate pdf file. To the extent possible, the definition of the GDIs has built on the definitions of the core indicators listed on Capacity4Dev (the EU knowledge-sharing platform for International Cooperation and Development), especially indicators linked to socio-economic benefits and sustainable agriculture. However, the focus of DeSIRA (research and innovation in agriculture and food systems) is not sufficiently reflected in Capacity4Dev, which explains why many definitions have been developed from scratch, building on other sources (especially the Food and Agriculture Organisation of the United Nations - FAO).

Disaggregation of Global DeSIRA Indicators. Some GDIs are disaggregated to better capture the diversity of results at project level and to allow for more detailed analysis at global level. For instance, the “Number of organisations increasing their capacity to innovate in the area of agriculture and food systems” is disaggregated into: (i) International, (ii) National/Research, (iii) National/Technical, (iv) National Farmers’ Organisations, NGOs, Civil Society Organisations. The “Number of climate-smart or agroecological innovations taken up by smallholder farmers” is disaggregated into: (i) Products, technologies, models, systems, strategies, (ii) Services, decision making tools, governance mechanisms. There are currently 44 lines (rows) of GDIs including disaggregation criteria (except sex). Several indicators can be further disaggregated by sex, in which case the respective values for male and female can be provided (when available) in the same cell i.e., not in separate rows, to keep the system as simple as possible.

RACER indicators. All GDIs are RACER (Relevant, Acceptable, Credible, Easy and Robust), except for several impact GDIs, the role of which is to highlight the long-term, higher level and wider objectives of the DeSIRA initiative i.e., most projects will not be in a position to report against these indicators.

Relevant - They are closely related to the objectives to be reached at global DeSIRA level.

Acceptable -The GDIs have been established using a bottom-up approach and have been broadly discussed with the IPs of the DeSIRA projects.

Credible - The data to be collected to inform the progress towards corresponding results is available and sources are deemed credible.

Easy - The monitoring process is based on collecting data from annual progress reports and from brief annual consultations with each IP. It does not entail any additional data collection at project level.

Robust – GDIs aim to capture progress towards long-term improvements and are sensitive enough to monitor changes during the lifetime of projects. They are not likely to be subject to manipulation.

Global DeSIRA Indicators and EU Result Framework Indicators

Where relevant, the correspondence between GDIs and EU Result Framework (EURF) indicators has been established and highlighted in the Excel file. A link to the EURF technical definition is included in the definition of the corresponding GDI. In 2022, the EURF was revised to become the “Global Europe Results Framework » (GERF) and the 2018 list of EURF (Level 2) indicators was updated. However, given that all DeSIRA projects were signed before this change took place, GDIs are, and will continue to be, linked with the 2018 version of EURF indicators. Correlations between GDIs and Sustainable Development Goals (SDGs) are also established.

Table 6 - Correspondence between EURF Indicators and Global DeSIRA Indicators

EURF Indicator	Global DeSIRA Indicator	Comment
EURF 2.4 Agricultural and pastoral ecosystems where sustainable management practices have been introduced with EU support (ha).	GDI #3 Number of hectares of agricultural or pastoral land where innovative climate-smart or agroecological practices have been introduced	The GDI corresponds to the EURF indicator.
EURF 2.14 Number of quality schemes adopted by economic operators with EU support	GDI #8A Number of climate-smart or agroecological innovations taken up by smallholder farmers (Products, technologies, models, systems, strategies)	Partial correspondence. EURF 2.14 is about conformity schemes, i.e. organic certification.
	GDI #14 Number of sustainable or climate-smart innovations taken up by agriculture and food-related MSMEs	
EURF 2.20 Number of MSMEs applying Sustainable Consumption and Production practices with EU support	GDI #15 Number of agriculture and food-related MSMEs which have taken up at least one sustainable innovation	The GDI corresponds to the EURF indicator. DeSIRA innovations are sustainable practices.
EURF 2.11 Number of jobs supported/sustained by the EU	GDI #18 Number of full-time food industry-related jobs created	The GDI corresponds to the EURF indicator.
EURF 2.25 Number of government policies developed or revised with civil society organisation participation through EU support	GDI #19 Number of policies, strategies or plans, fostered by multi-stakeholder processes, under development or endorsed by the relevant authorities	Partial correspondence. EURF2.25 counts policies “endorsed”, if developed with “CSO participation” (the definition of “CSO participation” is rather specific).
EURF 2.19 Number of EU supported countries and cities with climate change and/or disaster risk reduction strategies: (a) developed, (b) under implementation	GDI #20 Number of countries or international organisations developing or having endorsed a policy, strategy or plan which increases their ability to sustainably transform agriculture and food systems and/or adapt to climate change	The GDI corresponds to the EURF indicator.
EURF 2.3 Number of smallholders reached with EU supported interventions aimed to increase their sustainable production, access to markets and/or security of land.	GDI #23 Number of smallholder farmers reached by research & innovation initiatives	Partial correspondence. The GDI does not include beneficiaries of mass communication campaigns (EURF 2.3 does).

EURF 2.15 Number of people who have benefited from institution or workplace-based VET/skills development interventions supported by the EU	GDI #24B Number of individuals whose capacities are developed (Technical or Development Staff)	Partial correspondence. The GDI covers all forms of CD, EURF 2.15 includes VET only.
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Attributing a value to a Global DeSIRA Indicator

Links between Global DeSIRA Indicators and DeSIRA project results. To capture and analyse project results -explicit or implicit- and to attribute values to GDIs, links have been created between the set of GDIs and each project. All links are presented and fully described in the Excel document. Each project is characterized by a number “X” of links, direct, compatible and/or implicit, with the global M&E framework, i.e. it can inform “X” number of GDIs. Conversely, each GDI can, potentially, be informed by “Y” number of DeSIRA projects. The monitoring exercise carried out on 26 contracts signed in 2019 (25 projects, including SUPPORT TO CAADP AR&EO) shows that the majority of GDIs are informed by at least 9 projects (see the table below). A few private sector-related indicators are informed by only a few projects. For instance, among projects signed in 2019, only 4 of them can inform “Number of full-time food industry-related jobs created » (GDI#18), and only 6 projects can inform “Number of agriculture and food-related MSMEs which have taken up at least one sustainable innovation » (GDI#15). This reflects the fact that most projects focus more on farmers than on other private sector actors. However, these GDIs are maintained because without them, efforts made to support private sector capacities would not be captured at global DeSIRA level. Besides, the GDI “Number of full-time food industry-related jobs created » is also an EURF indicator, which argues in favour of keeping it in the global M&E framework. Only one GDI is informed by all 25 projects: “Number of communication products developed » (GDI#27A). At impact level, several GDIs have been included to highlight the long term objectives of the DeSIRA initiative and to encourage IPs to think in terms of wider impact, i.e. beyond target groups. These GDIs are yet to be linked to projects, which is why the table below shows that they are not informed by any (“0”) projects (GDI#3B, GDI#6, GDI#7).

Table 7 - Number of DeSIRA projects (based on contracts signed in 2019), which can potentially inform Global DeSIRA Indicators³ as at November 2022

GDI #	Global DeSIRA Indicators (including main disaggregation criteria, except sex)	#
Impact		
Outcome		
Output		
1	Number of smallholder farmers who claim socio-economic gains, a positive impact on agroecosystems and/or feel better equipped to cope with climate change-related shocks	18
2	Number of smallholder farmers expected to benefit from innovations disseminated beyond the projects' target groups	2
3A	Number of hectares of agricultural or pastoral land where sustainable innovative climate-smart or agroecological practices have been introduced (By target groups)	8
3B	Number of hectares of agricultural or pastoral land where sustainable innovative climate-smart or agroecological practices have been introduced (By indirect beneficiaries)	0
4	Number of DeSIRA projects claiming a positive, documented impact on agroecosystems at farm level	14
5	Number of DeSIRA projects claiming a positive, documented contribution to the status and role of smallholder female farmers or female food entrepreneurs	3
6	Number of organisations strengthened by DeSIRA projects, able to document a positive impact of the project on the transformation of agriculture and food systems at national or international level	0
7	Number of endorsed policies, strategies or plans supported by DeSIRA projects and demonstrating a positive impact on the transformation of agriculture and food systems at national or international level	0
8A	Number of climate-smart or agroecological innovations taken up by smallholder farmers (Products, technologies, models, systems, strategies)	18

³ The full definition of each Global DeSIRA Indicator is available in a separate file.

8B	Number of climate-smart or agroecological innovations taken up by smallholder farmers (Services, decision making tools, governance mechanisms)	9
9	Number of smallholder farmers who have taken up at least one climate-smart or agroecological innovation	18
10	Number of DeSIRA projects for which the expected rate of implementation of innovations by targeted farmers has been met	13
11	Number of DeSIRA projects having at least one documented strategy to disseminate or scale up innovations beyond the projects' target groups of smallholder farmers	20
12A	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (International)	10
GDI #	Global DeSIRA Indicators (including main disaggregation criteria, except sex)	#
Impact		
Outcome		
Output		
12B	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (National or subnational research institutions)	23
12C	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (National or subnational technical/development institutions)	14
12D	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (National or subnational FOs, NGOs, CSOs)	18
13	Number of new institutional partnerships on agriculture and foods systems triggered by DeSIRA projects	12
14	Number of sustainable or climate-smart innovations taken up by agriculture and food-related MSMEs	6
15	Number of agriculture and food-related MSMEs which have taken up at least one sustainable innovation	6
16	Number of agriculture and food-related MSMEs strengthened or created	10
17	Number of food value chains strengthened	9
18	Number of full-time food industry-related jobs created	4
19	Number of policies, strategies or plans, fostered by multi-stakeholder processes, under development or endorsed by the relevant authorities	11
20	Number of countries or international organisations developing or having endorsed a policy, strategy or plan which increases their ability to sustainably transform agriculture and food systems and/or adapt to climate change	11
21A	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (International level)	7
21B	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (National level)	12
21C	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (Subnational level)	9
22A	Number of climate-smart or agroecological innovations under development (At farm level: products, technologies, models, systems, strategies)	19
22B	Number of climate-smart or agroecological innovations under development (At farm level: services, decision making tools, governance mechanisms)	10
22C	Number of innovations under development (Beyond farm level, including at institutional level)	14
23	Number of smallholder farmers reached by research & innovation initiatives	21
24A	Number of individuals whose capacities are developed (Researchers)	22
24B	Number of individuals whose capacities are developed (Technical or Development Staff)	21
25A	Number of individuals supported to earn a post-graduate diploma (Master)	16
25B	Number of individuals supported to earn a post-graduate diploma (PhD / Doctorate)	16
26	Number of curricula or training packages developed or upgraded	13
27A	Number of knowledge and communication products developed (Communication products)	25
27B	Number of knowledge and communication products developed (Technical reports)	15
27C	Number of knowledge and communication products developed (Guidance manuals)	10

27D	Number of knowledge and communication products developed (Databases)	15
27E	Number of knowledge and communication products developed (Scientific publications)	21
28A	Number of policy-related outputs (Documents)	16
28B	Number of policy-related outputs (Dialogues)	8

(Source: Global DeSIRA M&E framework)

Attributing a value to a GDI. Each GDI is thus linked to “X” number of projects. Attributing a value to the GDI is a two-step process. First, a value is attributed to the GDI for each result (explicit or implicit) contributing to this GDI on the basis of a pre-established link. Whether the link is direct, compatible or implicit, the process is rarely straightforward and relies, most of the time, on the perspective of the IP. Furthermore, examples illustrating this first step (below) demonstrate that a judgment call from the monitoring expert is sometimes needed to determine the GDI value. Second, the global value of the GDI is calculated by adding together GDI values attributed at project level. This is a simple calculation, as all GDIs are quantitative. The value attributed to a GDI at project level is cumulative and covers an implementation period that depends on the project start date and data availability at the time of data collection at global level: e.g. several projects may have had two years of implementation (when data is collected), but some can only provide data for Year 1. Therefore, total values may aggregate project level values related to implementation periods of varying length.

Attributing a value to the GDI - Situation A - Direct link (Example 1).

The following table shows how a value is attributed to a GDI via a direct link between the project (explicit) result and the global M&E framework:

Table 8 - Example 1 - Attributing a value to a GDI via a DIRECT LINK

GDI #	Title – GDI	Title - Project indicator	Target @ project end	Current value 31/12/2021	GDI Value	Comments
22A	Number of climate-smart or agroecological innovations under development (At farm level: products, technologies, models, systems, strategies)	(P2.1) Number of innovative systems tested and validated by producers per village community <i>(“Nombre de systèmes innovants testés et validés par les producteurs par communauté villageoise »)</i> <i>(FAIR SAHEL)</i>	2 to 3 per community <i>(« 2 à 3 par communauté »)</i>	Between 1 and 3 tested, but not validated yet <i>(“Entre 1 à 3 testés mais non validés »)</i>	12	This GDI is an output indicator of the global LFM. The IP confirms this project indicator can inform this GDI. The project indicator is disaggregated as follows: 1/ tested systems (the link is established with this GDI at output level); 2/ validated systems (the project is linked with another GDI, at outcome level). The statement for P 2.1 is “A series of innovative systems incorporating sustainable soil, water and plant biodiversity management, adapted to the conditions of local producers in their diversity”. <i>(« Une série de systèmes innovants incorporant une gestion durable du sol, de l’eau et de la biodiversité végétale, adaptés aux conditions des producteurs locaux dans leur diversité »).</i>

Explanation and calculation of the GDI value

The link is direct because the project indicator is similar to the GDI in terms of definition and measurement unit.

Value of GDI#22A = value of the project indicator X number of communities = 1 X 12 = 12.

The project works in 12 farming communities. The GDI value is conservative. It assumes each community has developed/tested at least 1 system tailored to the conditions of this community. The IP says up to 3 systems have already been tested in each community but cannot provide an exact number for the 12 communities. If 2 systems are developed/tested, the GDI value may increase to 24, provided all systems developed by a community are unique to this community (i.e. they are different from systems developed by the other communities).

(Source: Global DeSIRA M&E framework; project short name and CRIS #: FAIR SAHEL # 412095)

Project-level indicators are sourced from project LFM; when the LFM is not in English, an English translation is proposed for the selected indicator, followed by the original indicator title (in italics).

Attributing a value to the GDI - Situation B – Compatible link (Example 2).

The table shows how a value is attributed to a GDI via a compatible link, based on multiple project indicators:

Table 9 - Example 2 - Attributing a value to a GDI via a COMPATIBLE LINK

GDI #	Title - GDI	Title - Project indicator	Target @ project end	Current value 31/12/2021	GDI Value	Comments
24B	Number of individuals whose capacities are developed (Technical or Development Staff)	(R1.3) Number of people trained in cassava virus disease management <i>(R1.3 « Nombre de personnes formées en gestion des maladies à virus du manioc »)</i>	(R1.3) At least 20 people trained per year per country <i>(“Au moins 20 personnes formées par an par pays »)</i>	(R1.3) Training not started	11	The project indicator linked to Result 1.3 counts researchers and technicians (who may not be researchers). The IP will be able to provide disaggregated information.
		(Output 2.2) Number of extension workers feeding the database <i>(P2.2 « Nombre d’agents de vulgarisation qui alimentent la base de données »)</i>	(P2.2) At least (100) additional extension workers (global) per country <i>(« Au moins (100) additionnels agents de vulgarisation (global) par pays »)</i>	(P2.2) 11 extension workers, 32 seed multipliers and 11 selected producer groups trained in the use of smartphones and the Plantvillage Nuru monitoring application.		Under Result 2, 260 smartphones (120 in the Democratic Republic of Congo, 60 in Cameroon, 40 in Gabon and Sierra Leone) were distributed to the trained people, able to diagnose and monitor cassava diseases in their plantations in real time. Extension workers for P2.2 & P3.5 are probably the same, beware of duplication.
		(Output 3.5) Number of extension workers and farmers trained in symptom identification <i>(P3.5 « Nombre d’agents de vulgarisation et nombre d’agriculteurs formés à l’identification des symptômes »)</i>	(P3.5) At least 100 extension workers <i>(P3.5 « Au moins 100 agents de vulgarisation »)</i>	(P3.5) Training not started		(P3.5) Note that this project indicator counts both extension workers and farmers. The target here is only for extension workers because the corresponding GDI is only for technical/development staff. The number of trained farmers is captured via another GDI.

Explanation and calculation of the GDI value

The link is compatible. The GDI is informed by 3 project indicators, compatible with but not similar to the GDI because they aggregate several categories (farmers, researchers, technical staff) whereas the GDI focuses on technical/development staff only.

Value of GDI#24B = cumulated values related to technical/development staff (i.e. researchers and farmers excluded) of project indicators linked to R1.3, P2.2, P3.5 = 0 (R1.3) + 11 (P2.2) + 0 (P3.5) = 11.

No value for R1.3 and P3.5 indicators yet. As for P2.2 indicator, we count 11 extension workers. The 32 seed multipliers and producer groups (11) are counted via GDI#23 “Number of smallholder farmers reached...”.

(Source: Global DeSIRA M&E framework; project short name and CRIS #: BIORISQUES # 411531)

Project-level indicators are sourced from project LFM; when the LFM is not in English, an English translation is proposed for the selected indicator, followed by the original indicator title (in italics).

Attributing a value to the GDI - Situation B – Compatible link (Example 3).

The following table shows another example of how a value is attributed to a GDI via a compatible link, this time based on a single project indicator:

Table 10 - Example 3 - Attributing a value to a GDI via a COMPATIBLE LINK

GDI #	Title - GDI	Title - Project indicator	Target @ project end	Current value (03/2022)	GDI Value	Comments
1	Number of smallholder farmers who claim socio-economic gains, a positive impact on agroecosystems and/or feel better equipped to cope with climate change-related shocks	(OS1) Production per hectare of beneficiary producers in the target value chains (kg/ha) (<i>« Production par hectare des producteurs bénéficiaires dans les chaînes de valeur cibles (kg/ha) »</i>)	Sorghum (<i>“Sorgho”</i>): 1700 Millet (<i>“Mil”</i>): 1500 Groundnut (<i>“Arachide”</i>): 1800 Niebe: 700	data not available because harvest underway at the time of reporting	0	The indicators (project and GDI) are compatible. The baseline covered 700 producers located in the intervention areas. A final survey will cover the same producers. Therefore, information on the number of farmers claiming a socio-economic gain and/or a positive impact on agroecosystems (the GDI) will be available at project level.
<p>Explanation and calculation of the GDI value The link is compatible. The project indicator is not similar to the GDI, but the title suggests the data needed to inform the GDI is available (or will be in the future). This is confirmed by the IP. The value of the GDI#1 is “0” because data was not yet available at the time of reporting.</p>						

(Source: Global DeSIRA M&E framework; project short name and CRIS #: APSAN (# 407715)

Project-level indicators are sourced from project LFM; when the LFM is not in English, an English translation is proposed for the selected indicator, followed by the original indicator title (in italics).

Attributing a value to the GDI Situation C – Implicit link (Example 4).

The following table shows how a value is attributed to a GDI via an implicit link:

Table 11 - Example 4 - Attributing a value to a GDI via an IMPLICIT LINK

GDI #	Title - GDI	Title - Project indicator	Target @ project end	Current value (12/2021)	GDI Value	Comments
12A	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (International)	No corresponding project indicator but there is an implicit match with the global DeSIRA Indicator	NA	Value suggested by the IP: CATIE & IICA	2	CATIE is strengthening its capacity by engaging in new activities: updated its courses in agroforestry, validated new agroforestry models, tested in CATIE's experimental farm because of COVID. The situation lead to 2 thesis. Capacities are left in place at CATIE to do further work/thesis on agroforestry systems. As for IICA, it is building experience on which it intends to capitalize (knowledge management strategy).
<p>Explanation and calculation of the GDI value Value of GDI#12A = 2 The link is implicit, i.e. the project result is implicit, the project LFM does not include any indicator compatible with the GDI, but the IP confirms the GDI captures a result which the project implicitly pursues. The IP provides evidence of how 2 international organisations supported by the project are developing their capacity to innovate.</p>						

(Source: Global DeSIRA M&E framework; project short name and CRIS #: AGRO INNOVA # 410203)

Description of the content of the Excel file underpinning the global M&E framework

The global DeSIRA M&E framework is captured in an Excel file, comprised of 7 sheets, described below:

“GDIs – LIST & DEFINITION”

List of current GDIs, including full definitions, sources of verification (data), unit and frequency of measurement.

“GDIs - LINKS & DATA”

Links (direct, compatible or implicit) between projects and the global M&E framework are described in this sheet, for each project. GDI values are also reported.

“GDIs - VALUES only”

Same as “GDI - LINKS & DATA”, only showing GDI values for each project and cumulated values (all projects).

“Global DeSIRA LOGFRAME MATRIX »

GDIs are categorised and organized into a results chain, comprised of an impact statement, 4 outcome statements and 6 output statements. Together they form the global DeSIRA Logframe Matrix.

“DeSIRA Input DATA”

Project data on synergies, researchers and organisations. Full definitions are included. Numbers attached to organisations are based on entries in the sheet: “DeSIRA Organisations LIST”.

“DeSIRA Organisations LIST”

A list, for each project, of key and non-key organisations involved in the project implementation, on the day the working session was conducted with the IP.

“DeSIRA projects – list & menu”

Working sheet (list of projects; predefined values categorising the organisations involved in implementation).

Annual data collection process and sources of verification for the Global DeSIRA Indicator values

Data collection process, step by step.

- 1/ IPs share -with the monitoring expert in charge of collecting data- their annual progress report as soon as it is ready, along with an updated version of the LFM, as appropriate. To the extent possible, EU Delegations will give implementing partners permission to share the technical part of the report, before final approval.
- 2/ The project LFM is examined to identify changes compared to the previous version (e.g. indicators deleted or added). Accordingly, the links between project results and the global M&E framework are updated.
- 3/ The expert looks for information and values in the annual progress report to complete/refine the links and inform the GDIs. If the project indicator and the GDI are strictly identical (definition, measurement unit), the current/final value can be found in progress reports (or in OPSYS). However, in most cases, a discussion with the IP is needed to confirm the current/final value that can be attached to the GDI.
- 4/ A meeting is set up with the IP (EU Delegation always in copy of exchanges) to confirm the relevance of the links and the values to be attributed to the GDIs. Information on organisations and researchers involved in implementation should be updated. This working session should not last more than 2 to 2.5 hours.
- 5/ Collected information is edited and a summary of the working session is sent to the IP (copy to the EU Delegation), which follows up and provides additional information, if required.
- 6/ Collected information is analysed and incorporated in the Annual Global Report of the DeSIRA Initiative.

Challenges related to data collection. In project reports, it is not always clear whether current values are yearly or cumulated values. Besides, valuable data for the GDIs are included in the narrative of the annual progress reports, but not reported in LFM. For several indicators, there is a risk of double counting individuals at project level, and thus also at global DeSIRA level. Last but not least, the quality of project-level data determines the overall quality of the data incorporated in the global M&E framework. It is expected that information collected from projects will improve over time, with support from the DeSIRA LIFT intervention.

On OPSYS. Since 2022, all EU-funded interventions, including DeSIRA projects, have been required to upload their LFM and indicators into OPSYS and to update values annually. There is also a possibility to upload the global DeSIRA LFM in OPSYS and enter the GDI values in the OPSYS database on an annual basis. Besides, the GDIs could be proposed as standard “core” indicators to DeSIRA projects. However, given the complexity of the monitoring process and the need to validate GDI values with IPs on a yearly basis, automating the annual

data collection process is not currently an option. Note that standardized “core” indicators proposed by OPSYS were largely ignored by DeSIRA interventions when project indicators were designed, because core indicators are mostly development indicators, not adapted to research and innovation actions.

Optimal period of the year to collect data for the global annual reporting. According to the table below, 75 projects, including SUPPORT TO CAADP AR&EO (which breaks down into support to 5 organisations) officially started between March 2019 and February 2022. 42 projects officially started during Quarter 4 (Q4) of the year and 12 more during Q3 (not including SUPPORT TO CAADP AR&EO), i.e. by the end of Q1 of Year n+1, most progress reports of Year n (72%) are expected to be available. The results for the 5 CAADP organisations are available at the beginning of Q2. The time taken by EU Delegations to validate the progress reports varies, but EU Delegations are likely to allow access to the technical part of the unapproved progress report, as soon as it is ready. Hence, going forward, the global monitoring process can start in February for projects that started during Q1, Q2 and Q3 and continue in March/April/May with projects that started in Q4. Projects included in the Annual Global Report 2021 are highlighted in blue in the table, which may not fully reflect the current situation of each project, given that some of them are in the process of being, or have already been, extended (longer duration), and a few others may have been forced to delay their official start date.

Table 12 - DeSIRA PROJECTS – START MONTH/YEAR as at January 2022

PROJECT NAME & DURATION (Years)	2019				2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
AGROFORESTRY RWANDA	5				Feb											
IRFFS	4			Dec												
AGRO-INNOVA	4			Oct												
FAIR-SAHEL	5			Dec												
MALMON	5			Dec												
INV-NIGER	4			Dec												
COCOA4FUTURE	5			Dec												
TAERA	5			Dec												
ACCEPT	4		Jul													
LIDISKI	4			Dec												
ASLIPS-ZIM	4				Jan											
CASSECS	4			Dec												
CSARIDE	5			Dec												
CLIMATE SMART INNOVATION	5			Dec												
CLIMA-LOCA	4			Dec												
ABEE	5			Dec												
APSAN	5			Oct												
BIORISQUES	5			Dec												
FAREI	3			Nov												
UOM INNOVATION & TRAINING	3			Dec												
BIOSTAR	5			Dec												
CAADP/AFAAS	4		Jul													
CAADP/ASARECA	4,5		Jul													
CAADP/CCARDESA	4	Mar														
CAADP/CORAF	4			Nov												
CAADP/FARA	4,5	Mar														
ONE PLANET	4		Jun													
SUPPORT TO GFAR	4				Jan											
SUPPORT TO TAP	5		Jul													
IRRINN	4							Dec								
SUSTLIVES	4								Jul							
ASSET	5					Jun										
MODELOS PILOTOS & AGROECOLOGÍA	3							Dec								
IDEAS	4,5							Dec								
LEG4DEV	5							Nov								

PROJECT NAME & DURATION (Years)	2019				2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SAFEVEG	5							Nov								
DARE	4						Jul									
SIRGE	3							Nov								
ICSIAPL																
ESSA	4							Dec								
SYRIMAO	4						Jul									
REDIAL	4						Jul									
MAKIS	5											Dec				
ACCESS	4											Oct				
AMINATA	4												Feb			
OPPDAB	4											Dec				
CDI-RWANDA	4							Dec								
RE-FARM	4											Dec				
TRANSITIONS	5												Jan			
IST CGIAR	1,5							Dec								
LSC-IS	4							Dec								
RESI-NOC	4						Sep									
WATDEV	4											Dec				
ARTEMIA4BANGLADESH	4					Mar										
MARIGO	4							Dec								
WE4F	3,5					Jan										
ECOFOODSYSTEMS																
DINAAMICC	4											Dec				
STAR-FARM																
SUSTENTA E INOVA	4										Jul					
Z4ABC	4											Dec				
PROSILIENCE	3,5									Jun						
ABRIGUE	3									May						
HEVEA CONGO																
COFFEE ETHIOPIA	4										Aug					
WOMEN, COFFEE AND CLIMATE	2,5											Nov				
GRAPE	3,6									Apr						
COFFEE UGANDA	4											Dec				
RAIZ	4											Dec				
PRISMA	4											Dec				
INACC NIGERIA	3,6										Aug					
SANTES-TERRITOIRES	5									May						
FO-LEDRI	5											Dec				
DESIRA LIFT	3									Jun						
STREAM MONGOLIA	3									Apr						
UAKIS	4										Sep					
INNOVAC																
CLIMATE INTELLIGENT AGRICULTURE & VC	4											Oct				
5 GREAT FORESTS	4										Jul					

(Source: INTPA F3 – 05/01/2022)

Limitations. Underpinned by a global LFM, a set of key GDIs and links between GDIs and DeSIRA projects, the global M&E framework aims at capturing project-level results (explicit or implicit) that contribute to (global) initiative-level expected outputs, outcomes and impact. Limitations inherent to the concept of “logframe” apply to the global M&E framework of the DeSIRA initiative, which is not able to reflect complex and sophisticated innovation processes and the full diversity of changes they may produce. Complementary monitoring tools and processes could be envisaged, in order to address these limitations. Besides, owing to the fact that GDIs reflect a mix of direct, compatible and implicit links between DeSIRA projects and the global M&E framework, they do not have a target value (i.e. project target values cannot be aggregated at global level because, for instance, implicit links are not tied to project indicators and thus target values have not been defined by Implementing Partners even though outputs or outcomes are -implicitly- generated).

Result Reporting Format for the Global Annual Report of the DeSIRA Initiative

Overall structure of the global annual report. The report follows the results chain of the global LFM and has 3 main sections: progress towards expected outputs, progress towards expected outcomes and impact prospects. Each section is divided into sub-sections, corresponding to a result (6 outputs, 4 outcomes).

Structure of a sub-section. Each sub-section adheres to the following reporting pattern:

- Brief introduction, placing the result into the overall DeSIRA perspective;
- Definition of the main Global DeSIRA Indicators (GDIs) attached to the result;
- Summary table of the values for the GDIs attached to the result (see below);
- Overview of the contribution of each DeSIRA project to the result;
- Analysis of achievements and progress towards the expected result, based on data and information collected from all projects;
- Brief conclusion;
- Recommendations.

How to read the summary of values for the GDIs attached to a result at initiative (global) level. The table below shows the format used to present the summary of GDI values.

Table 13 - How to read the summary of values for the GDIs attached to a result at initiative level

Number of projects contributing to the GDI value		GDI #	Global DeSIRA Indicator	Total Value	Value P-I	Value P-II
Linked to GDI	20XX-20XX				<i>Blue (empty) cells: no expected contribution</i>	
Number of projects expected to contribute a value for this GDI, as per their current design	Number of projects having contributed a positive value for this GDI, for the reporting period	GDI number	GDI Title	Value Pillar I + Value Pillar II	Sum of values attributed to this GDI for each Pillar I project contributing to the GDI	Sum of values attributed to this GDI for each Pillar II project contributing to the GDI

For instance, in the example below, 12 projects are expected to contribute - in theory and as per their current design- to GDI #21B “Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (National level)”, i.e. when they are sufficiently advanced and data is available. However, over the 20XX-XX period, only 5 projects did contribute a positive value, for a total of 76 platforms. The number of platforms formed or strengthened amounted to 12 for Pillar I projects and 64 for Pillar II projects.

12	5	21B	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (National level)	76	12	64
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A blue-shaded cell with no content indicates that the group of projects (Pillar I or Pillar II) is not expected to contribute to the GDI during this reporting period, because none of the projects in this group has a link (direct, compatible or implicit) with the corresponding GDI. The GDI in the example below refers to the number of innovations taken up by smallholder farmers. The GDI can be potentially informed by 18 Pillar I projects but only 2 projects contributed a positive value during the reporting period. Besides, there is no expected contribution from Pillar II projects during the reporting period.

18	2	8A	Number of climate-smart or agroecological innovations taken up by smallholder farmers (Products, technologies, models, systems, strategies)	29	29	
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Overview of the contribution of each DeSIRA project to a specified result at initiative level. Each section or sub-section incorporates a table showing, for each project, its contribution to the GDIs attached to the result the section covers, as per the following format.

In case a project has produced outputs but is unable to provide robust data for the reporting period, the value “0+” is reported in the corresponding cell of Table 14, below. In the summary of values (refer to Table 12, above), the project is NOT counted among projects having contributed a positive value.

A blue-shaded cell with no content indicates that the project is not expected to contribute to the GDI during this reporting period, because it has no link with the corresponding GDI, as established during a discussion with its implementing partner.

Table 14 – Format for the overview of a DeSIRA project’s contribution to a specified result at initiative level

OUTPUT X - Contribution 20XX-20XX of DeSIRA projects					
GDI #X1 Title of the GDI					
GDI #X2 Title of the GDI					
GDI #X3 Title of the GDI					
Project ID	Contract CRIS #	DeSIRA Project Short Title	GDI #X1	GDI #X2	GDI #X3
			<i>0(+)</i> Positive contribution but value not available		
			Blue (empty) cells: no expected contribution		
1	XXXXXX	PROJECT A		2	0
2	XXXXXX	PROJECT B	1	3	0(+)
...
Pillar II	XXXXXX	PROJECT Y	2	0	
TOTAL Cumulative Values (All interventions, Pillar I & II)			3	5	0

The Global DeSIRA Logframe Matrix – Version 1 - November 2022

	RESULT STATEMENT	#	INDICATOR TITLE ⁴
IMPACT	The DeSIRA initiative contributes to the climate-relevant, productive, and sustainable transformation of agriculture and food systems in low and middle-income countries	1	Number of smallholder farmers who claim socio-economic gains, a positive impact on agroecosystems and/or feel better equipped to cope with climate change-related shocks
		2	Number of smallholder farmers expected to benefit from innovations disseminated beyond the projects' target groups
		3A	Number of hectares of agricultural or pastoral land where sustainable innovative climate-smart or agroecological practices have been introduced (By target groups)
		3B	Number of hectares of agricultural or pastoral land where sustainable innovative climate-smart or agroecological practices have been introduced (By indirect beneficiaries)
		4	Number of DeSIRA projects claiming a positive, documented impact on agroecosystems at farm level
		5	Number of DeSIRA projects claiming a positive, documented contribution to the status and role of smallholder female farmers or female food entrepreneurs
		6	Number of organisations strengthened by DeSIRA projects, able to document a positive impact of the project on the transformation of agriculture and food systems at national or international level
		7	Number of endorsed policies, strategies or plans supported by DeSIRA projects and demonstrating a positive impact on the transformation of agriculture and food systems at national or international level
OUTCOME 1	The capacity and the resilience of smallholder farmers improve as they take up new climate-smart or agroecological products, technologies, models or services	8A	Number of climate-smart or agroecological innovations taken up by smallholder farmers (Products, technologies, models, systems, strategies)
		8B	Number of climate-smart or agroecological innovations taken up by smallholder farmers (Services, decision making tools, governance mechanisms)
		9	Number of smallholder farmers who have taken up at least one climate-smart or agroecological innovation
		10	Number of DeSIRA projects for which the expected rate of implementation of innovations by targeted farmers has been met
		11	Number of DeSIRA projects having at least one documented strategy to disseminate or scale up innovations beyond the projects' target groups of smallholder farmers
OUTCOME 2	Innovation capacities of research, technical and development institutions as well as capacities of farmers' organisations to support agriculture innovation processes are strengthened	12A	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (International)
		12B	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (National or subnational research institutions)
		12C	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (National or subnational technical/development institutions)
		12D	Number of organisations increasing their capacity to innovate in the area of agriculture and food systems (National or subnational FOs, NGOs, CSOs)
		13	Number of new institutional partnerships on agriculture and foods systems triggered by DeSIRA projects
OUTCOME 3	Private sector capacities and value chains of agri-food systems are strengthened	14	Number of sustainable or climate-smart innovations taken up by agriculture and food-related MSMEs
		15	Number of agriculture and food-related MSMEs which have taken up at least one sustainable innovation
		16	Number of agriculture and food-related MSMEs strengthened or created
		17	Number of food value chains strengthened
		18	Number of full-time food industry-related jobs created

⁴ The full definition of each Global DeSIRA Indicator is available in a separate file.

	RESULT STATEMENT	#	INDICATOR TITLE
OUTCOME 4	The agriculture and food systems policy environment is improved at national or international level	19	Number of policies, strategies or plans, fostered by multi-stakeholder processes, under development or endorsed by the relevant authorities
		20	Number of countries or international organisations developing or having endorsed a policy, strategy or plan which increases their ability to sustainably transform agriculture and food systems and/or adapt to climate change
OUTPUT 1	The mechanisms for inter-institutional cooperation and the joint design of climate-smart and agroecological innovations are developed	21A	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (International level)
		21B	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (National level)
		21C	Number of multi-stakeholder innovation platforms/mechanisms developed or strengthened (Subnational level)
OUTPUT 2	Innovations linked to agri-food systems are developed and made available at farm and institutional levels	22A	Number of climate-smart or agroecological innovations under development (At farm level: products, technologies, models, systems, strategies)
		22B	Number of climate-smart or agroecological innovations under development (At farm level: services, decision making tools, governance mechanisms)
		22C	Number of innovations under development (Beyond farm level, including at institutional level)
OUTPUT 3	Farmers are reached by research and innovation initiatives and individual capacities are developed beyond farm level, including at institutional level	23	Number of smallholder farmers reached by research & innovation initiatives
		24A	Number of individuals whose capacities are developed (Researchers)
		24B	Number of individuals whose capacities are developed (Technical or Development Staff)
		25A	Number of individuals supported to earn a post-graduate diploma (Master)
		25B	Number of individuals supported to earn a post-graduate diploma (PhD / Doctorate)
OUTPUT 4	Education and training programmes responsive to capacity development needs for agricultural innovation at national level are strengthened	26	Number of curricula or training packages developed or upgraded
OUTPUT 5	Science-based knowledge and evidence are generated and made available to inform research for innovation in agriculture, institutional cooperation and the dissemination of new climate-smart and agroecological solutions	27A	Number of knowledge and communication products developed (Communication products)
		27B	Number of knowledge and communication products developed (Technical reports)
		27C	Number of knowledge and communication products developed (Guidance manuals)
		27D	Number of knowledge and communication products developed (Databases)
		27E	Number of knowledge and communication products developed (Scientific publications)
OUTPUT 6	Science-based policy briefs are produced and dialogues on agriculture and food policy development and reform are organized	28A	Number of policy-related outputs (Documents)
		28B	Number of policy-related outputs (Dialogues)

(Source: Global DeSIRA M&E framework)