AAS Working Paper

Using theory of change to achieve impact in AAS

RESEARCH PROGRAM ON Aquatic Agricultural Systems

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Introduction

The CGIAR Strategy and Results Framework sets out four system level outcomes (SLOs), namely: reducing rural poverty, improving food security, improving nutrition and health and sustainable management of natural resources. In pursuit of these objectives the CGIAR has developed a set of sixteen CGIAR Research Programs (CRPs), each of which is expected to make specific contributions to a range of intermediate development outcomes (IDOs) linked to the SLOs (ISPC, 2012). As part of this work the CRPs are developing impact pathways and theories of change designed to explain how the programs will achieve IDOs. The purpose of the present paper is to explain the approach that the CRP on Aquatic Agricultural Systems (AAS) is taking to using these programmatic tools to help achieve impact.

AAS and nested theories of change

A theory of change for a program or initiative describes the set of causal assumptions that link action to desired outcomes. The ISPC has proposed a distinction between impact pathways that map out causality–normally using boxes and arrows–and the theory of change that explains the assumptions behind the arrows. We use this distinction in this paper.

Agreeing, building and revisiting impact pathways and their associated theories of change is central to both the participatory action research approach of AAS and its results based management. How we work in AAS is guided by a top-level theory of change consisting of two parts: the six core elements that guide implementation and three scaling pathways that guide strategy. Graphical summaries of both are provided below in Figs 1 &2.

Theories of change are nested, that is, higher level theories of change at the program level such as those shown in Figs 1&2 frame more specific theories of change for individual research initiatives. The purpose of his working paper is to describe how the AAS program implementation and scaling theories translate into such specific theories of change for individual research initiatives. We also explore how we will co-develop specific theories of change with stakeholders and why we believe that doing so will make impact more likely. We do so by focusing on two early program initiatives, a first set of value chain initiatives in the Barotse Floodplain, and our early productivity and diversification work in the Southern Bangladesh Polder Zone.

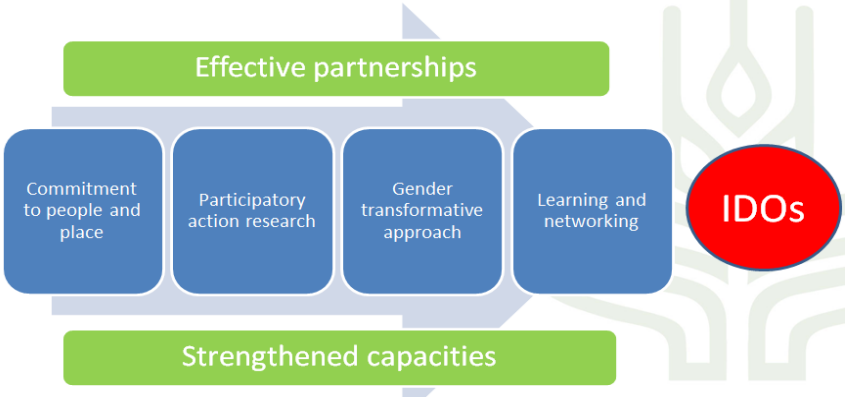


Figure 1. Implementation theory: The six elements of the AAS Research in Development Approach.

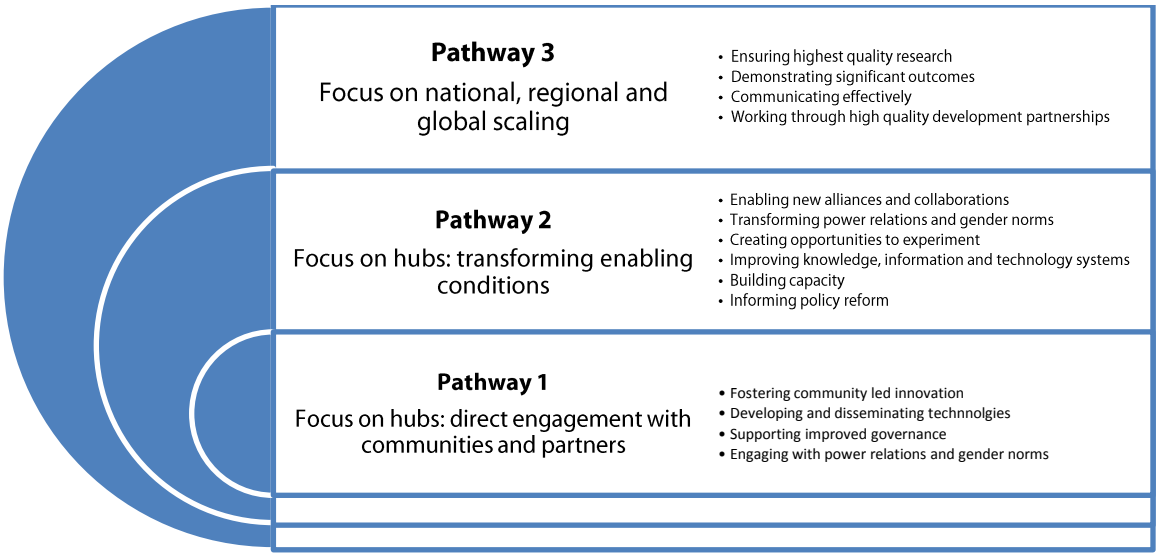


Figure 2. Scaling Theory: AAS' three scaling pathways.

Developing our Initiative Impact Pathways and Theories of Change

Impact pathways and theories of change are program models. As with other types of program model they are most useful when built and tested by stakeholders in the change process that's being mapped out. Building ToC helps those involved better understand the processes that the model is attempting to describe, and then testing the model deepens or challenges this understanding. In each of the initiatives described here we have built first drafts of these models, based on the authors' collective experience and the cumulative insight gleaned from early scoping and diagnosis. The discipline of agreeing and writing out our theory and then subjecting it to critical review is a form of test that we expect to help build both our own and stakeholders' understanding of how we expect to achieve impact and how working with ToC will help. We will follow this step by convening participatory impact analysis workshops in order to build upon the models with stakeholders.

The cases presented follow the same structure to provide a framework for comparison and generalization. Both cases begin by describing the AAS engagement process that led to stakeholder agreement on the need for the initiatives, before then detailing each theory of change.

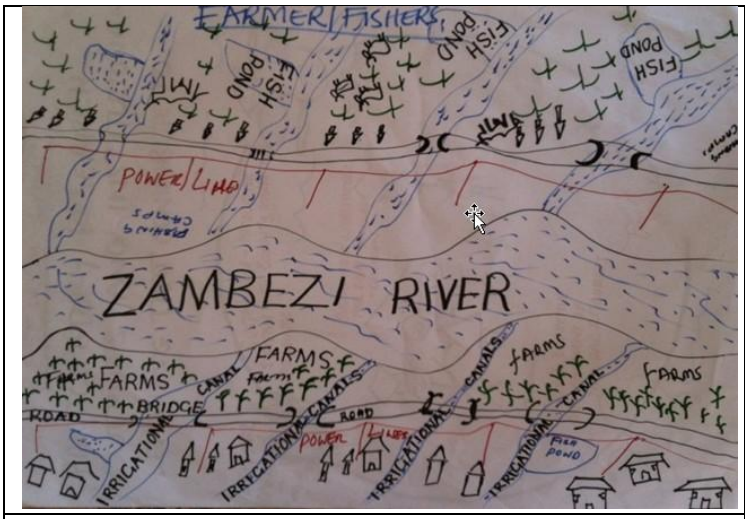
Case 1: Impact through value chain research in the Barotse Floodplain

Establishing the need for the initiative

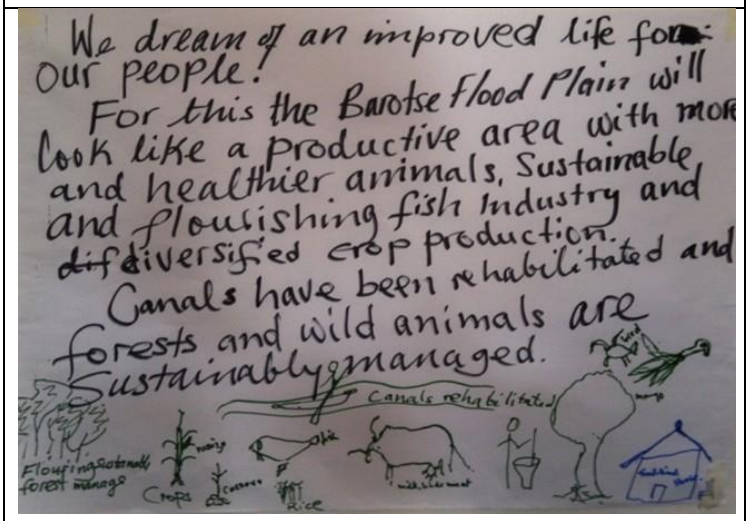
In the Barotse Floodplain hub AAS is convening and working with a coalition of partners to tackle an agreed hub development challenge. This has been defined as:

> *"To make more effective use of the seasonal flooding and natural resources of the Barotse Flood Plain System through more productive and diversified aquatic agricultural management practices and technologies that improve lives and livelihoods of the poor."*

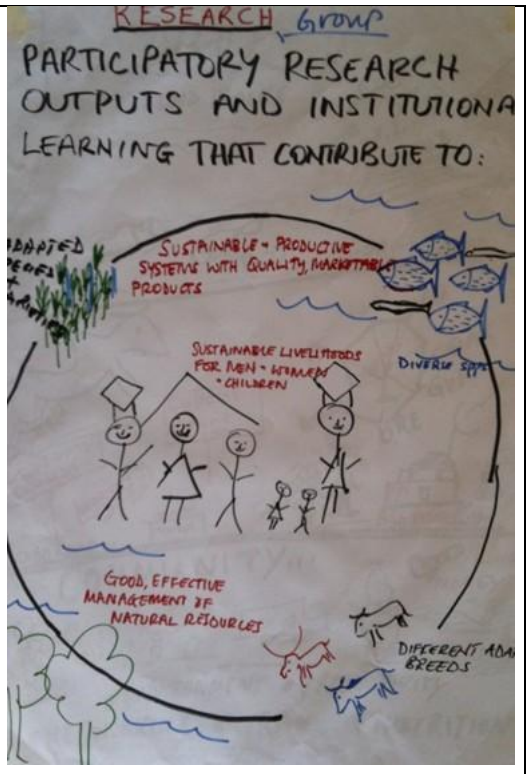
As part of the process of building an engaged coalition of stakeholders we facilitated stakeholder groups at community and hub level to describe their visions of success relating to the challenge. A subset of these visions shown in Figure 3 provide a good sense of what people aspire to and the commonality that exists. We then worked with the stakeholder groups to identify what they saw as the main opportunities and constraints to tackling the hub development challenge. At the same time we undertook a number of scoping and diagnosis studies on specific subjects such as gender and nutrition.



(i) Farmer and fisher vision



(ii) Induna vision (Barotse Royal Establishment)



(iii) Researcher vision

Figure 3: Visions of success in tackling the hub development challenge by three stakeholder groups from the Barotse Floodplain

Drawing upon the results of this work we then conducted an intense week-long synthesis workshop with key stakeholders - CGIAR Centers, NARS, NGOs, national and local government, the Barotse Royal Establishment (the traditional authority), the private sector and community representatives – through which we agreed the overall design of the program of work that we would collectively begin to implement (Fig. 4). Through this process stakeholders not only agreed the substantive focus of our work, but also developed as an effective team, working collaboratively towards a common goal.

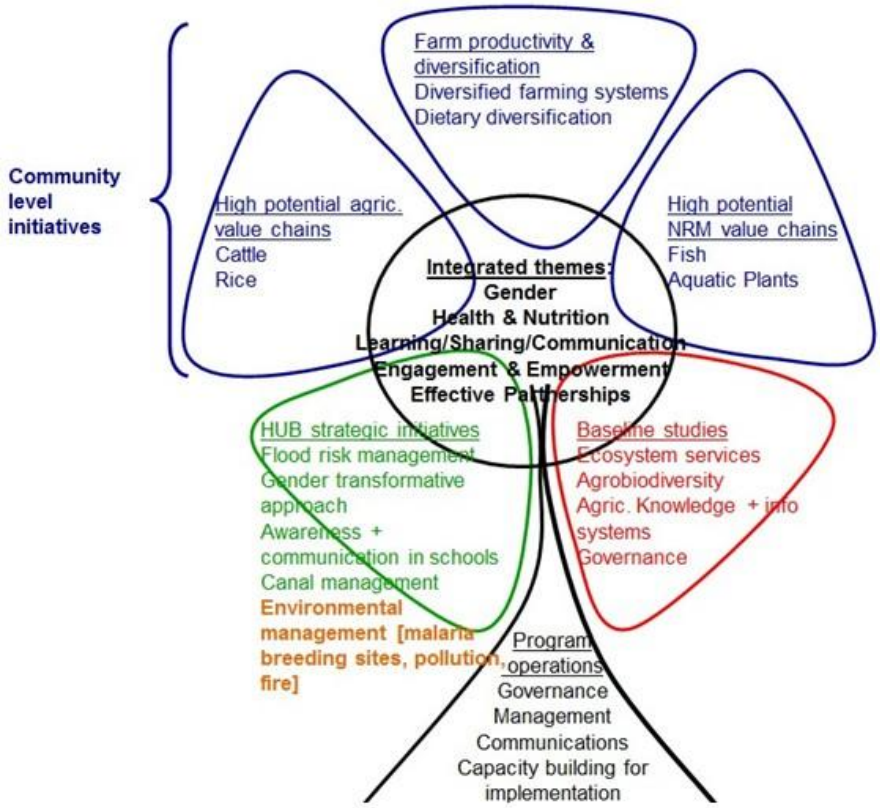


Figure 4: Design of the AAS Program of Work agreed with Barotse stakeholders.

Value chain impact pathway and theory of change

In the Barotse program four initiatives relate to value chains. We now use two of these to explore how implementing the AAS approach will contribute to achieving stakeholders' visions and the achievement of IDOs.

We have begun work on the fish and rice value chains with initial scoping, identification and engagement with fish and rice value chain actors in the hub and linked markets. Building upon this, value chain assessments are now underway involving data collection and analysis together with program partners in the selected communities and market areas. This preliminary work has allowed us to map out an impact pathway for both value chains, shown schematically in Fig. 5. The theory of change is made up of the assumptions behind the arrows shown in the diagram and partially described in the following narrative.

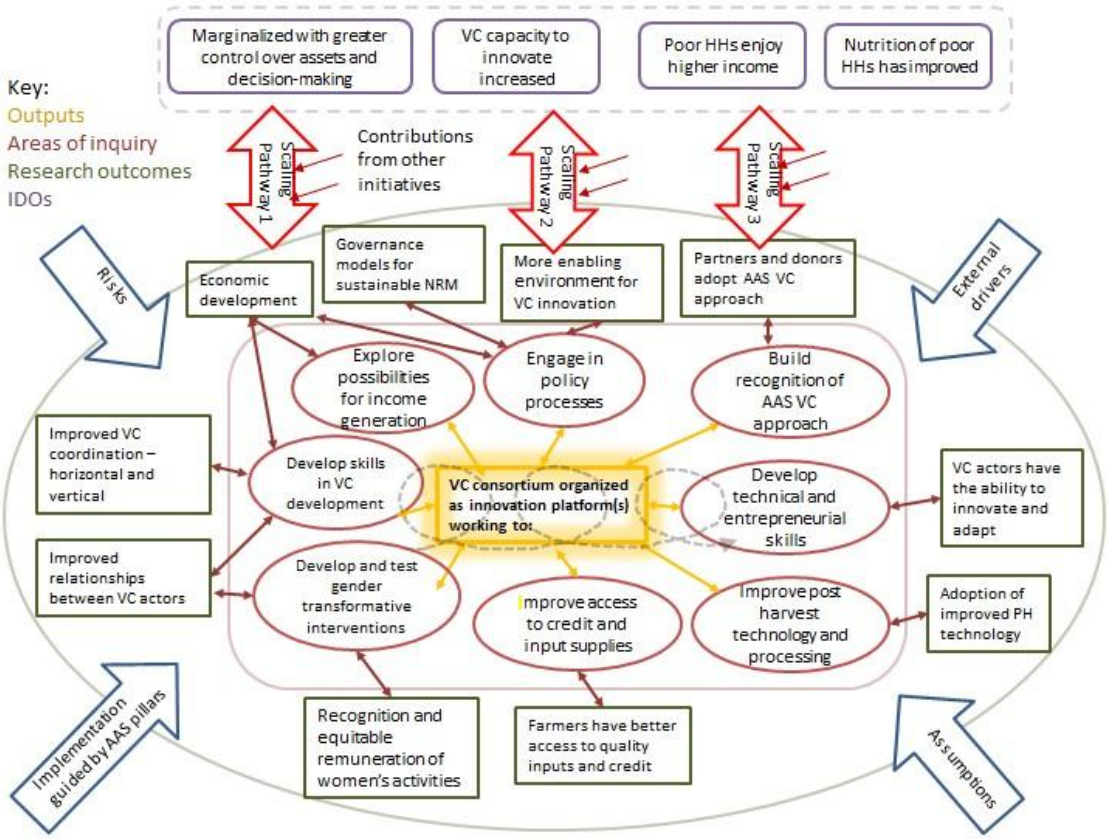


Figure 5: Impact pathway for the rice and fish value chain initiatives in the Barotse hub.

Establishing an innovation platform

Building upon our initial scoping, engagement and assessment, we are proceeding to convene value chain actors around an innovation platform. One of the first activities of the platform will involve stakeholders working together to articulate the impact pathway and theory of change building from findings of the value chain assessment. One of the assumptions is that doing this will help to build the necessary common understanding and commitment to how the platform will work and how this will contribute to tackling the hub development challenge. Through this process we will identify and prioritize initial areas of inquiry and form Participatory Action Research (PAR) groups around them, working to ensure the membership is inclusive. Each group will be facilitated through iterative action and reflection cycles and will bring their results and lessons learned to the innovation platform for peer review and joint planning.

In these meetings each PAR group will ask itself if its action area is unfolding as planned. Collectively, the PAR groups will ask themselves if their combined effort is generating the synergies and connections required to tackle the hub development challenge. Plans will be made based on the outcomes of these conversations. Documentation of the PAR and innovation platform processes and outcomes will provide the basis both for monitoring and research that tests and builds theory about how to run successful value chain initiatives. The platform coordination team will look to link to similar platforms so as to build on a broader set of experiences.

Indicative areas of inquiry and links to outcomes

While it is only through the participatory process described above that we will obtain a working theory of change, our initial scoping, engagement and assessment over the last 18 months has suggested what some of the areas of inquiry might be. Figure 4 summarizes this as an early attempt at to explain how action in these areas will lead to outcomes and impact. It is provided here for the purposes of this paper, and will be replaced with the stakeholders' model as this is developed. The following narrative consists of a series of causal assumptions that will be tested during implementation.

Causal narrative: outputs to research outcomes

At the community level, PAR groups work to enhance entrepreneurial skills of men, women and youth. This, combined with another overlapping PAR group working to improve access to market information, credit, and services, will lead to their improved capacity to proactively respond to market opportunities. Bringing together value chain actors through the innovation platform leads to enhanced mutual understanding and vertical linkages in the chain which improve the efficiency and equitability of the chain. AAS community-level activities related to collective action also lead to improved horizontal coordination which results in economies of scale and enhanced bargaining power. Supporting these efforts we will invest in value chain analysis as a means to improve understanding and dialogue about men and women's roles and responsibilities in the value chain and the household. This critical reflection challenges existing norms and attitudes that prevent poor men and women from benefiting equitably. Gender transformative changes in the value chains unlock the potential of poor and marginalized men and women. This also leads to recognition and equitable remuneration of women's activities in the value chain, and that increased incomes and greater control over resources and decision-making by women leads to improved education, food and nutrition security at household level.

At the hub-level and beyond, the improved understanding of limitations in the enabling environment enhance lobbying for new policies. Implementation of these policies improves the enabling environment of the chains, especially with respect to fisheries and natural resources governance, improved quality standards, access to credit and incentives for private sector investments. This enhances the performance of the value chain as a whole. Due to the geographical extent of value chains and the linkages among actors at different levels impact will be achieved at a wider scale.

What we know and what we don't

While we believe that the causal linkages described above are plausible, we can't at this stage be certain that events will unfold exactly as described. We are however more confident that the innovation platform/PAR mechanism we are putting in place will allow for the stakeholders involved to select areas of inquiry, make the assumed causal mechanisms that justify these choices explicit, and then provide the framework to test this theory. There is a wealth of experience in using innovation platforms for participatory value chain development on which we are building (Bernet et al, 2006; Gildemacher and Mur, 2012; Lundy, 2012). It is through this process of collectively setting out our mental models about how we think change happens and regularly challenging these assumptions though PAR that we can expect to bring about transformational change. We believe that it is through transforming how people understand the role of research in development, and more specifically see their roles and relationships within the value chain, that we will unlock the potential that exists with the Barotse Floodplain System and the people who depend upon it.

In other words, while we are uncertain *ex ante* of the actual causal pathways that will turn out to be pivotal in the future, we believe that the innovation platform / PAR mechanism will allow value chain actors to discover and navigate these pathways in a way that integrates stakeholder and research knowledge. We are confident that if we implement our approach according to the core elements and notwithstanding the risks, effects of external drivers and some major assumptions (see below), AAS' value chain initiatives will contribute substantially to improving the lives of many. Box 1 paints an indicative word picture of what this success will look and feel like.

Nesting the value chain theory of change in the program theory of change

While the value chain impact pathway in focuses on research outcomes, it also indicates our expectation that the value chain work will contribute to AAS' three scaling pathways to achieve the program's IDOs. The following narrative describes this part of the impact pathway. Again, this represents a series of assumptions that will be tested during implementation.

Causal narrative: value chain contribution to IDOs

As we begin working on the rice and fish value chains we will establish innovation platforms for each. At first these will be tightly focused geographically, but as the platforms gain momentum we will encourage existing platform members to extend these platforms to other areas. In this way the platforms' outputs and process will spread, contributing to AAS Pathway 1. This spread will increase cross-sectoral linkages and improve the connectivity of actors in the Barotse hub. This will contribute to AAS Pathway 2, together with the transformational changes around norms described above. Research to understand and improve the Value Chain platforms, through building and testing theories of change during implementation, contributes to Pathway 3. Other initiatives contribute to AAS scaling pathways and through these to achieving the hub

vision of success and the IDOs. Box 1 paints an indicative picture of the specific contribution that the VC initiatives will make to four key IDOs.

Box 1: Indicative vision of success for AAS' Value Chain Initiatives in the Barotse Hub.

Farmers and fishers (men, women and youth) enjoy increased and more equitable participation in value chains. They use more sustainable production methods with improved efficiencies through better post-harvest handling and enhanced value addition. Greater productivity and reduced losses lead to higher income for poor and marginalized households which participate in value chains.

Farmers (particularly women and youth) and other value chain actors have the entrepreneurial skills and enjoy better access to inputs and services to respond to market opportunities. Such inputs and services (including credit) are provided through private sector suppliers.

Women's roles in the value chain are valued and recognized equally, their choices for participation in different stages in value chains have expanded, social norms regarding women's decision-making at household and community levels have changed and this had led to their increased access to and control over resources and income.

Increased local processing has led to increased employment and quality of employment for poor and marginalized groups.

Health and nutrition have improved as a result of enhanced production and post-harvest handling practices that have improved food safety (especially in beef and dairy value chains).

Dialogue between stakeholders, notably the private sector, state actors and local authorities, has led to an improved enabling environment for the value chain.

Mitigating Factors

The scale and nature of our impact will depend on key framing assumptions, risks and the effect of external drivers, shown schematically in and of which there are many. The following are an indicative set.

Two important assumptions are that the relationship between the Barotse Royal Establishment and the national government remains open for dialogue and development and that the private sector engages despite lack of property rights to land. Among the main risks are that better access to markets will lead to less home consumption of nutrient rich food such as fish and beef and at the same time provide incentives for overharvesting and unsustainable practices. In terms of drivers of change we assume that new major road development go ahead as scheduled and this greatly improves access to markets. At the same time we expect government policy on rural industrialization and general government investments in market development and quality standards to continue to increase. Finally, we assume that population pressure will continue to increase and this will be a driver of diversification and put increasing pressure on natural resources.

The innovation platform will monitor these assumptions, risks and drivers, identify others and consider actions required to address them where possible.

Case 2: Impact through aquatic agricultural productivity and diversification research in the Southern Bangladesh Polder Zone

Establishing the need for the initiative

In the South Bangladesh Polder Zone (SBPZ) AAS is working in a similar way to convene a coalition of partners as in the Barotse Flood Plain. In the SBPZ the hub development challenge has been defined as:

"To achieve sustainable and continual improvements in agricultural productivity, livelihoods and nutrition of poor communities in the Southern Bangladesh Polder Zone in the face of increasing salinity, changing hydrology and climate change."

As in the Barotse Flood Plain, AAS used an extensive stakeholder engagement to identify the main development challenge and visions of success for the SBPZ (Figure 6 and Box 2). This is more layered than that for the Barotse program reflecting the more complex institutional setting that exists in the SBPZ.

The process began with a Scoping Survey in which an initial stakeholder group spent two weeks in the hub. Their results fed into a Stakeholder Consultation Workshop in which a broad range of hub stakeholders were invited, including farmers, national researchers, CGIAR researchers, NGOs, the private sector and government officials from agriculture and other administrative units. The workshop produced an initial framing of the hub development challenge, visions of success and research priorities. Following the workshop specific diagnostic studies were conducted to provide more detailed information on key issues such as gender and nutrition. As in the Barotse Flood Plain, our NGO partner Constellation led visioning and action planning using strength based approaches with both men and women's groups in 16 villages.

The results from scoping, the workshop, the studies and the village action planning were then brought together by a design team consisting of staff from hub and national level stakeholders, and program staff. Team members were selected on their degree of involvement in the program areas, and their ability to represent the interests of their respective organizations. The design team were then facilitated through a process of participatory decision making (Kaner, 2007) to arrive at a draft program structure. This was presented to a one-day Stakeholder Engagement Workshop to receive feedback on the design from a broader set of stakeholders and potential program partners including the Planning Commission, BARC, BARI, BRRI, BWDB, LGED, Dept of Ag. Extension, Dept. of Fisheries, IWM, NGOs (CARE, World Vision, Save the Children, IDE Bangladesh), CGIAR (WorldFish, IRRI, IFPRI, CIMMYT) and private sector (Lal Teer Seed Limited).

With endorsement from the Stakeholder Engagement Workshop we then went back to the 16 villages and worked with them to further prioritize areas of work. The program structure shown in has emerged from this consultative process.

Figure 6: Stakeholder visions of success in the Southern Bangladesh Polder Zone.

Box 2: Elements of a common vision shared by SBPZ stakeholders

- Provision and maintenance of good infrastructure and facilities
- Hygiene and health promotion including access to drinking water
- Access to finance and sharing services
- Practice of diversified, intensified and integrated farming system
- Provision of better education for enable farmers to generate, access, analyze and use of information and technology
- Availability and accessibility of alternative rural livelihoods and lifestyle of choice
- Healthy partnership between farmers, GO, NGOs, Private sector and researchers
- Better/ effective water/river/polder management systems
- Continue development of and access to new technologies, varieties and methods
- Access to safe, sufficient and nutritious food
- Ability and willingness to adapt to climate change
- Evolving and effective implementation of supportive and enabling policies
- Local involvement in water and natural resources management
- Greater gender equity
- Enhanced community cohesion and working together
- Improved market access

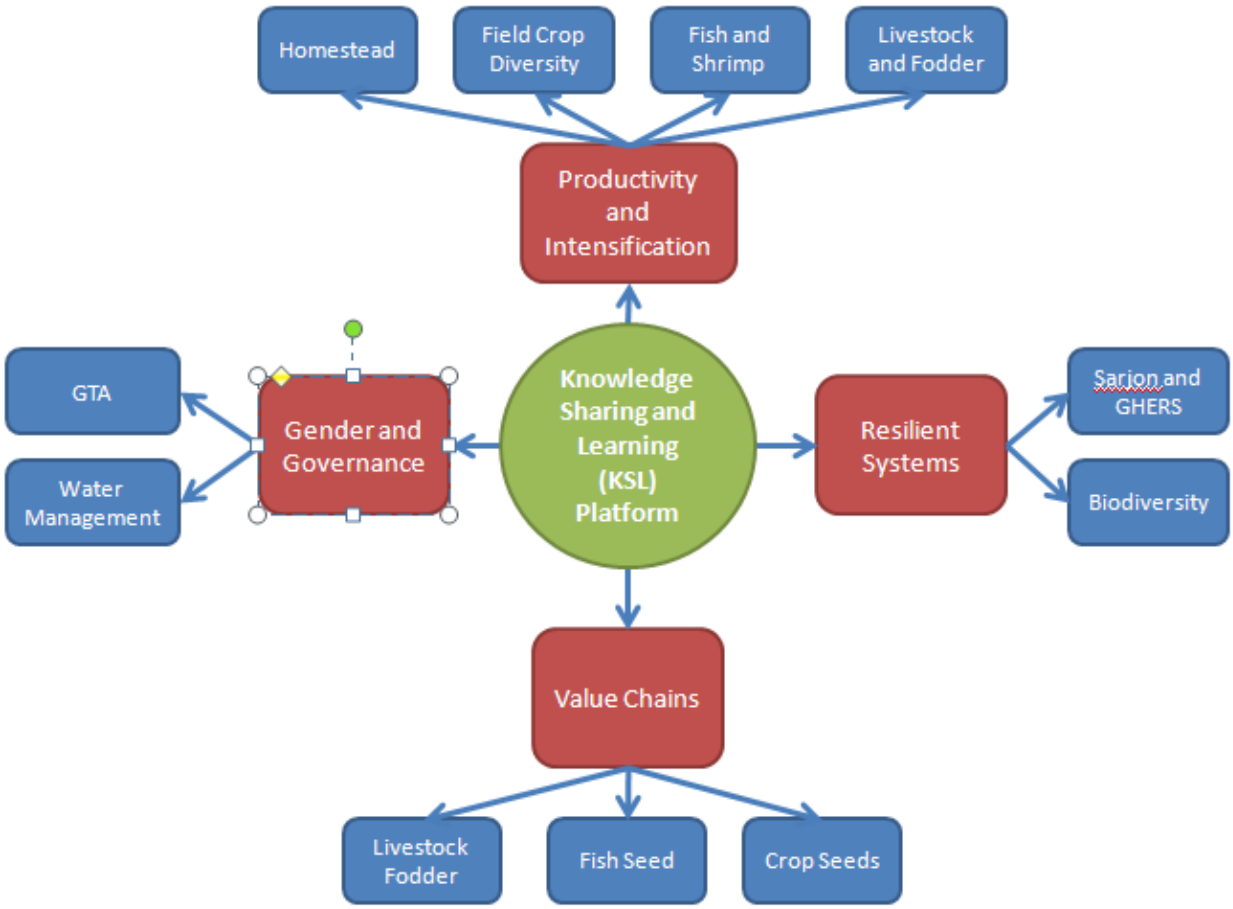
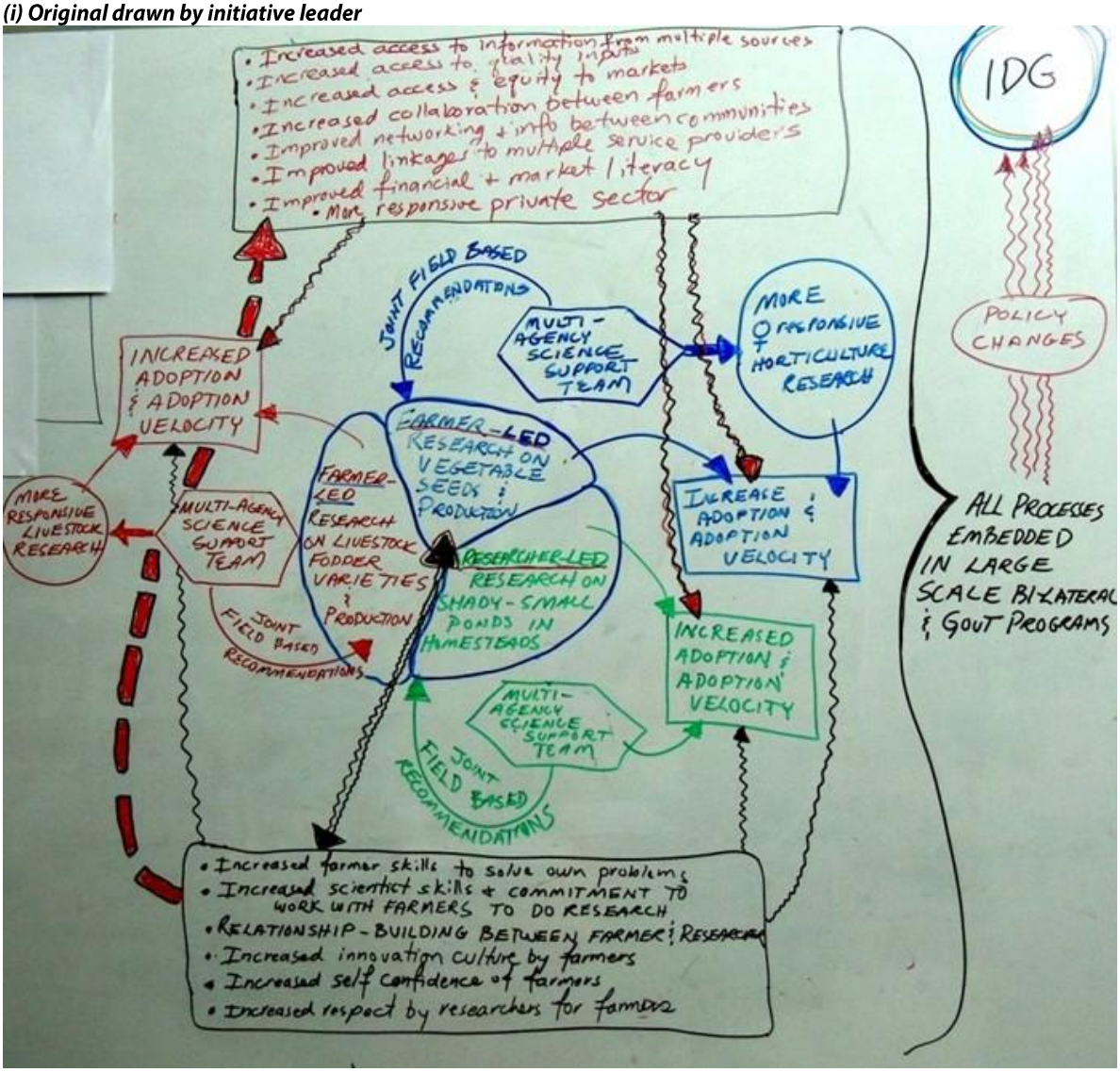


Figure 7: Design of the AAS Program in the SBPZ.

Impact pathway and theory of change of the SBPZ initiative on productivity and diversification

One of the initiatives identified in the hub is increased productivity and intensification of agricultural production in the polder zone. The impact pathway for this initiative is shown in Figure 8 in two forms. The first is drawn by the country program leader while the second shows it redrawn to allow comparison with Zambia, highlight similarities and differences, and show common elements of the AAS approach.

(i) Original drawn by initiative leader



(ii) Adapted to highlight common program elements

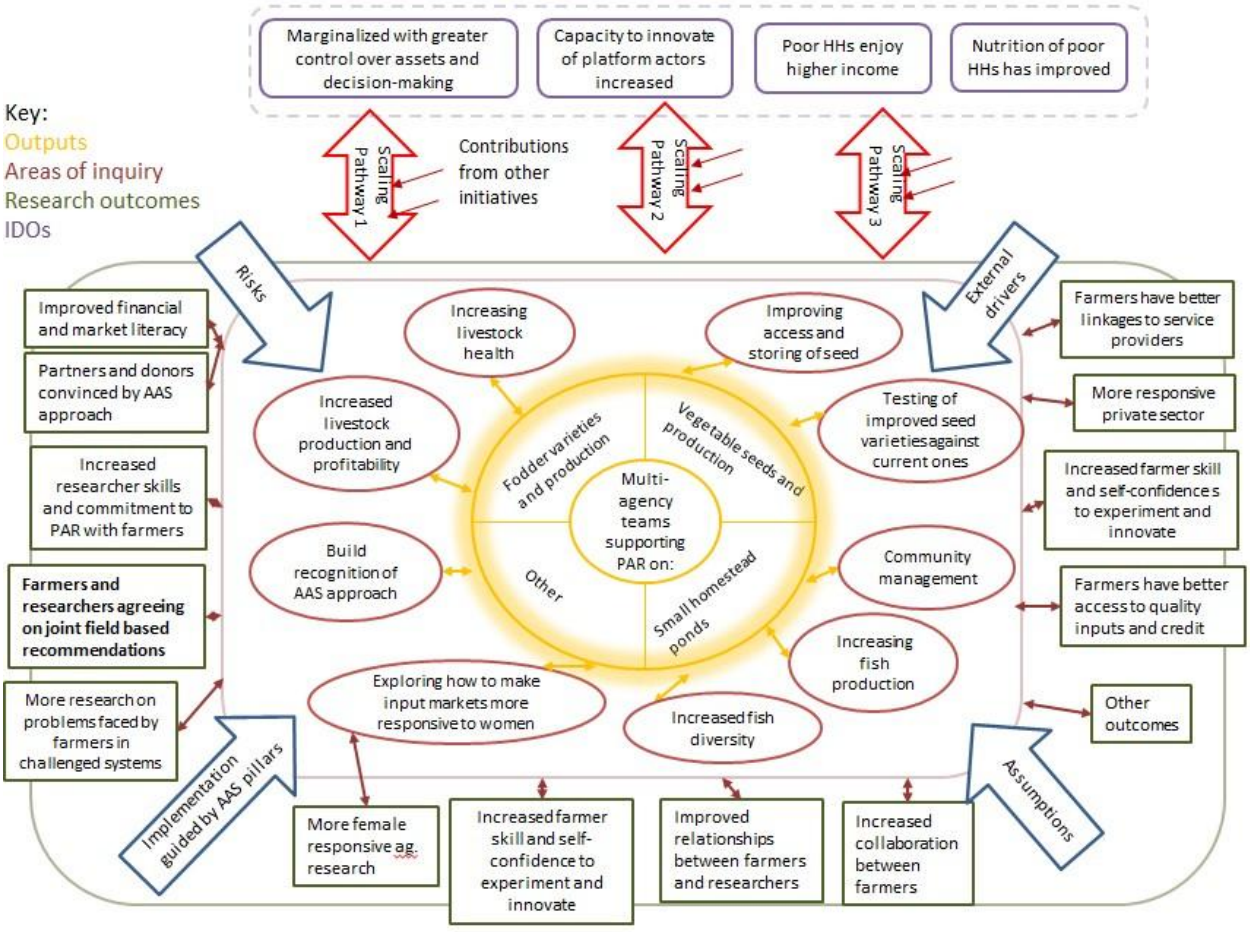


Figure 8: Impact pathway for the productivity and diversification initiative in the Southern Bangladesh Polder Zone.

Establishing an innovation platform

The productivity and diversification initiative will be implemented through an innovation platform similar in function to the Value Chain platform described above. Three platforms will work on three agreed priority areas – vegetable seeds and production; fodder varieties and production; and small homestead ponds, and will share what they learn through the program's central knowledge sharing and learning platform (Figure 7).

The platforms will be supported by a research advisory team formed from the formal research sector, as well as development actors and the private sector, to ensure there are relationships established that create a wider "research community" and a "community of support". This will contribute to much of the network building necessary for scaling pathway 2 and help ensure the approach is embedded in large scale multilateral and government programs.

While the details of the pathways by which the individual platforms will bring about change still need to be fully worked through with stakeholders we know enough to map out indicative theories of change for the first three platforms. Two are presented below.

Indicative areas inquiry and links to outcomes for two platforms

(i) Vegetable seeds and production

Through community engagement we know the problems farmers are experiencing are threefold and related: 1) the quality of the vegetable seeds they save on their own farms is poor; 2) the quality of the seeds they buy from the market are often poor quality; and 3) they do not know which commercial varieties are best for their own farms. The platform will work on all three problems. The following narrative makes explicit the assumptions behind the boxes and arrows in Figure 8 (ii). The assumptions will be reworked with stakeholders and tested during implementation. As with the value chain initiative the same caveats apply regarding uncertainty.

Causal narrative: outputs to research outcomes

Farmers, supported by a research advisory team, will carry out PAR on the factors that determine seed quality, particularly for the open pollinated varieties (OPVs) they are saving. They will also be supported in carrying out varietal trials in the monsoon and winter seasons of both local and commercially-available varieties.

Women are generally responsible for vegetable cultivation. Researcher support will therefore focus on women and include the design of experiments and steps in the PAR process (i.e. making observations, documentation, analysis and sharing of data). PAR groups will be encouraged to link to each other, as well as farmers and groups working on similar issues in other communities, through opportunities to come together to share their research results and learn from each other. This will include seed fairs for selling and exchange of seeds, information and production inputs in particular to strengthen links to the private sector. The fairs will provide "women only" spaces -- socially and culturally safe environments where women can more effectively interact with diverse seed sector and community actors. The multi-agency composition of the support team will itself facilitate links between PAR groups and other researchers, private sector seed sector actors, extension organizations and service providers that support farming communities in other ways (governance, water, health, etc.).

The support team will work to increase the research skills of farmers to experiment on their own to test different varieties, especially new varieties as they are developed to address new problems and opportunities.

(ii) Small homestead ponds

In the SBPZ most aquaculture technologies, research, information and services are targeted at ponds where biophysical conditions for growing fish, shrimp and prawn are optimal. These "ideal ponds" tend to be managed by men and are large. In contrast the ponds that lie closer to homesteads tend to be smaller, are used for many purposes, and are generally managed by women with few resources receiving very little technical support. In addition the fish seed value chain does not reach them. Little is known about homestead ponds and women's management priorities and most research that has been done in both aquaculture and fisheries is based on a production objective in ponds which seek ideal conditions for a small number (or even one) species.

Causal narrative: outputs to research outcomes

The small homestead ponds platform will facilitate the formation of PAR groups that include researchers, gender experts and women in joint inquiry to understand small homestead ponds better. Facilitation will focus on helping the researchers to better understand women's multiple goals, the women to understand the PAR process and together to co-develop solutions that don't necessarily have "fish production" and "profits" as the sole, or even the primary goal of the system.

The expectation is that the cumulative effect of this work will be more women-responsive fisheries and aquaculture research. This will happen as fisheries and aquaculture scientists build new skills and learn new approaches. This will encourage researchers to continue to be more aware of and more responsive to the needs of women (and poorer farmers) who have a different and more challenging set of resource endowment. By means of supporting research on such systems and finding new ways to address these challenges, aquaculture research will be able to achieve greater levels of adoption of technologies by this farmer group.

A broad shift in aquaculture research in this direction is expected to result in: increased fish production, more regular fish harvesting, an increase in natural fish species populations, a diversity of species (often in high demand by rural communities) and growing knowledge of the types of habitats favored by indigenous fish species. These are all women's priorities.

The program will take a household approach to implementing this platform. Even though the focus will be on women in the households, men and boys will be engaged. PAR groups including men and boys will be facilitated to critically reflect on social and cultural norms, attitudes and behaviors that constrain the livelihoods options and positive outcomes for women and poor men. It is hoped that through this, a gradual change in regressive norms and beliefs will occur which will expand choices for women and improve their control over resources and decision-making at the household level and beyond.

Nesting the initiative ToC

The productivity and diversification impact pathway (Figure 8 (ii)) shows the initiative contributing to the IDOs through AAS' three scaling pathways. The follow narrative indicates how we believe this will happen.

Causal narrative: Initiative contribution to IDOs

The program will contribute in three ways to CGIAR IDOs through this and other initiatives. The first is to establish and foster a network of PAR groups and farmers, clustered together in innovation villages, increasingly able to solve their own problems while placing a stronger demand pull on supporting institutions including formal research and the private sector. The drive behind the growth of the network will come from increasing self-confidence and improving links as a result of PAR and platform work together with the positive experience of being able to solve problems.

The second mechanism will contribute to changes in formal sector research and the private sector such that both become more responsive to the needs of farmers, particularly women farmers who have received little attention in the past.

The third mechanism is to embed the AAS approach in large scale government and multilateral programs. We will do this through the twin strategies of involving key staff in our work and providing the evidence that the AAS approach works. This will be done in subsequent years of the program and represent contributions to scaling pathways 1, 2 and 3 in Figure 8. In this way, this initiative together with other AAS initiatives, expects to make a substantial contribution to achieving the visions of success reflected in Box 2.

Mitigating Factors

The scale and nature of our impact in the SBPZ will depend on some key assumptions about frame conditions, risks and external drivers. These are shown schematically in the impact pathway diagram (Figure 8) and will be periodically identified and tracked as part of building the impact pathway and theory of change with stakeholders. From our perspective we see one key set of assumptions relating to our ability to influence the donors, public sector organizations, NGOs and the private sector to better support endogenous development through adopting elements of the AAS approach described above. This will in turn rest on ability to document, learn from and communicate evidence about what works and what doesn't in using research to build capacity to innovate in communities and the networks that link them together and to the outside.

There are several powerful external drivers that will influence priorities, decision making and the contribution that the program will make to the IDOs. We are assuming that development agendas will remain heavily influenced by external donors and large multi-lateral programs and it is with these actors that we seek to engage. Secondly we assume that markets will be driven in the future by an increasingly affluent urban class. Thirdly, we expect polders and other water infrastructure to continue to be a high priority for government, research and the development sector. Finally we assume that climate change will lead to more frequent cyclones and greater variability in rainfall that could hamper or curtail our work on the ground.

Discussion and Conclusions

The two case studies are our first attempts to model the impact pathways for two research initiatives. We have tested the models through the discipline of trying to write a coherent and plausible narrative describing the causal linkages implied in the impact pathway diagrams. While preliminary, building and testing the models has provided us with a number of insights as to how we will in practice co-develop nested theories of change, and why doing so will make achieving impact more likely.

Theory of change is different looking forward

The use of theory of change comes from the field of evaluation, specifically program theory evaluation, where it has been used most often looking back as part of evaluations that attempt to establish whether a program made a difference. Much of the method and expectation around using theory of change derives from here. However, building retrospective theory of change is much easier to do because there are fewer actual pathways than potential ones: far fewer things do happen than could happen. This is obvious reading the causal narratives above. All of the causal links we identify could be unpacked further, and many more exist than we have specified. We have looked at just two initiatives out of the many initiatives that AAS will work with. One can quickly see that working with theory of change as evolving models of what we expect to happen could take up a large amount of people's time unless we learn to use it in parsimonious and useful ways. There is little practical guidance available because of ToC's origins, so this is an area where AAS can make an important contribution to the evaluation and change literature.

The role of research in building ToC

Good theory of change is grounded in both stakeholder experience and prior research knowledge (Chen, 2005). As we start to build theories of change with stakeholders we need to ensure research knowledge is used to challenge and inform in ways that on one hand avoids making predictable mistakes while on other leaves the key stakeholders – those with most to win or lose – feeling ownership of what is happening. This points to the importance of facilitation that is sensitive to power imbalances between different groups. It also points to the assembly and communication of relevant research knowledge through a combination of literature review and commissioned research in particular areas, rather as AAS did in preparation for program design, described above.

Emergence of a common mechanism

When we began we thought that the two initiatives would require different modalities for implementation. While the Zambia and Bangladesh innovation platforms are structured differently they both share the same mechanism built on PAR and use of ToC underpinned by good technical support, facilitation and documentation. We now see that this mechanism represents a form of mid-level theory of change that has wider applicability.

Nesting of ToC

The process has helped us clarify that we have three levels of ToC.

(i) Program-level or top-line ToC– the implementation and scaling theory described in the Introduction.
(ii) Process theory – a mid-level theory that describes the mechanisms we use and how we expect them to work to lever change. The explanation behind how we see the innovation platforms working using PAR and ToC is an example.
(iii) Initiative-level or detailed ToC– causal description that starts identifying specific actors, activities and outcomes and the causal pathways that link them within the frame provided by process and program theory.

Our two cases wove together all three.

Managing uncertainty

As ToC becomes more detailed it becomes less predictable and more prone to change. Initially we saw this unpredictability as a major obstacle to making plausible estimates of likely impact. A major insight for us is that this obstacle reduces if the mid-level theory of change can handle this uncertainty. We are beginning to see that AAS has the potential to do so though the co-development and modification of detailed ToC using PAR cycles by those motivated to change with research and facilitation support to do so.

The graphics matter

Figure 6 provides two versions of the same impact pathway describing how the productivity and diversification initiative will link activity to impact. The second is derived from the first. The fact that the second has been reworked to fit the common platform mechanism does not necessarily make it better; that depends on the use. Experience shows that impact pathways drawn on whiteboards or flipchart paper are often more compelling than those done in PowerPoint. Unless done carefully, reworking participant ToC can leave people feeling disempowered and separated from they were thinking when they drew it, which is an issue when using the graphics as artifacts in subsequent reflection. On the other hand the reason for making ToC explicit is to surface and challenge underlying assumptions.

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