Ecohealth research in practice: Insights from researchers in Kunming, China

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Background

The Field Building Leadership Initiative: Advancing Ecohealth in South East Asia and China (FBLI) (2011-2016) was created to address health and environmental risks associated with agricultural intensification through **research, capacity building, knowledge translation and networking** in Ecohealth (Lam et al, 2016). Developed jointly by research centers in China, Indonesia, Thailand and Vietnam and funded by the International Development Research Center (IDRC), Canada, this initiative was designed to:

- strengthen the Ecohealth field in Southeast Asia and China, and build a mature field of research training, and practice;
- train a new generation of researchers and practitioners in the region;
- produce useful and relevant research for policy and decision making; *and*
- create links between research and policy circles in Southeast Asia and China.

The FBLI research group at the Kunming Medical University (KMU) focuses on on addressing the impacts of pesticide use on health and environment in Yuanmou County, Yunnan Province, China.

The new generation of pesticides that claim to be highly effective, and low in toxicity and residues, is actively promoted by China's agricultural extension department. These pesticides are widely used by local farmers yet the long-term risks on human health and ecosystems are not well understood.

To capture FBLI China's progress towards Ecohealth field building outcomes, along with challenges and lessons learned, the program's Coordinating Unit (CU) at the regional level facilitated a session with the FBLI China team in October 2015 to reflect on outcomes. This work highlights reflections of FBLI China researchers.

Outcome-based evaluation

The evaluation aims to capture outcomes, particularly field-building outcomes, of the China team, and identify challenges and lessons learned. Two evaluation questions are explored*: (i) To what extent and how do the outcomes of FBLI represent a (potential) contribution to advancing Ecohealth in in China ? And (ii) what are the challenges that the FBLI China encountered in achieving expected outcomes of the program?*

The data collection process used tools such as focus groups, in-depth interviews, and program document reviews. The process, including 5 steps, was adapted based on the Outcome Harvesting approach designed by Ricardo Wilson-Grau (2012)

- ✓ Step 1: Review program documents to formulate draft outcomes.
- ✓ Step 2: Discuss with FBLI China team members on outcomes
- ✓ Step 3: Analyze information and revise outcome descriptions.
- ✓ Step 4: Verify outcome descriptions
- ✓ Step 5: Finalize the report

Outcomes are defined as changes in the behavior, relationships, activities, or actions of the people, groups, and organizations with whom a program works directly (Earl et al, 2001)

Roles and Responsibility in the evaluation activity
Facilitators: The program's CU took the role of facilitating the process. The CU is the administrative hub in facilitating the all the program's activities at the regional level.
Participants: FBLI China team members.

Results

The process of change from this project can be seen in three main groups of outcomes: 1) the FBLI changed the way researchers do research by integrating knowledge from local community; 2) local partners were actively engaged in the research process; and 3) Ecohealth has been recognized by local academic peers through FBLI-China's networking activities.

Photo 1: A student doing Ecohealth research in FBLI China team interviews a farmer in Yuanmou County, Yunnan province, China.

FBLI has contributed to more transdisciplinary research among the team

Transdisciplinary is one of the six principles of Ecohealth approach and involves both academic and non-academic knowledge and perspectives (Charron, 2012). Transdisciplinarity can be acquired through long-time engagement of all parties in the research. The FBLI China team experienced transdisciplinarity through a number of activities since the beginning of the research in 2012. For example, to understand the situation of pesticide use in the area and identify solutions, the FBLI China team has been working with the community in Yuanmou County including officials from Chinese Center for Disease Control and Prevention (CDC) and farmers from 4 local villages. Both groups participated in identifying research issues and solutions. In the intervention phase in August 2014, FBLI-China team incorporated farmer's suggestion to modify health education calendars. Further, the CDC in Yuanmou County actively participated in many project activities such as field sampling and Information, Education and Communication (IEC)

materials distribution together with the FBLI-China team.

Another example reflecting the change in doing research is using urine test results to raise awareness of the local farmers surrounding pesticide use. One hundred twenty (120) urine samples were taken including adults and children, with the dual purpose of laboratory testing and raising awareness. The test results were discussed face-to-face between researchers and the farmers who gave their urine samples. This activity informed the farmers through a more personal manner. The positive-to- pesticide urine test result of the 3-year old boy who followed his mother to field convinced the locals about the need of using self-protection. By this way, urine test is not only a scientific research but also a tool to raise people's awareness.

Local partners were actively engaged in the research process

Yuanmou CDC has been a very supportive partner of the KMU research team since 2006. In an interview with the team members, the team leader indicated that CDC officers showed interest in the Ecohealth research and actively participated in field work (e.g., collecting urine sampling), a first since initial collaborations. The repeated visits of the researchers to the CDC office to seek for data and information have gained attention of CDC colleagues. "While in the traditional research, people just come once or twice during the data collection. They [the CDC officers] sometimes felt annoyed when we [FBLI researchers] came back very often", Noted by the FBLI China team member. The CDC partners accompanied the team on several sampling missions in the field. The local partner engaged in the research process in a more active way which gives chances for them to gain deeper understanding about Ecohealth research. It would consolidate the trust of local partner for the research team.

Example of full outcome description

FBLI China team has applied more transdisciplinarity in their research by incorporating farmer's perspectives and by learning through fieldwork in the community during the implementation of the FBLI.

Significance

This outcome marked the difference between Ecohealth and other traditional research approaches. In traditional approach, issues and solutions often come from scientists as the result of reviewing literature, but in Ecohealth, issues and solutions are raised from interaction with the community. Ideas such as "diary calendar" or using urine test results as tools of raising awareness of villagers were formed through interaction with local community.

Contributions of the FBLI

The flexibility in the FBLI's program design has provided an opportunity for researchers to apply transdisciplinarity in research.

FBLI China team and CU staff working with CDC in Yuanmou County during the evaluation activity

Ecohealth has been integrated in the curriculum of the KMU and FBLI contributed to the Ecohealth capacity building for next-generation researchers

The activities of FBLI-China have gained attention of KMU. Since 2011, "Ecohealth" has been offered as an 18 hour elective course offered to all students at the university. Further, six teaching hours of EcoHealth was integrated into the university's postgraduate student curriculum. This outcome supported Ecohealth capacity building for researchers, especially the next-generation researchers.

Another evidence for the increasing recognition of Ecohealth approaches among the peer community is the diversity of participants in The Future Leader Training in May 2014. Among the list, there were participants from Beijing University, Fudan University, Yunnan Agriculture University, the Kunming University of Science and Technology and the FORHEAD[1] network.

Challenges

The FBLI China team identified challenges in doing Ecohealth research:

- Administration is often inflexible, whereas Ecohealth research is flexible. Changes in research plans (often encountered in Ecohealth research) complicates administrative processes, often leading to delays
- Policy advocacy is not a linear process, difficulties in reaching policy makers
- Researchers encounter challenges in balancing traditional academic norms (e.g., produce publications) with creating positive changes in the community (e.g., interventions)

Lessons learned

- Defining Ecohealth field building outcomes are challenging at initial planning stages, however, this activity helped identify and formulate outcomes
- 'Know someone who knows someone', connecting with researchers with links to policy-makers can help reach policy makers
- There are similar outcomes and challenges between FBLI China and FBLI Vietnam, suggesting value in further cross-country exchanges in the future.
- Through outcome harvesting, the team further enhanced their capacity in using the Ecohealth approach through reflecting on their experiences

Conclusion and Next steps

Four years since project implementation, changes in behaviour among stakeholders were observed. The FBLI-China team and partners became an informal coalition that raised issues surrounding pesticide use. Regular communication was established between team and partners, and some training of researchers in Ecohealth was achieved. The emphasis on community engagement was the key to the success of project activities so far. Working as a team with farmers and local partners empowered a shared responsibility for results. It also enabled groups to share resources and use their collective capacity to create change.

The outcomes harvested from the FBLI China activity are initial but significant, representing

[1] FORHEAD : Forum on Health, Environment and Development in China. More information on http://www.ssrc.org/publications/view/food-safety-in-china-a-mapping-of-problems-governance-and-research/

gradual contributions to build the field of Ecohealth. Field building is an ongoing process, and the outcome harvesting allowed FBLI-China to better understand contributions to the process, as well as challenges, in order to move forward into its final year of FBLI implementation.

To continue to advance the project, suggested next steps to move forward include:

- Engagement with researchers with links to policy makers
- Continued engagement with stakeholders
- Sharing reflections and early outcomes to encourage partners to continue advocacy for changing pesticide use
- Push out research findings
- Communication among research teams of four countries to share experiences.

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