

SAFE4ALL Report on inventorying Tools, Services and Policy context for co-creation case studies: Needs Assessment and Gap Analysis for Adaptation to Climate Change

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Executive Summary

This report presents a stakeholder engagement matrix that will guide the planning of activities leading to the development of the relevant SAFE4ALL tools and services required in the three co-creation cases.

Although some climate services and tools exist in the case study countries (Ghana, Kenya and Zimbabwe), they are often fragmented and lack sustainability in terms of operation, maintenance due to financial and institutional constraints including capacity to maintain the tools and services. Again, the primarily target of most of the existing services are large commercial farmers, operating at a county/district or national scale leaving many local needs unmet.

The SAFE4ALL initiative aims to address these gaps by focusing on three vulnerable regions - Ghana, Kenya, and Zimbabwe. Through collaborative case studies, the project is testing user-centered suite of bundled services including ecosystem management, agriculture and disaster management at time scales of near-real time to seasonal forecasts. This is done using various tools designed by the project partners to enhance community resilience, improve food security, and mitigate the impacts of climate change-induced migration.

By identifying and engaging key stakeholders from the start of the project activities, the tools and services will be well-targeted and address real needs on the ground. This also ensures the project gets an early buy-in its' activities and avoid the pitfall of climate services and tools being disbanded, following finalization of projects.

1. Objectives and Goal

The objectives of the SAFE4ALL project stakeholder engagement matrix is to:

1. List the various groups of stakeholders who we will engage with during the project: Map the various stakeholder groups that we will engage with during project implementation to determine the best strategy to use to get them to support or lead the project activities.

2. Analyze the needs of identified stakeholders: To ensure that the project activities, tools and services are relevant to key stakeholders including users, it is critical to understand their “pain points” and needs so these tools and services address critical gaps that they currently have with regards to localized climate, water and health/environmental data and information needs. Identifying these will support effective adaptation strategies.

3. Determine and manage the expectation of stakeholders: We want to ensure we do not oversell the products, tools and services we will develop to fill some of the gaps identified during the needs assessment. We do not want to promise stakeholders, especially smallholder farmers, that we will solve all their problems by engaging them in this project. At the same time, we need to make the project look attractive to them so we can get their full buy-in to support the co-creation of climate information, tools, and services, ensuring that their perspectives are integral to the co-creation process.

4. Identify the interest of stakeholders: To identify gaps in the current offerings of tools and services from other projects and providers (as elaborated in the SAFE4ALL deliverable D1.1 – Inventory of Tools and Services in the Case Study Countries and Regions), highlighting areas where additional resources or support are necessary to enhance farmers' capacity to adapt to climate change which will raise their interest in the offerings (tools and services) from the SAFE4ALL project.

5. Inform Stakeholders: To provide actionable recommendations for policymakers, practitioners, and researchers aimed at bridging identified gaps and facilitating collaborative efforts that empower stakeholders to adapt to climate change effectively.

6. Possible Impact of the project on Stakeholders: To analyze the possible impact with regards to the building of the resilience of stakeholders to climate extremes and to improve their coping strategies to improve food and water security which will likely lead to a reduction in rural-urban (in-country) as well as South-North or South-South (regional and continental) migration.

These objectives will lead to the development of an engagement matrix which highlights the approach including engagement process and channels for each stakeholder in the various case studies.

2. Background

The SAFE4ALL project aims at addressing food security, disaster management and migration issues with the main objective to better support local and regional actors in decision-making to safeguard African foodsheds and to build resilience in communities across scales. The project harnesses the EU climate services landscape and leverage it with local knowledge from African case studies to co-create Climate Information Services (CIS) and to facilitate its uptake at different scales (from local to district and regional levels). The SAFE4ALL project therefore advances the uptake of user-centered climate services in three carefully selected vulnerable regions across Africa (Figure 1), strengthening and accelerating adaptation and resilience to climate change in those regions. The project has selected three (3) co-creation case studies where we test bundled user-centered suite of services including ecosystem management, agriculture and disaster management at time scales of near-real time to seasonal forecasts.

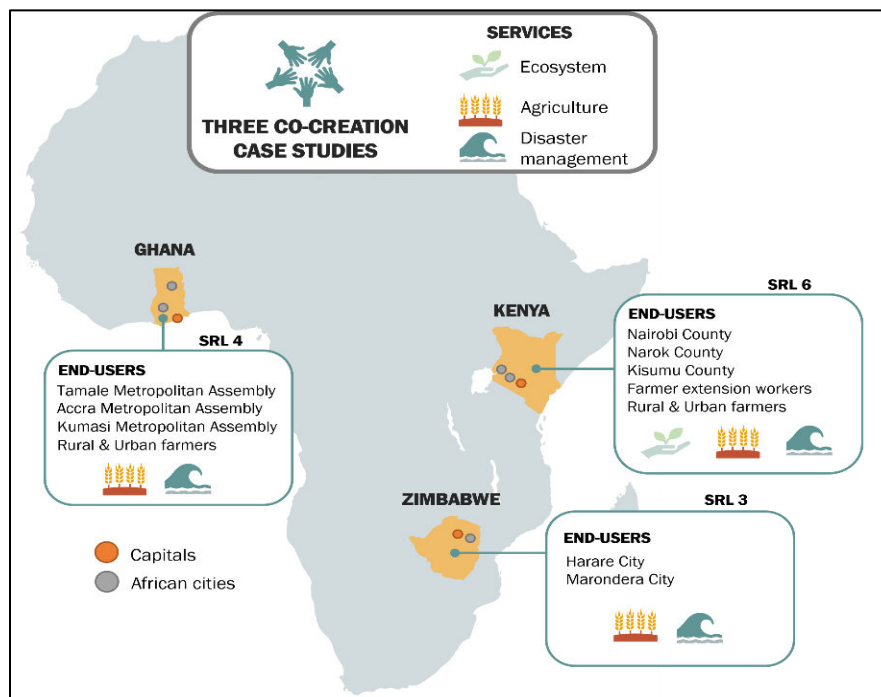


Figure 1: Map of the three Co-creation cases

Through collaborative efforts with key stakeholders, innovative tools, and tailored services, SAFE4ALL will support the development of climate adaptation plans, promote sustainable agricultural practices, and build resilience in vulnerable communities, ensuring that Africa can meet its food security challenges effectively.

The starting point for these activities is the careful identification of key stakeholders, determining their interests, needs and co-creation of localized climate, water and environmental (health) tools and services that addresses these needs in a sustainable manner going beyond the project phase.

This report presents a stakeholder engagement matrix that will guide the planning of activities leading to the development of the relevant tools and services required in the three co-creation cases.

3. Methodology

The methodology for the study was designed to map the relevant stakeholders to engage in the development and delivery of the SAFE4ALL tools, services that will support climate adaptation among farmers and citizens in general, in Kenya, Ghana, and Zimbabwe. This included the review of relevant literature, stakeholder interviews through focus group discussions, questionnaire administration and workshops to identify technical champions, enablers and users of Climate Information Services (CIS). Details of this methodology is presented in SAFE4ALL deliverables D1.1 and D1.3 which are also public documents.

4 Results and Discussion

This section presents the results including the groupings and list of identified stakeholders, possible or preferred mode of engagement according to their needs, their interests and expectations from literature and through the survey carried out in Ghana, Kenya and Zimbabwe.

4.1 Typology of stakeholders

There are many ways of categorizing stakeholders for climate services. These are presented below based on literature review, expert knowledge and stakeholder input from the survey carried out in Ghana, Kenya and Zimbabwe.

Stakeholders could be grouped using about 15 different models or grids¹ listed below.

1. Power-interest grid
2. Influence-impact grid
3. Power-influence grid
4. Importance-influence grid
5. Stakeholder analysis matrix (used in SAFE4ALL to enhance our communication strategy)
6. Saliency model
7. Stakeholder attitude and knowledge map
8. Stakeholder engagement assessment (also used by SAFE4ALL to determine the level of involvement of various stakeholders)
9. Stakeholder interest and impact table
10. Stakeholder participation grid
11. Stakeholder mind map
12. Stakeholder context diagram
13. Direction of influence chart
14. Stakeholder cube
15. Stakeholder profile

4.1.1 Internal and External Stakeholders

For the development and the delivery of the tools and climate services for the SAFE4ALL project, internal stakeholders will be classified as partners and third parties directly or indirectly receiving funding from the project (consortium partners and sub-contractors) while external stakeholders could be considered as people or institutions that receive some benefit from the project or are affected by activities carried out within the project.

¹ <https://www.indeed.com/career-advice/career-development/types-of-stakeholder-analysis>

4.1.2 Main stakeholders for climate information Tools and Services

The main stakeholders identified as relevant for the development of climate information services include the following (Carr et al., 2020; Lamond et al., 2019; Nkiaka et al., 2019):

1. National Meteorological and Hydrological Services (NMHSs)
2. Research Scientists (including Hydrologists and climate scientists)
3. Crop and Livestock (Pastoralists) Farmers
4. Government ministries and departments
5. Agricultural extension officers

Other stakeholder groups that are important but often left out of discussions include:

- Media
- Businesses
- NGO's
- Military
- Fire brigades

With respect to the SAFE4ALL CIS, the following stakeholders have been identified based on literature, expert knowledge and the survey carried out for the 3 case studies:

- **Farmers:** included by all experts and local stakeholders as one of the key players, farmers are by far the largest group of grassroots end-users. Though diverse types of farmers require different actionable information, the method by which this can be supplied to them remains very similar (SMS, IVRS, Radio, TV).
- **Pastoralists:** often referred to as a marginalized group, pastoralists often end up in conflict with farmers due to the overlap between grazing land and farmland. Currently pastoralists heavily rely on local weather prediction methods and are notoriously difficult to reach with information from CIS, because they often do not own smartphones and do not stay in the same place for long.
- **Meteorological and Hydrological Services:** the most powerful institution when it comes to the spread and adoption of CIS, since it holds the mandate for dissemination of weather and climate information.
- **Government ministries:** this stakeholder group includes any government ministry or department that could make use of weather and climate information to influence their policies. Though the interest varies highly between the ministries, information on disaster management and weather/climate extremes are highly wanted by this user group.
- **Agricultural extension staff:** this stakeholder group is the intermediary between the farmers and other actors such as government ministries and meteorological offices, and therefore play a vital role in the dissemination of information and knowledge to grassroots end-users.
- **General public:** mainly interested in health and disaster warning information, the general public is included to represent the interests of all other grassroots end-users (citizens in general).
- **Food supply chain actors:** this stakeholder includes the following private actors along the food supply chain:
 - Middle men
 - Seed distributors
 - Transporters
 - Store owners

- Other Integrators
- **Media:** though not specifically mentioned as a stakeholder by many, the media is a key player in disseminating weather and climate information to the general public.

Though they were frequently mentioned as a stakeholder group, NGOs are not focused on in this report. This is done because the role NGOs play is more similar to that of a tool or service developer than to that of a local stakeholder. TAHMO for an example is an NGO.

4.1.3 Stakeholder power/interest

The dynamics in the stakeholder group will evolve over time as the project progresses. However, preliminary sketch of the power-interest dynamics of these stakeholders is presented in Figure 2 according to the findings of the interviews.

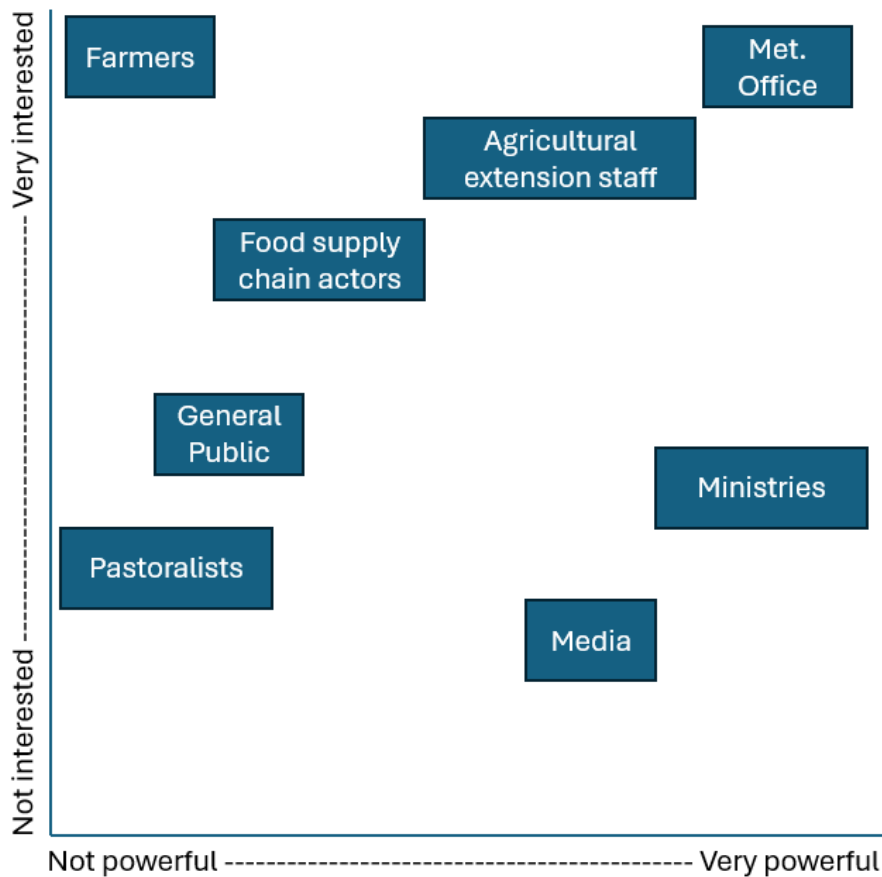


Figure 2: Stakeholder groupings for Climate Information Services (Source: Abel Drost, 2024)

From Figure 2, it is clear that **farmers** are very much interested in Climate Information Services however they are less powerful so cannot dictate much. This is also the reason SAFE4ALL concentrated a bit more on smallholder farmers so we can co-create tools and services that meet their needs.

In the same way, the **media** is very powerful but often not much interested in climate services. To generate some interest for the media, SAFE4ALL is developing learning modules (WP5) using storytelling and story maps.

Agricultural extension officers and **National Hydrological and Meteorological Services** are very powerful and very much interested in CIS. It was therefore strategic,

that the project involved these key players from the onset of the project. All national meteorological services from the case study countries are project partners (in the case of Kenya and Ghana) or a sub-contractor (in the case of Zimbabwe). The Agricultural extension officers were also actively involved in co-creating, testing and administering the first set of questionnaires used for the needs assessment in the case study countries. By engaging these powerful and interested stakeholders (Met Services and Agricultural Extension Officers), they can play leading roles in the project implementation as desired by the project (see Table 1). The stakeholder grouping (Figure 2) follows a similar pattern for all case study countries (Ghana, Kenya and Zimbabwe).

The climate services and tools being developed are tailored to local policy contexts for SSA and support synergies between policies, needs and climate information services within the local processes while providing communication platforms using story maps and storytelling to facilitate actionable and inspiring results for climate adaptation to enhance project uptake.

4.2 Case study-specific stakeholder engagement matrix

Ghana

The stakeholder engagement assessment matrix in general (Table 1) is the same for all three countries (LivingLabs or case studies) based on literature, expert knowledge and the survey carried out especially for the SAFE4ALL tools and climate services.

Table 1: SAFE4ALL Project Stakeholder Engagement Matrix

Stakeholder	Power/Interest	Unaware	Resistant	Neutral	Supportive	Leading
Farmers	Low/High	C				D
Food supply actors	Med/High	C			D	
General Public/Citizens	Low/Med	C			D	
Pastoralists	Low/Low	C			D	
Agricultural Extension Staff	High/High			C		D
Meteorological Services/Offices	High/High			C	D	D
Ministries and departments	High/Med	C			D	
Media	Med/Low	C			D	

Key: C – current state; D- desired state during and after the project implementation

In Zimbabwe, the specific stakeholders (Figures 4-7) required to support the development of the climate services in the LivingLabs were identified (Figure 7) but that is not the case for the other two(2) countries where this will be done within the next six(6) months. The stakeholder matrix will continuously be updated. Table 1 will have case specific stakeholders who will be well-targeted for the climate services. The three sets (3) of bundled Climate Services being developed by SAFE4ALL project covers **Foodsheds (agricultural) management**, **Hydro-Meteorological Disaster Management** (drought, floods, tropical cyclones) and **Ecosystem management** (reservoir management – water quantity and quality, movement and migration of wildlife in nature reserves and communities that surround them).

The power-interest-grid (Figure 3) will help SAFE4ALL with our co-creation of tools and services, communication, dissemination and exploitation of project results.

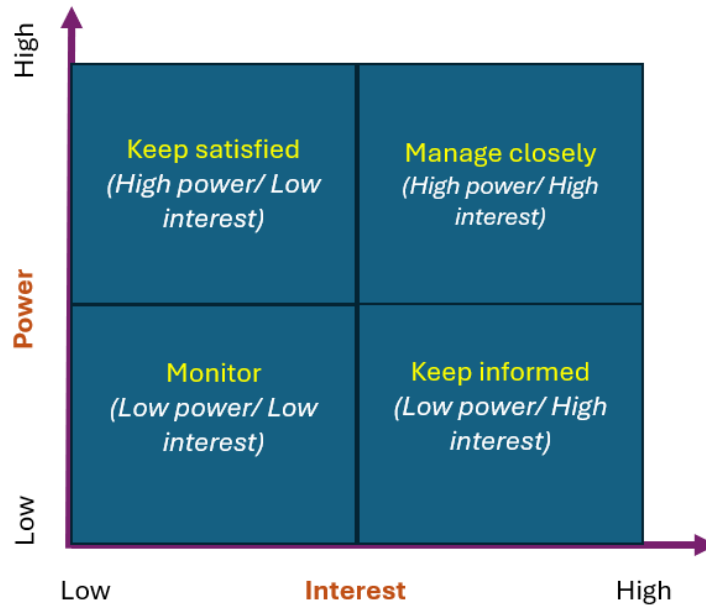


Figure 3: The Power-Interest Grid for targeted engagement strategies²

AhaSlides

List some Technical Champions for CIS?

irrigation experts
zimbabwe water authority

department of irrigation dcp
dcp-dept of civil protect
agric extension officers

lead farmers

extension officers
zim national water author

msd

civil protection unit
innovation centre officer

climate change management

univetidities
farmers unions

met officers

ngos
agritex
farmers

met officer
iks

zinwa-zimbabwe national w

Figure 4: Identified stakeholders who are considered champion actors of climate services in Zimbabwe

² <https://rigcert.education/resources/power-interest-grid-for-stakeholder-identification-and-management>

List some Enablers for CIS?



Figure 5: Identified stakeholders who will enable climate services in Zimbabwe

List some End-Users for CIS?



Figure 6: Identified stakeholders who will use climate services in Zimbabwe

Who should be in the Living Lab at Marondera?



Figure 7: Suggested stakeholders for the LivingLab in Marondera, Zimbabwe

4.3 Communication and Engagement platforms or channels for CIS

Following the interviews, focus group discussions and workshops organized in the three co-creation case studies, the preferred channels for communication, dissemination and engagement in the co-creation processes including capacity development and mobilization are presented Figure 8. The suggested channels align with the dissemination and communication strategy for SAFE4ALL which makes it easier to use the suggested channels especially for WP5 in terms of the local embedding of climate change adaptation solutions through trainings.

How and where should we meet?



Figure 8: Suggested channels and platforms for engagement of stakeholders in the LivingLabs

5 Conclusions

Identifying and engaging key stakeholders from the start of the project activities is important for the well-targeting of tools and services that will address real needs on the ground. This also ensures we have early buy-in for the project activities and avoid the pitfall of climate services and tools being disbanded after the end of projects.

The identification and engagement process has to be a continuous process which makes it tedious and expensive but worthwhile. In SAFE4ALL we will continue to actively engage all spectrum of stakeholders to ensure gender inclusiveness, literacy neutral and sustainable co-creation of climate tools and services that will outlast the project. The engagement matrix will be continuously updated and presented in the periodic reports and in D1.5 '*Prioritized overview of innovations and improvements*' and D1.6 '*Final overview of developed services and tools, together with usage assessment for different cases, fields of application, and stakeholders*'.

6 Recommendations for Project Implementation and Service Delivery

Within the SAFE4ALL project, tools and services are developed to meet the needs of users, considering already existing tools and services, policies and governance, needs of different users, as well as lessons learnt from previous tools and services while focusing on how best to engage with stakeholders in the LivingLabs in the case-studies of the project. From the results obtained so far, it is clear that the different tools and services for SAFE4ALL will require different business plans for sustaining it beyond the project through continuous engagement of the identified stakeholders.

7 References and reviewed documents

Carr, E. R., Goble, R., Rosko, H. M., Vaughan, C., & Hansen, J. (2019). Identifying climate information services users and their needs in Sub-Saharan Africa: a review and learning agenda. *Climate and Development*, 12(1), 23–41. <https://doi.org/10.1080/17565529.2019.1596061>

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Nkiaka, E., Taylor, A., Dougill, A. J., Antwi-Agyei, P., Fournier, N., Bosire, E. N., Konte, O., Lawal, K. A., Mutai, B., Mwangi, E., Ticehurst, H., Toure, A., & Warnaars, T. (2019). Identifying user needs for weather and climate services to enhance resilience to climate shocks in sub-Saharan Africa. *Environmental Research Letters*, 14(12), 123003. <https://doi.org/10.1088/1748-9326/ab4dfe>

<https://www.indeed.com/career-advice/career-development/types-of-stakeholder-analysis> [Last Accessed: 31/01/2025]

Annex 1

Information flow of the SAFE4ALL services, in relation to the different stakeholder groups and societal actors that have been identified during the initial stages of the project duration.

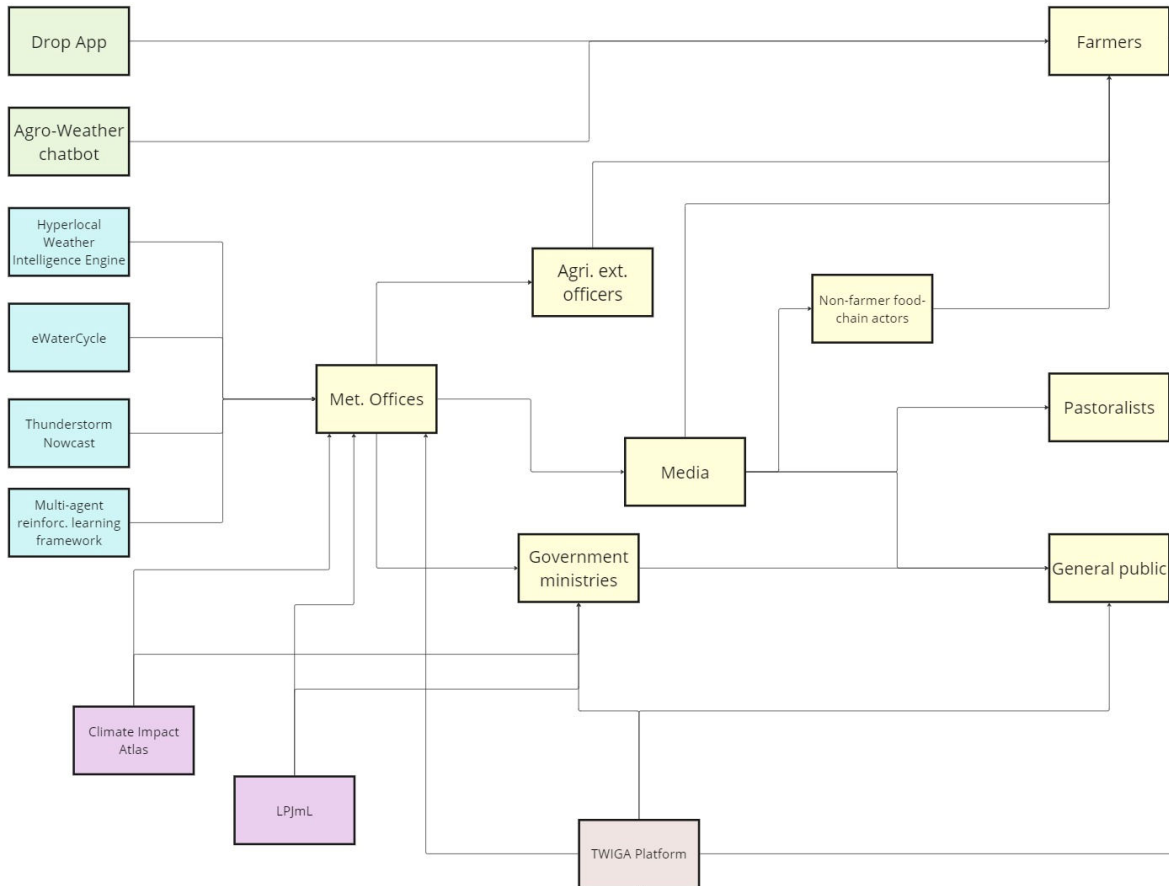


Figure 9: Information flow for the SAFE4ALL Tools to the various identified stakeholder groups



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