

Overall objective of the Action: to develop sustainable land-, soil-, crop information hubs in national agricultural research organisations that facilitate the exchange of knowledge and information between farmers, knowledge organisations, private sector and policy makers, enhance the effectiveness of national Agricultural Knowledge and Innovation Systems (AKIS 2.0) and contribute to rural transformation and Climate Smart Agriculture in East Africa.

Results chain		
Impact/ ultimate outcome	Increased agricultural productivity and farm income especially for small-scale farmers based on climate resilient and sustainable food production in Ethiopia, Kenya and Rwanda, characterised by reduced greenhouse gas emissions from primary production systems	<p><i>Assessment Pathway (see figure 3.1)</i> <i>* Discussed and agreed roadmaps based on the scaling and institutionalisation of LSC hubs - available for the design of an enabling and vibrant national AKIS 2.0 exist to contribute to rural transformation, climate change adaption and mitigation in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 2)</i></p>
		<p><i>Development Pathway</i> <i>* Through the effective operation of LSC knowledge and innovation hubs, the hubs evolve and expand towards national Agricultural Knowledge and Innovation Systems (AKIS 2.0) contributing to continuously challenging the status quo of food system performance, to rural transformation and a climate-smarter agricultural sector in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 3)</i> <i>* Enhanced adaptive capacity exists in information users and producers resulting in the continuous updating and improving of LSC hubs and their operation in particular and the national AKIS 2.0 in general in Ethiopia, Kenya, Rwanda, and eventually in East Africa (specified in WP 4a and WP 5a)</i></p>
		<p><i>Scaling and Institutionalisation Pathway</i> <i>LSC hubs in particular - and the national AKIS 2.0 in general - contribute to a decrease of the digital divide in the agricultural sector and are used for policy formulation, for the development of policy frameworks, for public and private advice and service provision as well as for the development of (inter)national funding schemes contributing to rural transformation and climate change adaption and mitigation Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 4b and WP 5b)</i></p>
		<p><i>Monitoring & Learning Pathway</i> <i>The latest trends and approaches to stimulate knowledge exchange and social learning are applied to enhance innovative capacity of the LSC hubs in particular and the national AKIS 2.0 to contribute to rural transformation, climate change adaption and mitigation in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 1)</i></p>

		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Medium-term effect / Specific objective / intermediary outcome 1	1. A clear overview of the results, outcomes and lessons learnt and recommended steps to further optimise sector performance and resilience exists; These have been widely disseminated and enjoy a great visibility.	Number of roadmaps to develop a national AKIS based on lessons learnt and effective practices at LSC hubs	0	3			
		An online monitoring dashboard (including historical logs) with (periodically updated) results and final Action outcomes	0	1			

Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
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		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Medium-term effect / Specific objective / Intermediary outcome 2	2. A (proven) effective methodology and strategy for a LSC hub design trajectory based on lessons learned of clearly specifying demands, roles, responsibilities and capacity of actors exists and ownership has been made explicit.	Description of sustainability strategies developed for Ethiopia, Kenya, Rwanda	0	3			
		Description of user needs assessments for LSC-hub information services for Ethiopia, Kenya, Rwanda	0	3			
		Methodology for country demand and capacity assessment	0	3			
		Methodology for country institutional assessment	0	3			
Outputs Workpackage 2	Output 2.1 Multi-stakeholder consultative process design for the demand and capacity assessment	A documented multi-stakeholder consultative process design for the demand and capacity assessment.	0	3			
	Output 2.2 Multi-stakeholder consultative process design for the institutional assessment	A documented multi-stakeholder consultative process to define the institutional requirements and assessment.	0	3			
	Output 2.3 Multi-stakeholder implemented country based demand, capacity and institutional assessments	Number of focus group discussions per country covering at least 5 stakeholder groups	0	10 FGDs			
		Number of multi-stakeholder workshops per country	0	2 workshops			
		Documented multi-stakeholder country-based demand capacity and institutional assessments.	0	3 country documents			
	Output 2.4 Overview of generic and country specific demands, capacities and institutional requirements for the LSC hub design	Overview of generic and country specific demands, capacities and institutional requirements for the LSC hub design	0	1 generic and 3 country specific overviews			
	Output 2.5 Consolidated report of the demand, capacity and institutional assessment and sustainability strategy	Consolidated report of the demand, capacity and institutional assessment, including sustainability strategy; and publication	0	4			

Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
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		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Medium-term effect / Specific objective / Intermediary outcome 3	3. LSC hub partners (i.e. producers and users of data) are familiar with LSC services, are able to reflect on these services and are able to update LSC functions and operations.	Number of LSC hubs at national level, complemented by viable business plans.	0	3			
		Number of producers of knowledge and information (i.e. organisations) engaged in the LSC hub.	0	45 (on average 15 per country)			
Outputs Workpackage 3	Output 3.1 Existing basic land, soil and crop information available in the right format for deployment in the LSC hubs	Number of harmonised datasets with existing basic land, soil and crop information available	0	3			
	Output 3.2 GIS layers with basic land, soil and crop information at 250*250m resolution in the LSC-hub	Number of nation-wide GIS layers with basic land, soil and crop information at 250*250m resolution	0	3			
	Output 3.3 Tailor-made GIS layers to support CSA and agricultural transformation decision-making (e.g. nutrient deficiency, potential for improved water management and water harvesting, and potential for carbon sequestration)	Number of tailor-made GIS layers to support CSA decision-making	0	3			
	Output 3.4 Agreed hub architecture, based on the demand and institutional assessment in WP 2	Document describing the agreed upon architecture of the hubs	0	1			
	Output 3.5 LSC hubs developed in three countries according to user demands and populated with the data developed in activity 3.1 – 3.3	Hubs in three countries developed and populated with the data developed in activity 3.1 – 3.3.	0	3			
	Output 3.6 Human and institutional capacity for operating and maintain LSC hubs, and provide support services to stakeholders promoting and facilitating use; develop training materials	Number of training packages Number of training documents indicating that training material used at the three national hubs to train staff in data management, data integration and use.	0 0	3 3			
	Output 3.7 LSC-hubs embedded in existing national agricultural data infrastructures and agricultural advisory services of NARS (see WP4b)	LSC-hubs embedded in existing national agricultural data infrastructures and in existing multi-stakeholder platforms of agricultural sector collaboration	0	3			

Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
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Results chain		
Impact/ ultimate outcome	Increased agricultural productivity and farm income especially for small-scale farmers based on climate resilient and sustainable food production in Ethiopia, Kenya and Rwanda, characterised by reduced greenhouse gas emissions from primary production systems	<p><i>Assessment Pathway (see figure 3.1)</i> <i>* Discussed and agreed roadmaps based on the scaling and institutionalisation of LSC hubs - available for the design of an enabling and vibrant national AKIS 2.0 exist to contribute to rural transformation, climate change adaption and mitigation in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 2)</i></p>
		<p><i>Development Pathway</i> <i>* Through the effective operation of LSC knowledge and innovation hubs, the hubs evolve and expand towards national Agricultural Knowledge and Innovation Systems (AKIS 2.0) contributing to continuously challenging the status quo of food system performance, to rural transformation and a climate-smarter agricultural sector in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 3)</i> <i>* Enhanced adaptive capacity exists in information users and producers resulting in the continuous updating and improving of LSC hubs and their operation in particular and the national AKIS 2.0 in general in Ethiopia, Kenya, Rwanda, and eventually in East Africa (specified in WP 4a and WP 5a)</i></p>
		<p><i>Scaling and Institutionalisation Pathway</i> <i>LSC hubs in particular - and the national AKIS 2.0 in general - contribute to a decrease of the digital divide in the agricultural sector and are used for policy formulation, for the development of policy frameworks, for public and private advice and service provision as well as for the development of (inter)national funding schemes contributing to rural transformation and climate change adaption and mitigation Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 4b and WP 5b)</i></p>
		<p><i>Monitoring & Learning Pathway</i> <i>The latest trends and approaches to stimulate knowledge exchange and social learning are applied to enhance innovative capacity of the LSC hubs in particular and the national AKIS 2.0 to contribute to rural transformation, climate change adaption and mitigation in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 1)</i></p>

		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Medium-term effect / Specific objective / intermediary outcome 4	4. LSC hubs are used at national level, are complemented by a long-term viable business plan, are able to provide up-to-date LSC data to users and LSC hubs started to play an active role in policy development and in CSA decision making at national level	Number of national and regional users (organisations) using LSC-hub services for their decision making processes.	0	75			

		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Outputs Workpackage 4	Output 4.1 Policy bodies, knowledge organizations and development partners are aware and use information from LSC hubs	Number of public bodies (PB) trained in Ethiopia Number of public bodies trained in Kenya Number of public bodies trained in Rwanda Number of knowledge organisations (KO) trained in Eth Number of knowledge organisations trained in Kenya Number of knowledge organisations trained in Rwanda Number of development partners (DP) trained in Ethiopia Number of development partners trained in Kenya	Ethiopia 0 PBs Kenya 0 PBs Rwanda 0 PBs Ethiopia 0 KOs Kenya 0 KOs Rwanda KOs Ethiopia 0 DP Kenya 0 DP Rwanda 0 DP	Ethiopia 20 PBs Kenya 20 PBs Rwanda 20 PBs Ethiopia 20 KOs Kenya 20 KOs Rwanda 20 KOs Ethiopia 20 DP Kenya 20 DP Rwanda 20 DP			
	Output 4.2 Feedback of policy bodies, knowledge organizations and development partners which contributes to the functionality, visualization and user friendliness of LSC hubs	Number of country reports including feedback consultations with policy bodies, knowledge organizations and development partners	0	3			
	Output 4.3 Inputs provided by policy bodies, knowledge organizations and development partners for scaling and institutionalisation of LSC hubs	Number of country reports including inputs for scaling and institutionalization from policy bodies, knowledge organizations and development partners	0	3			
	Output 4.4 Inputs for the business plan including a financial strategy contributing to the sustainability of the LSC hubs	Number of country reports with inputs for business plans for LSC hubs	0	3			

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		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Medium-term effect / Specific objective / intermediary outcome 5	5. LSC hubs are used at local level, are complemented by a long-term viable business plan, are able to provide up-to-date LSC data to users and LSC hubs started to play an active role in policy development and in CSA decision making at local level and contribute to to enhancing the performance of extension services and public and private sector advisors	* Number of farmers actively using the LSC hubs	0	> 400,000 farmers (Ethiopia - 187.000 farmers, Kenya -100,000 farmers, Rwanda-111.000 farmers)			
		* Number of farmers per country indirectly connected to the LSC hubs through communication of public and/or private advisory/extension services	0	>3,000,000			
		* Number of public and private sector extension officers and other local service providers actively using the LSC hub	0	9000 (3000 per country)			
		* LSC hubs are mentioned in national rural transformation strategies	0	3 (Ethiopia, Kenya and Rwanda)			
		* Enhanced entrepreneurial value of LSC hubs: indicated by number of business initiatives or start-ups	0				

		Indicator	Baseline	Target	Achieved up to now	ON TRACK YES/NO or at RISK	Comments
Outputs Workpackage 5	Output 5.1 LSC users operating in a direct linkage with small-scale food producers aware of the usefulness and potential impact of the hubs	Number of farmers and representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas are aware of LSC hubs	0	20 staff x 2 areas x 3 countries = 120			
	Output 5.2 LSC information users able to access, work with and benefit from LSC information in their small-scale farmer level contributions to CSA and agricultural transformation	Number of farmers and representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas trained in the use information from LSC hubs (including those organizations targeting specifically women and young	0	20 staff x 2 areas x 3 countries = 120			
	Output 5.3 Feedback from LSC information users working at the small-scale farmer level improves the design and content of the hubs	Number of farmers and representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas provided feedback towards the functionality, visualization and user friendliness of	0	20 staff x 2 areas x 3 countries = 120			
	Output 5.4 Inputs (by representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas) for incorporating LSC information into scaling and embedding of	Number of workshop reports on the local policy consultation	0	1 per country = 3			
	Output 5.5 Inputs (by representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas) for incorporating LSC information in their development- and	Number of reports with inputs for business plans for LSC hubs	0	1 per country = 3			

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Results chain		
Impact/ ultimate outcome	Increased agricultural productivity and farm income especially for small-scale farmers based on climate resilient and sustainable food production in Ethiopia, Kenya and Rwanda, characterised by reduced greenhouse gas emissions from primary production systems	<p><i>Assessment Pathway (see figure 3.1)</i> <i>* Discussed and agreed roadmaps based on the scaling and institutionalisation of LSC hubs - available for the design of an enabling and vibrant national AKIS 2.0 exist to contribute to rural transformation, climate change adaption and mitigation in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 2)</i></p>
		<p><i>Development Pathway</i> <i>* Through the effective operation of LSC knowledge and innovation hubs, the hubs evolve and expand towards national Agricultural Knowledge and Innovation Systems (AKIS 2.0) contributing to continuously challenging the status quo of food system performance, to rural transformation and a climate-smarter agricultural sector in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 3)</i> <i>* Enhanced adaptive capacity exists in information users and producers resulting in the continuous updating and improving of LSC hubs and their operation in particular and the national AKIS 2.0 in general in Ethiopia, Kenya, Rwanda, and eventually in East Africa (specified in WP 4a and WP 5a)</i></p>
		<p><i>Scaling and Institutionalisation Pathway</i> <i>LSC hubs in particular - and the national AKIS 2.0 in general - contribute to a decrease of the digital divide in the agricultural sector and are used for policy formulation, for the development of policy frameworks, for public and private advice and service provision as well as for the development of (inter)national funding schemes contributing to rural transformation and climate change adaption and mitigation Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 4b and WP 5b)</i></p>
		<p><i>Monitoring & Learning Pathway</i> <i>The latest trends and approaches to stimulate knowledge exchange and social learning are applied to enhance innovative capacity of the LSC hubs in particular and the national AKIS 2.0 to contribute to rural transformation, climate change adaption and mitigation in Ethiopia, Kenya, Rwanda, and eventually, in East Africa (specified in WP 1)</i></p>

		Indicator	Baseline	Target	Achieved 31-12-2022	ON TRACK YES/NO or at RISK	Comments
Medium-term effect / Specific objective / intermediary outcome 1	1. A clear overview of the results, outcomes and lessons learnt and recommended steps to further optimise sector performance and resilience exists; These have been widely disseminated and enjoy a great visibility.	Number of roadmaps to develop a national AKIS based on lessons learnt and effective practices at LSC hubs An online monitoring dashboard (including historical logs) with (periodically updated) results and final Action outcomes	0 0	3 1	0 1	Y Y	<i>At outcome level:</i> A clear overview of results, outcomes and lessons learnt and recommended steps to further optimise sector performance will be provided by the end of the project. To this end an indicator tracking table has been prepared to monitor (<i>disaggregated</i>) results (e.g. no of small scale <i>female</i> farmers directly reached by 'the LSC hub'). <i>At indicator level:</i> the prepared indicator tracking table is necessary for the the online monitoring dashboard (https://lsc-hubs.org/#dashboard). The dashboard has been integrated in the website and will gradually link more with the logframe indicators. Roadmaps will be developed/designed during the project and described/recorded in the last project year.
Medium-term effect / Specific objective / intermediary outcome 2	2. A (proven) effective methodology and strategy for a LSC hub design trajectory based on lessons learned of clearly specifying demands, roles, responsibilities and capacity of actors exists and ownership has been made explicit.	Description of sustainability strategies developed for Ethiopia, Kenya, Rwanda Description of user needs assessments for LSC-hub information services for Ethiopia, Kenya, Rwanda Methodology for country demand and capacity assessment Methodology for country institutional assessment	0 0 0 0	3 3 3 3	0 0 2 2	Y N N N	<i>At outcome level:</i> The proof of the effectiveness of deliverable 2.1 and 2.2 will require assesment during project implementation. The use cases that have been produced during the in-country workshops as an output are an important foundation for WP3, 4 and 5. <i>At indicator level:</i> Methodologies for country demand and capacity assessments <i>and</i> for country institutional assessments are available. The outcome of using the methodology for the demand and capacity assessment (D2.1) has implications for the country.
Medium-term effect / Specific objective / intermediary outcome 3	3. LSC hub partners (i.e. producers and users of data) are familiar with LSC services, are able to reflect on these services and are able to update LSC functions and operations.	Number of LSC hubs at national level, complemented by viable business plans. Number of producers of knowledge and information (i.e. organisations) engaged in the LSC hub.	0 0	3 45 (on average 15 per country)	0 5	Y Y	<i>At outcome level:</i> on track. <i>At indicator level:</i> The first multi-stakeholder workshops at national and county level in Kenya and Rwanda indicated the representation of already different categories of AKIS actors: farmers, FOs, NGOs, public and private sector (includingv extension services), research institutes and (development) organisations/partnerships.
Medium-term effect / Specific objective / intermediary outcome 4	4. LSC hubs are used at national level, are complemented by a long-term viable business plan, are able to provide up-to-date LSC data to users and LSC hubs started to play an active role in policy development and in CSA decision making at national level	Number of national and regional users (organisations) using LSC-hub services for their decision making processes.	0	75	0	R	<i>At outcome level:</i> the LSC hubs are likely to be used at national level but the current en date of the project may actually jeopardise the actual use of the LSC hub for decision making. 'On track' has therefore been indicated as 'at risk'. <i>At indicator level:</i> Indicators may still require to be refined with all partners in the PMEAL framework, upon gradually having more insight in the Agricultural Knowledge and Innovation System (AKIS)
Medium-term effect / Specific objective / intermediary outcome 5	5. LSC hubs are used at local level, are complemented by a long-term viable business plan, are able to provide up-to-date LSC data to users and LSC hubs started to play an active role in policy development and in CSA decision making at local level and contribute to to enhancing the performance of extension services and public and private sector advisors	* Number of farmers actively using the LSC hubs * Number of farmers per country indirectly connected to the LSC hubs through communication of public and/or private advisory/extension services * Number of public and private sector extension officers and other local service providers actively using the LSC hub * LSC hubs are mentioned in national rural transformation strategies * Enhanced entrepreneurial value of LSC hubs: indicated by number of business initiatives or start-ups	0 0 0 0 0	> 400,000 farmers (Ethiopia - 187.000 farmers, Kenya -100,000 farmers, Rwanda-111.000 farmers) >3,000,000 9000 (3000 per country) 3 (Ethiopia, Kenya and Rwanda)	0 0 0 0 0	R R R R R	<i>At outcome level:</i> the current end date of the project may actually jeopardise the active role the LSC hubs may be able to play in policy development and CSA decision making and hence has been put "at risk". <i>At indicator level:</i> indicators are continuously being refined (in the PMEAL framework), particularly on the basis of the Quicksan and the results of the multi-stakeholder workshops in Kenya and Rwanda with all partners. In connection to the upscaling of regional initiatives (in cooperation with ASARECA, one of the CAADP-XP4 organisations), buy-in of current initiatives (ILRI's AICCRA project) and through multipliers of the local extension system and other intermediaries, current target numbers provided in the logframe are <i>still not unrealistic</i> . During the WP2 workshops in Kenya and Rwanda inputs were obtained from all key AKIS actors including: private sector, government (national and country), development partners
Other Outcomes	The strategy developed during the Action reduced the gap between research and practice in the farm planning of small-scale farmers has been embarked upon by public and private sector stakeholders	Number of active multi-stakeholder platforms for the exchange of agricultural knowledge and information	0	3 (1 platform per country)	0	R	<i>At outcome level:</i> <i>at risk</i> , delayed activities may have an effect on the actual reduction of the gap. <i>At indicator level:</i> The platforms have started to be developed at county and national level in Kenya and in Rwanda, as part of the WP2.2 workshops
	Capacity built of national agricultural research institutions	Number of National Agricultural Research Institutes Number of staff of National Agricultural Research Institutes/Centres trained	0 0	3 60	0 0	Y Y	<i>At outcome level:</i> still on track but activities to reach the outcome may be delayed. <i>At indicator level:</i> still on track but activities to reach targets may be delayed.
	Students trained in the action	Number of PhD students trained	0	1	1	Y	<i>At outcome level:</i> on track <i>At indicator level:</i> After preparations made for the selected PhD student, Mr Musefa Abigaz, he started his first period in Wageningen on 1 October 2022.

		Indicator	Baseline	Target	Achieved 31-12-2022	ON TRACK YES/NO or at RISK	Comments
Outputs Workpackage 2	Output 2.1 Multi-stakeholder consultative process design for the demand and capacity assessment	A documented multi-stakeholder consultative process design for the demand and capacity assessment.	0	3	2	N	Deliverable 2.1 has been tailored to Kenya, Rwanda and Ethiopia. In line with the prepared methodology, Quicksans, incl. a description of the AKIS in Kenya and Rwanda and a plan to apply the methodology in Kenya and Rwanda have been prepared. Following the methodology the assessment process as outlined under Output 2.3 has started. This exercise will follow in Ethiopia in 2023. The methodology integrates relevant topics of interest from workpackage 3, 4 and 5 Pilot counties and districts have been selected for Kenya and Rwanda as part of the methodology and links as such to Activity 5.1.
	Output 2.2 Multi-stakeholder consultative process design for the institutional assessment	A documented multi-stakeholder consultative process to define the institutional requirements and assessment.	0	3	2	N	Deliverable 2.2 has been tailored to Kenya and Rwanda, specifically the approach to the institutional assessment was prepared for Kenya and was applied in Rwanda after internal review. The process is ongoing for Ethiopia. Questionnaires have been prepared for the hub host capacity assessment.
	Output 2.3 Multi-stakeholder implemented country based demand, capacity and institutional assessments	Number of focus group discussions per country covering at least 5 stakeholder groups Number of multi-stakeholder workshops per country Documented multi-stakeholder country-based demand capacity and institutional assessments.	0 0 0	10 FGDs 2 workshops 3 country documents	0 6 2	N N N	The assessments under output 2.3 were implemented in the form of three workshops in Kenya: Nairobi (national level), Busia and Taita Taveta; In Rwanda: in Kigali, Muzanze and Rwamagana. Draft workshop reports have been prepared. (Workshops in Ethiopia prepared for Jan 2023). NARS staff participated in each others workshops for peer to peer input. All FGD/KIs moved to early 2023.
	Output 2.4 Overview of generic and country specific demands, capacities and institutional requirements for the LSC hub design	Overview of generic and country specific demands, capacities and institutional requirements for the LSC hub design	0	1 generic and 3 country specific overviews	0	N	Replanned for the first quarter of 2023 after completion of 2.3 in Ethiopia.
	Output 2.5 Consolidated report of the demand, capacity and institutional assessment and sustainability strategy	Consolidated report of the demand, capacity and institutional assessment, including sustainability strategy; and publication	0	4	0	N	Replanned for the last quarter of 2022 after completion of 2.3 in the 3rd and 4th quarter 2022, for Kenya and Rwanda. Ethiopia will follow thereafter.
Outputs Workpackage 3	Output 3.1 Existing basic land, soil and crop information available in the right format for deployment in the LSC hubs	Number of harmonised datasets with existing basic land, soil and crop information available	0	3	1	N	This activity translated 2 selected use cases: Soil and Water Conservation (SWC) and Soil Productivity / Integrated Soil Fertility Management (ISFM) into lists of no-regret data layers. Draft have been prepared. Doc will be finalised on the basis of the results of the needs and capacity assessments per country under Output 2.3.
	Output 3.2 GIS layers with basic land, soil and crop information at 250*250m resolution in the LSC-hub	Number of nation-wide GIS layers with basic land, soil and crop information at 250*250m resolution	0	3	2	Y	Two draft sets of data layers prepared as intermediate results. To be completed in course of 2023 and 2024. The input from DLR was defined and concluded in the final contract with DLR. EIAR PhD student started work at ISRIC
	Output 3.3 Tailor-made GIS layers to support CSA and agricultural transformation decision-making (e.g. nutrient deficiency, potential for improved water management and water harvesting, and potential for carbon sequestration)	Number of tailor-made GIS layers to support CSA decision-making	0	3	0	Y	For the soil productivity use case an overview of models, flowcharts and required data layers were prepared. Collection of corresponding data has started.
	Output 3.4 Agreed hub architecture, based on the demand and institutional assessment in WP 2	Document describing the agreed upon architecture of the hubs	0	1	0	Y	First exchanges on systems in place by hub hosts included in WP2 capacity assessment of hub hosts. Will continue under WP2.3 before the design stage.
	Output 3.5 LSC hubs developed in three countries according to user demands and populated with the data developed in activity 3.1 – 3.3	Hubs in three countries developed and populated with the data developed in activity 3.1 – 3.3.	0	3	0	Y	Will start in once the feedback from the workshops 2.3 is made available in the 4th quarter 2022
	Output 3.6 Human and institutional capacity for operating and maintain LSC hubs, and provide support services to stakeholders promoting and facilitating use; develop training materials	Number of training packages Number of training documents indicating that training material used at the three national hubs to train staff in data management, data integration and use.	0 0	3 3	0 0	Y Y	Available training materials on Digital Soil Mapping collected as input for capacity building. Training conducted in context of ISRIC Spring School added to materials from RWASIS project as basis - lessons learned- for activity 3.6 in Rwanda (and other countries. Will continue in 2022
	Output 3.7 LSC-hubs embedded in existing national agricultural data infrastructures and agricultural advisory services of NARS (see WP4b)	LSC-hubs embedded in existing national agricultural data infrastructures and in existing multi-stakeholder platforms of agricultural sector collaboration	0	3	0	Y	Will start in the 4th quarter 2024

		Indicator	Baseline	Target	Achieved 31-12-2022	ON TRACK YES/NO or at RISK	Comments
Outputs Workpackage 4	Output 4.1 Policy bodies, knowledge organizations and development partners are aware and use information from LSC hubs	Number of public bodies (PB) trained in Ethiopia Number of public bodies trained in Kenya Number of public bodies trained in Rwanda Number of knowledge organisations (KO) trained in Eth Number of knowledge organisations trained in Kenya Number of knowledge organisations trained in Rwanda Number of development partners (DP) trained in Ethiopia Number of development partners trained in Kenya	Ethiopia 0 PBs Kenya 0 PBs Rwanda 0 PBs Ethiopia 0 KOs Kenya 0 KOs Rwanda KOs Ethiopia 0 DP Kenya 0 DP Rwanda 0 DP	Ethiopia 20 PBs Kenya 20 PBs Rwanda 20 PBs Ethiopia 20 KOs Kenya 20 KOs Rwanda 20 KOs Ethiopia 20 DP Kenya 20 DP Rwanda 20 DP	Ethiopia 0 PB Kenya 0 PB Rwanda 0 PB Ethiopia 0 KO Kenya 0 KO Rwanda 0 KO Ethiopia 0 DP Kenya 0 DP Rwanda 0 DP	N N N N N N N N N	(Delayed against 2022 plan) Planned for 1st half 2023, after completion of WP2
	Output 4.2 Feedback of policy bodies, knowledge organizations and development partners which contributes to the functionality, visualization and user friendliness of LSC hubs	Number of country reports including feedback consultations with policy bodies, knowledge organizations and development partners	0	3	0	Y	Planned for 2023
	Output 4.3 Inputs provided by policy bodies, knowledge organizations and development partners for scaling and institutionalisation of LSC hubs	Number of country reports including inputs for scaling and institutionalization from policy bodies, knowledge organizations and development partners	0	3	0	Y	Planned for 2023
	Output 4.4 Inputs for the business plan including a financial strategy contributing to the sustainability of the LSC hubs	Number of country reports with inputs for business plans for LSC hubs	0	3	0	Y	Planned for 2024
Outputs Workpackage 5	Output 5.1 LSC users operating in a direct linkage with small-scale food producers aware of the usefulness and potential impact of the hubs	Number of farmers and representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas are aware of LSC hubs	0	20 staff x 2 areas x 3 countries = 120	0	N	(Delayed against 2022 plan) Priorities of the EU Delegation (Nairobi), Dutch Embassies (in Rwanda, Kenya and Ethiopia), KALRO and possible linkages with other DeSIRA projects, have been combined in the selection of target geographies in Kenya and Rwanda. Several meetings were held to align expectations from NARS and other parties. This has been incorporated in the plan for te workshops under output 2.3.
	Output 5.2 LSC information users able to access, work with and benefit from LSC information in their small-scale farmer level contributions to CSA and agricultural transformation	Number of farmers and representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas trained in the use information from LSC hubs (including those organizations targeting specifically women and young people)	0	20 staff x 2 areas x 3 countries = 120	0	R	Planned for early 2023 following WP2.
	Output 5.3 Feedback from LSC information users working at the small-scale farmer level improves the design and content of the hubs	Number of farmers and representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas provided feedback towards the functionality, visualization and user friendliness of the hubs	0	20 staff x 2 areas x 3 countries = 120	0	R	(May be delayed against 2022 plan) Planned for 2023
	Output 5.4 Inputs (by representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas) for incorporating LSC information into scaling and embedding of LSC hubs	Number of workshop reports on the local policy consultation	0	1 per country = 3	0	R	(May be delayed against 2022 plan) Planned for 2023
	Output 5.5 Inputs (by representatives of staff of local public rural extension, planning and policy development, NGOs, farmer organizations and private sector in 2 selected areas) for incorporating LSC information in their development- and	Number of reports with inputs for business plans for LSC hubs	0	1 per country = 3	0	Y	Planned for 2024