

Info Note

Scaling the capacities to adapt to a changing climate

Experiences of the AMIA Climate Resilient Villages, Philippines

Jana Koerner, Ruvicyn S. Bayot, Maggie Rosimo, Rene Vidallo, Julian Gonsalves

NOVEMBER 2019

Key messages

- AMIA villages have the necessary ingredients to develop into system-wide innovation platforms.
- AMIA village leaders act at the nexus between farmer communities, the local governments and the wider enabling environment.
- With technical knowledge on CRA widely being available, they developed functional capacities like fostering ownership and stakeholder linkages, and applying an adaptive management.
- Tacit knowledge, in combination with technical knowledge, played a strong role in their choice of tools, capacity and learning formats, and M&E.
- Main challenges referred to technical capacities of the AMIA village leaders' home institutions and the enabling environment.
- Recurrent needs assessments of the innovation capacities could help the AMIA village project to tailor their capacity building and learning curricula with a systems-wide perspective.

The fast advancing climate change calls for accelerated scaling of agricultural innovations. The Climate-resilient agriculture (CRA) concept in the Philippines integrates agricultural development with climate responsiveness. Similar to climate-smart agriculture, CRA is highly context-specific and requires a systems approach.

Combining technical and functional capacities

The need for constant adaptation in a changing climate points to an increased importance of the main actors' adaptation capacities across all levels. This also means that

efforts to scale community-based approaches need to foster innovation capacities along all phases of the scaling processes. Innovation means to bring knowledge into use. The “know what” is as important as the “know-how”. Therefore, capacities to innovate require both technical and tacit knowledge, and technical and functional capacities at all levels.

Innovation platforms can create innovation capacities at individual and organizational levels, which in turn can positively change the institutional environment. However, addressing the complex challenges of food systems in climate change requires a system-wide approach (Chuluunbaatar and LeGrand, 2015).

Climate-resilient villages as system-wide innovation platforms

Adaptation and Mitigation in Agriculture (AMIA)

Program: Since 2015, the Philippines Department of Agriculture (DA) mainstreams climate resilient agriculture (CRA) across all its programs, functions, and agencies through the national and system-wide AMIA program. As part of this AMIA program, DA created “AMIA villages” in 21 regions, following the example of CCAFS Climate-Smart Villages.

In the Philippines, the local government units (LGU) are the main implementing units for agricultural policies, while the Regional Field Offices (DA-RFOs) are responsible for the overall coordination and management, e.g. of the AMIA villages, and the liaison between the LGUs and the national government.

Textbox 1: The Philippines' AMIA program

Already in 2014, the NGO International Institute of Rural Reconstruction (IIRR) set up two Climate Smart Villages as learning platforms in the municipalities of Guinayangan and Ivisan. Between 2017/2018, IIRR implemented a

capacitation program for AMIA Focal Persons on CRA programming and AMIA village implementation, with emphasis on local government engagement. In three roving workshops and review events, IIRR facilitated active peer exchange between “advanced” and “new” AMIA villages, with active participation of farmer leaders, extension technicians, and stakeholders like national research stations, State Universities, and Colleges.

In July 2019, IIRR interviewed 12 AMIA representatives about their current implementation process. Open questions included lessons learnt and challenges, the use of tools and capacity building processes. This Info Note aims to feed dialogue and exchange among AMIA village implementers, outline further areas for action, and provide learnings for the CCAFS and the wider scaling community.

The different dimensions of AMIA villages

In July 2019, the AMIA villages were in different stages of implementation:

Understanding the concept, goals and concept: Some AMIA villages were in the initial stage of raising stakeholders’ awareness on the project, using the AMIA framework and Climate Risk Vulnerability Assessments (CRVA) as basis for establishing the AMIA villages.

Community mobilization and planning: Some AMIA villages were in the phase of community mobilization, using participatory rural appraisal (PRA) tools to build a basic understanding on weather and climate, and how agriculture both contributes to and is affected by climate change, influencing daily lives in the communities.

Community participatory action: Other AMIA villages were currently engaged in community participatory action, organizing learning groups of future farmer cooperators, and introducing participatory action research to identify CRA technologies and practices.

Incremental strategies: Some AMIA villages currently developed strategies to integrate business enterprise development in their community-based approaches, e.g. by diversifying cropping systems with crops or commodities that have a market, while at the same being adaptive to climate hazards and/or protecting the environment.

Sustaining and scaling: Some AMIA villages already approached the end of their project and were concerned with sustaining the AMIA villages, while others were already planning to expand to other provinces or municipalities vulnerable to climate change.

Textbox 2: The different dimensions of AMIA villages

Key lessons from implementation

■ Ownership at the different levels

“A progressive community greatly depends on the farmers or people themselves!” Climate change is irreversible, but

farmers are intrinsically able to adapt to and even mitigate climate change, thus strengthening the resiliency of their communities. Most respondents emphasized strongly that this effort takes collective learning and action.

“It is important that all actors understand their roles and responsibilities.” The local government units (LGU) have a crucial role in guiding the AMIA process. They facilitate on the ground implementation, e.g. the introduction of CRA technologies and practices to farmers and farmers’ trainings. They also coordinate with stakeholders at the field level to take on and enact their respective roles and responsibilities. Stakeholders include farmer associations, community officials, local and regional technical working groups, State Universities and Colleges and local, provincial and regional government units. The DA-Regional Field Offices (RFOs), in turn, liaise with the LGUs and the national government, and have the national coordinating responsibility of the AMIA village project.

■ Adaptive management

“The AMIA team must be resilient to adapt to the client’s unique distinction.” Each AMIA village has distinct geographic, political, social and demographic characteristics, and every village has its own priorities. This calls for an adaptive management approach. Communities need to be equipped to identify their own problems and come up with locally viable solutions. This entails proper and regular coordination and planning with the farmers from the very beginning.

“If you do not level off with the locals, you will never understand how they behave and why.” Another crucial ingredient was having presence on the ground. Being hands-on and directly working with the farmers and fisherfolks builds trust in relationships. Open communication spaces allow that technicians and farmers effectively convey and understand their messages. Explaining the project thoroughly before starting field activities and having continued interaction will further increase the probability that farmer-learning groups keep agreements and adhere to research protocols.

■ Partnerships and multi-stakeholder platforms

“The project can’t work if you don’t have smooth linkages with all the partners.” Partnerships and multi-stakeholder platforms are very important elements to ensure sustainability. DA-RFOs and the LGUs shall facilitate and coordinate multi-stakeholder platforms from the very beginning of community planning to market linkage establishment for farmer associations and cooperatives.

Organizing and strengthening the community were other important elements of sustainability. One AMIA village leader observed that farmers who organized themselves during or after project implementation became more confident, active and maintained better relations among themselves than those who already had been members of existing organizations when the project started.

The AMIA villages' narrative on CRA

"... a holistic approach to foster the adaptive capacities of farmers and fisherfolks."

Not two communities or villages are alike. AMIA villages promote a combination of the respective traditional and best-adapted climate-resilient practices and technologies, as well as livelihood and income diversification, summed up as climate-resilient agriculture (CRA). They see this as a holistic approach to enhance the adaptive capacities of farmers and fisherfolks. Their main aim is to increase communities' resilience in the face of economic, human-induced and natural risks.

Depending on the respective contexts and development aims, some AMIA villages hereby focus more on climate change adaptation, livelihood enhancement and diversification. Some AMIA villages explicitly promote opportunities for women (e.g. low cost investments that women can manage); while other villages focus on supporting indigenous people's communities.

Textbox 3: The AMIA villages' narrative on CRA

Combining technical and tacit knowledge

Generally, all AMIA Focal Persons found the available tools and methodologies very useful and important throughout the different steps of AMIA village establishment and implementation: "If the methodology is erroneous, then the output of the project will also be erroneous."

■ **Participatory assessment and dialogue tools**

"Talking with the people in the community is the most effective approach ..." AMIA village implementers valued participatory assessment tools as most effective approaches, because "we directly talk with the people in the community, men, women, children, old, young, official or not, poor or rich." Dialogue tools included participatory rapid assessment (PRA), focus group discussions and key informant panels.

"... more importantly, PRA made them appreciate the value of their own resources." AMIA Focal Persons considered PRA the most important tool, as it helped communities to understand the risks of climate change, and how climate-resilient technologies can address these risks. Since CRA practices are location- and context specific, PRA supported farmers in identifying their own problems and the most suitable CRA, tailored to their respective needs. Some interviewees further described how by applying PRA, the AMIA staff learnt that communities have indigenous and traditional ways of dealing with the impacts of climate change, and how the CRA practices can be adjusted to complement these. Knowing their own historical practices, in turn, helped also

the farmers to compare the advantages and disadvantages of the newly introduced CRA practices.

■ **Participatory action research (PAR)**

"Learning trials are most useful for farmers to get to know their adaptive capacities." Farmer field schools on different CRA practices were most useful for capacitating farmer leaders and integrating CRA in their respective agricultural production systems. Actual field implementation and demonstrations fully involved the farmers and communities in the discussion, planning and resource allocation. Furthermore, LGUs and farmers cooperated for accompanying site-specific technological and financial innovations. PAR also laid the ground for participatory monitoring, supervised by the AMIA staff, to obtain accurate research results and progress indicators.

■ **Climate Risk Maps**

"Maps served as guide in prioritizing the pilot municipalities with the most impact." AMIA Focal Persons found maps, especially climate risk and vulnerability assessment (CRVA) maps, very helpful for the geographical targeting of the AMIA sites. They utilized these maps to identify the areas most vulnerable to climate hazards. Other useful tools were enterprise- and hydrology maps, hazard maps and the National Color-coded Agricultural Guide Map.

■ **M&E and economic tools**

Some AMIA village implementers found economic analysis and M&E tools useful to make decisions and measure their impacts. These tools were cost-benefit analyses for selected CRA and measuring the return on investment for focus commodities, and correlating baselines (e.g. on income) with the current developments, thus being able to observe transformations. One interviewee suggested conducting in depth studies on how to sustain technologies from production to marketing.

Learning and capacity building

■ **Needs based learning**

"As to the kind of capacity building that we promote, we first assess the needs of everyone." The AMIA staff used the PRA as means for identifying training needs and for drafting capacity-building plans of and for the farmers. Needs assessments were also used to propose capacity-building activities targeting the LGUs' and RFOs' staff.

■ **Learning by doing**

"Share peer knowledge, experiences and practices." AMIA village implementers found that farmers' capacity building already started with the involvement of the communities in planning workshops, and continued through introducing new CRA practices, developing the participatory research trials, and conducting regular meetings and farm visits. They encouraged farmers to share their knowledge, experiences and practices in farmer field schools and

farmer field days, thus rolling out the technologies to other non-beneficiaries.

Also for their own capacity building, the AMIA staff valued a “mixture of lectures and hands-on activities”. As one interviewee put it: “I don’t have formal training nor studied climate change. To build my competence, I need to understand more and have mastery of the subject.” This already started with the first roving and review workshops to the IIRR Learning Sites, where the AMIA Focal Persons learnt from the actual implementation experiences shared by project beneficiaries and other AMIA teams. As one participant said: “I am sure these experiences or some of them will also happen in our AMIA village process.”

■ Exchange across levels and disciplines

“We invite masters of the subject as resource persons, to develop our skills.” At all levels, AMIA village implementers tapped a variety of partners and resource persons for capacity building activities. At regional level, RFOs received training from the DA System Wide Climate Change Office, as well as from Civil Society Organizations like IIRR, Rice Watch and Action Network and the FAO. At the field level, the RFO invited local extension technicians and farmer change agents as resource speakers to learn about community mobilization, or the protocols of climate smart farmer field schools.

The staff of the AMIA villages solicited further technical assistance from other agencies like the Agricultural Training Institute, the Department of Agrarian Reform, Cooperative Development Authority, the Provincial Cooperative & Enterprise Development Office, or the Office of the Provincial Agriculturist. LGUs invested in farmer-learning groups’ capacity building by providing a small honorarium to resource persons.



Figure 1. DA-AMIA regional field officers visit farmer leaders in the advanced AMIA village Guinayangan.

■ Documenting and mainstreaming learnings

“All learnings should be documented and published, as a ready reference.” AMIA staff continuously monitors the process, “with or without project”, during the regular visits to the AMIA villages. Main activities were following up on

the learning groups’ memberships, and documenting their progress with photo documentations, video recordings, interviews and storytelling. The AMIA village implementers proposed to institutionalize and mainstream learnings not only among the LGUs, but also among the RFOs, the DA agencies and bureaus, and other stakeholders and implementing agencies.



Figure 2. Learning takes place as dialogue between the stakeholders, and across all levels.

Challenges for implementation

■ Sustaining engagement at all levels

“Farmers’ practices and mindsets don’t change overnight.” Some AMIA staff wished for a “value re-orientation” of farmers, since they faced challenges like farmers not cooperating, putting little efforts in the process, not following the research protocols, not attending village events without AMIA staff being present, or “attending events only for free inputs and food”. Another challenge was that farmers would go back to their usual practice after the field trials.

“How to mainstream climate change adaptation and mitigation in LGU and DA programs, for sustainability?” AMIA village implementers found that a great challenge was to hand over the ownership to the municipal, city- and provincial local governments. Since it was the LGU’s responsibility to make their farming communities adaptive to climate change, the LGUs would have to build their own capacities and include the AMIA village into their priorities. DA’s role would be to assist LGUs in practicing and integrating the AMIA village approach in their regular activities.

■ Access to seeds of climate resilient varieties and climate information

In some cases, seeds for climate resilient varieties (e.g. drought tolerant varieties) were not available when needed, especially after a climate hazard. Climate information advisories were seen as valuable tool for preparation, but still unreliable and inconsistent.

■ Organizational capacities

“We have only few hands working in this big initiative.” Several AMIA leaders identified staff time as their main challenge. They felt that there was a lack of commitment at the management level to assign or hire more staff, which led to additional workload and inefficiencies. One AMIA Focal Person described a conflict of activities, because of her triple function as AMIA project leader, regional seed coordinator and focal point for disaster risk reduction and management. A related challenge was the risk of staff turnover. Some staff are project-based or contracted. Their contract ends with the end of the project. Good practice was to have a staff succession plan -- train and assign several staff members for the various AMIA village activities, to have a backup for the taking-over.

“A lot of paperwork, and much time in waiting.” Several AMIA villages experienced delays in their implementation due to long internal processes of budget approval, preparation of fund release orders, and final fund releases. Lengthy procurement processes for supplies and materials, with extensive paperwork and rigid bidding processes was said to cause further delays. Some AMIA village implementers faced mobility challenges, with limited vehicles available, or poor road networks that allowed travelling only by the local “habal habal” system.

■ Changes in development agenda and priorities

Changes in political power, e.g. after elections of Local Chief Executives, might change the priorities of the municipalities, which in turn could lead to a shift in attention from some communities of the AMIA villages to others. In other cases, situations of insurgence near the project sites affected the progress of implementation. In regions with many indigenous people, it was said to be difficult to organize farmer-learning groups because people belonged to communities with different tribal leaders.

What would be helpful for the future?

■ Investments in infrastructure for CRA

Several AMIA village leaders emphasized having access to updated and reliable climate information services as key priority. This would ideally come as a “complete package”, and with the installation of more automated weather stations and agricultural climate information centers. Other needs referred to improving the irrigation system, and to investing in transportation and roads, especially improving access to the AMIA learning centers.

■ Continuous capacity building

AMIA village leaders would appreciate more seminars, trainings and trainings-of-trainers, since these were “a big help” for project implementers, be it AMIA staff, LGU or RFO officials. Several AMIA villages would benefit from more information, education and communication materials, as well as from support in developing and producing these themselves.

■ Advocacy for the AMIA village project

“Finding support for the AMIA project” was one priority of several AMIA village leaders. This could be in frame of a promotional campaign for AMIA in the region, which in turn might help to commit more staff, and increase collaboration with experts and other concerned agencies.

The scaling mindset

“The seeds we sow as AMIA village develop and bear fruits”

Most of the AMIA Focal Persons were deeply motivated by helping the farmer and fisher families – among them often the most vulnerable and poor - to become highly adaptive for the future. For a government employee, “nothing is more fulfilling than seeing our villages equipped and resilient in facing the hazards of climate change, and living a peaceful and happy life.”

Some interviewees also thrived on making the AMIA villages “go-to” places, lighthouses or model villages, which other vulnerable communities could follow on, and which would be sustainably integrated in projects all over the regions, linking key players from the “top management to the farmers”. One AMIA village had a dream of becoming an agri-eco-tourism site.

They also loved to see the farmers transforming from “idealistic farmers” into “organized farmers”, in associations and agricultural cooperatives, with many diverse economic activities, and being tapped by other agencies as partners in their project. Others enjoyed seeing indigenous community members becoming educators for sustainable lifestyles themselves.

Textbox 5: The scaling mindset

Discussion

The Philippine AMIA villages can be seen as platforms for agricultural innovations. AMIA Focal Persons have the complex task to foster adaptation and innovation capacities at different levels and dimensions. They need to develop technical and functional capacities among the farmers’ communities, as well as within their own institutions (e.g. LGUs and RFOs), and within the larger enabling environment (e.g. DA national programs and related institutions and departments).

Since technical knowledge on CRA was already widely available in the AMIA context, it is not surprising that the main learnings and best practices of the AMIA village implementers refer to functional capacities, like fostering ownership and linkages with partners and stakeholders at all levels, and applying an adaptive management.

Similarly, tools that fostered exchange of tacit knowledge were widely used to enhance ownership, relationships, traditional knowledge and adaptive capacity among farmers, while the more technical tools were used for early

decision-making on targeting, economic assessments and impact monitoring. All AMIA villages further had a strong component on capacity building and learning. The used formats fostered the exchange of technical, but more importantly of tacit knowledge, at and across all levels. This helped to develop self-confidence and inter-personal communication skills among all actors.

Challenges, however, related to both the functional and technical spheres. One set of challenges related to sustaining the engagement and commitment at all levels, from farmer groups to the AMIA implementers' own organizations, and within the DA and wider enabling environment. Lack of resources for innovation within the AMIA village leaders' home institutions had effects on their technical capacities for implementation, e.g. with regard to staff availability and transport. In some cases, this correlated with the home institutions' degree of commitment for the AMIA project.

At the same time, AMIA village implementers themselves found it very rewarding and motivating to experience how the communities developed their own capacities for adaptation and innovation, and how farmers transformed into organized groups with agri-preneurial mindsets, and became leaders themselves. This points to an opportunity to strengthen the narrative of the AMIA villages as platforms for innovation, providing a shared vision and opportunities to improve adaptation and innovation capacities at all levels, aspiring the shared future goals.

Conclusion

The learnings from this study suggest that the AMIA villages already possess the needed ingredients for developing into sustained innovation platforms. The functional capacities of the AMIA village leaders could still be strengthened with regard to addressing institutional bottlenecks at all levels, e.g. by developing further change management, negotiation and advocacy skills. This is not surprising given the early stage of implementation of many AMIA villages, and the iterative design of the process.

The learnings from this study also point to an opportunity for the AMIA program to strengthen the system-wide innovation capacities more systematically. One tool could be the dynamic Innovation Capacity Development Cycle of FAO (Chuluunbaatar and LeGrand, 2015), which builds on

best practices such as they are already used by the AMIA village implementers, with regard to their participatory planning, implementation and monitoring processes, and their capacity building and learning formats. It suggests to recurrently assess the three dimensions "Where are we now?", "Where do we want to go?" and "How are we going to get there?", and provides tools for each dimension.

In the degree that the AMIA villages are progressing, such recurrent innovation capacities needs assessments would probably lead to a broadened, systems-wide perspective. Correspondingly, the tailored-to-the needs learning and exchange events could strongly draw on the experiences of the advanced and advancing AMIA villages.

Further reading

Chuluunbaatar D., LeGrand S. 2015. Enabling the Capacity to Innovate with a System-wide Assessment Process. Occasional Papers on Innovation in Family Farming. Food and Agriculture Organization of the United Nations. Rome. ISBN 978-92-5-108939-2

This brief summarizes insights from the Da Philippines' AMIA Focal Persons, collected through an open-ended interview conducted by the International Institute of Reconstruction (IIRR) and CCAFS. Cooperation partners for the AMIA leaders' capacitation program of IIRR were the University of the Philippines Los Baños Foundation Inc., the Bureau of Agricultural Research, and the CCAFS.

Jana Koerner (j.korner@cgiar.org) is the scaling officer of the CCAFS.

Ruvicyn S. Bayot (ruvicyn.bayot@iirr.org) is the Project Manager on Scaling CSA of IIRR.

Maggie Rosimo (maggie.rosimo@iirr.org) is the Senior Program Manager of Learning Communities of IIRR.

Renee Vidallo (renee.vidallo@iirr.org) is the Program Director of IIRR's Philippine Program.

Julian Gonsalves (juliangonslaves@yahoo.com) is the Senior Technical Advisor of IIRR.

About CCAFS Info Notes

CCAFS Info Notes are brief reports on interim research results. They are not necessarily peer reviewed. Please contact the authors for additional information on their research. Info Notes are licensed under a Creative Commons Attribution – NonCommercial 4.0 International License.

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) brings together some of the world's best researchers in agricultural science, development research, climate science and Earth system science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security. Visit us online at <https://ccafs.cgiar.org>.

CCAFS is led by the International Center for Tropical Agriculture (CIAT) and supported by:

