

## Engaged Research Can Advance Knowledge AND Promote Positive Change Among the Rural Poor

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### Abstract

There is increasing interest in investigative processes known as “Engaged Research.” Such approaches include aspects of Farming Systems Research & Extension, Participatory Rural Appraisal, Participatory Action Research, and Innovation Systems. Engaged Research—a term recently popular in the USA—is founded on long-term relationships among stakeholders and emphasizes problem-solving based on co-production of knowledge. We are now at a time when science-based knowledge should be implemented to improve the lives of the rural poor under the triple threat of poverty, natural resource degradation, and climate change. Traditional ways of conducting applied, academic study can be reconfigured to this end, improving research effectiveness beyond publications. The objective of this paper is to review the author’s experiences concerning four Engaged-Research projects and summarize lessons learned. Projects include improving risk management among pastoralists in Ethiopia as well as enhancing climate-change adaptation among pastoralists and small-holder farmers in Ethiopia, Nepal, and Uganda. Project outcomes have included economic diversification of households, empowerment of women, and water-resource development in addition to research outputs. Key elements of this approach include: (1) Joint identification of major problems and solutions; (2) trust building among stakeholders; (3) peer-to-peer learning; (4) investments to build human and social capital; and (5) facilitating growth of stakeholder self-help networks. Given there are typically positive effects of Engaged Research on stakeholders, why aren’t such approaches more common? The answer lies in the narrow incentives governing academia and development organizations; such incentives reward traditional ways of working rather than reflecting development impacts in the field. Other obstacles include the transaction costs and need for sustained funding in support of engaged activity from beginning to the end of a project. Researchers in developing nations can become involved in Engaged Research. How such scientists can navigate traditional incentive structures and enhance fund-raising for Engaged Research are reviewed.

### Introduction

Researchers and development practitioners who work with the rural poor hope their efforts will lead to positive, sustainable changes in people’s lives. Reality, however, indicates this is difficult to achieve. One reason is that academic study rarely translates into practical recommendations; another is that development actions tend to be donor-driven and not evidence-based. Keeping community members out of the loop when research or outreach is planned promotes project irrelevance and undermines stakeholder buy-in. But a traditionally minded researcher may counter with the belief that, “*My role is only to generate*

*and publish knowledge; whether it is ever used is someone else’s problem.*” This is a perfectly logical position—researchers often feel they can only do so much given limited time and other resources, and must focus on their core mandate. Here it is contended, however, that researchers and other change agents can expand their horizons to better embrace integrated projects that unite science and stakeholder participation (Pound *et al.*, 2003). This is because the life circumstances for the rural poor are increasingly dire, and development professionals of all stripes should aspire to help foster positive changes in the drylands (Briske *et al.*, 2020). Applied research

thus needs to be used, not just reported and left on the shelf. Scientists and development practitioners often become entrenched in “safe,” conventional ways of working, and lack exposure to innovative ways to collaborate and generate a greater array of real-world impacts. Indeed, there are few incentives to act differently. The objective of this paper is to provide examples as to how improved connectivity among stakeholders in rural-development processes can advance knowledge and foster more progress on the ground, largely based on the experiences of the author. An array of similar, action-oriented approaches (Shaner *et al.*, 1982, Whyte 1989, Chambers 1994, Röling

2009) are grouped here under the term Engaged Research (Whitmer *et al.*, 2010), a concept now getting traction among American universities (Coppock 2019). Benefits and challenges of Engaged Research will also be reviewed.

### Materials and Methods

The approaches used for projects summarized in this paper and referenced above include: (1) Farming Systems Research & Extension (FSRE), (2) Participatory Action Research (PAR), (3) Participatory Rural Appraisal (PRA), (4) Innovation Systems (IS), and Engaged Research (ER). Key elements are summarized in Table 1.

**Table 1:** Key elements of various collaborative or action-oriented research approaches as practiced in pastoral or farming areas world-wide. Approaches are listed from top to bottom in a rough chronological order of their appearance in academic or rural development discourse.

Approach	Reference	Key Elements
Farming Systems Research & Extension ( <b>FSRE</b> )	Shaner <i>et al.</i> , (1982)	Integrated collaboration between research and extension components; tends to emphasize technical issues in understanding complex production systems
Participatory Action Research ( <b>PAR</b> )	Whyte (1989)	Iterative, step-wise problem solving with multi-sectoral applications (i.e., education, health, agriculture, etc.)
Participatory Rural Appraisal ( <b>PRA</b> )	Chambers (1994)	Prioritized community-based problem diagnosis with identification of locally sustainable solutions; also with multi-sectoral applications as above
Innovation Systems ( <b>IS</b> )	Röling (2009)	Similar elements with <b>FSRE</b> and <b>ER</b> , but more emphasis on community-driven innovation and creation of integrated stakeholder networks to best achieve project goals. Networks can include governmental, non-governmental, or community-based organizations (GOs, NGOs, CBOs); also academics, etc.
Engaged Research ( <b>ER</b> )	Whitmer <i>et al.</i> , (2010)	Encompasses multi-stakeholder interactions and outputs for research-based problem-solving over long time-frames on a project; embraces a novel mind-set for traditional, applied researchers in the USA

While the approaches listed in Table 1 have distinct scholarly roots, they can yield similar project outcomes depending on how they are used. There is rarely a strict “cook book” approach for either practitioners or applied researchers when using these approaches. And approaches can be combined in an adaptive fashion. The ideal situation where all could be combined is

illustrated in Table 2. In the author’s experience, his involvement in several consecutive projects in the Borana Plateau of southern Ethiopia from 1985 to 2018 offers a serendipitous case-in-point from a post-hoc retrospective, with the centerpiece being the USAID-funded Pastoral Risk Management (PARIMA) project.



**Table 2:** Temporal sequence of approaches used on the Borana Plateau of Southern Ethiopia, 1985 to 2018.

Years	Approaches	Funding Source	Comments
1985-1994	System Analysis	International Livestock Center for Africa (ILCA)	Compilation of numerous discrete studies into a synthesis volume (Coppock 1994) revealed the need to diversify the pastoral economy and better manage risks of drought given population pressure. In one sense this substituted for an <b>FSRE</b> perspective.
1991-2015	Quest to Problem Solve	Not Applicable	In retrospect, Coppock (1994) gave the impetus to focus on pastoral economic diversification and risk management as problem model solutions. This embodied an <b>ER</b> worldview.
1994-1997	Applied Study of Household (HH) Risk Management	Utah State Univ.; Rockefeller Foundation	Study of details of HH asset diversification in pastoral (live-stock) and non-pastoral (banking) spheres to better manage risk. Embraced <b>conventional, socioeconomic research</b> methods.
1997-2009	PRA; PAR; IS	USAID Global Livestock CRSP; USAID Country Missions; Utah State Univ.	PARIMA project; <b>PRA</b> used to confirm and enrich problem diagnosis; identified diversification as key, women as change agents; <b>PAR</b> sed to strengthen pastoral capacity-building efforts; <b>IS</b> used to expand problem-solving via stakeholder networks of GOs, NGOs, CBOs, academics, etc. (Coppock 2019)
2013-2018	Applied Study of HH Asset Diversification and Rural/Urban Linkages	USAID Adapting Livestock Systems to Climate Change CRSP	Study of details of HH asset diversification in pastoral (live-stock/rural) and non-pastoral (urban/banking) spheres to better manage risk. Embraced <b>conventional, socioeconomic research</b> methods (Coppock <i>et al.</i> , 2018). Still embodied an <b>ER</b> worldview. Overall effort ceased by Coppock <i>et al.</i> , when funding networks ended. Could continue with more <b>PRA, PAR, IS</b> to enhance pastoral development prospects.

## Results

While an ER perspective has been embraced for various projects over the past 20 years—and subsequent projects benefitted from lessons learned in previous projects and hence became more efficient—each project has differed in terms of funding support, duration, research outputs, and development impacts (Table 3). Importantly, all four projects identified and implemented solutions to local problems within a short period of time, thanks to reliance on PRA and PAR. Variation in project funding has been the single most important factor in overall project impact

and success; high funding levels for PARIMA allowed for major investments in research, human capacity-building, outreach, and creating a large IS stakeholder network (Coppock 2019). Project impacts from PARIMA are still ongoing today. In contrast, in other situations the lack of an ability to expand project support beyond 2-3 years markedly limited project impacts, despite that many interventions have been locally sustained post-project. Funding is also needed to incentivize IS networks (Table 2); when funding had dried up for PARIMA by 2009 the IS network quickly faded. Fortunately, however, continued growth of PARIMA no longer depended on the network; the IS was only essential early on.

**Table 3:.** Features of four Engaged Research projects undertaken in chronological order by the author and colleagues, 1997 to 2018. Projects varied greatly with respect to funding levels; PARIMA was a USD multi-million effort while KALO was at a USD half-million level; Nepal (USD 25,000) and Uganda (USD 3,000) were funded at much lower levels

Project Name or Location	Project Goal	Official Project Duration	Stakeholder Network	Main Approaches Used <sup>1</sup>	Outcomes
PARIMABorana, Ethiopia	Improve risk management among pastoralists (Coppock 2019)	12 years	Very Large	PRA, PAR IS, ER, FSRE	Livelihood diversification; empowerment of women; regional impact; very high publication output
KALO Borana, Ethiopia	Climate-change adaptation among pastoralists (Coppock 2016)	3 years	Moderate	PRA, PAR	Local water development and capacity building; local impact; moderate publication output
Bajura, Nepal	Climate-change adaptation among small-scale farmers (Coppock <i>et al.</i> , submitted)	3 years	Small	PRA, PAR	Local water development and diverse capacity building; local impact; low publication output
Hoima, Uganda	Climate-change adaptation among small-scale farmers (Derr 2018)	2 years	Very Small	PRA, PAR	Local water development and capacity building; local impact; low publication output

Research outcomes contrasting engaged and conventional research approaches are shown in Table 4. Based on the author's experiences, research innovation is higher under engaged formats because insights from co-produced knowledge are superior; research hypotheses are improved beyond what is offered in the scientific literature and action-oriented study provides better hypothesis testing. Problem-solving also benefits from testing ideas (theory) in real-world settings. The down side of engaged approaches includes

the need for more funding that is also flexible. Transaction costs incurred when interacting with project stakeholders is another challenge that is often avoided when just conducting conventional research. Increased time involved in transaction costs may detract from the time devoted to data analysis and publication. Research risk occurs when the priority study topics that emerge from communities fail to coincide with the main scholarly interests of scientists.

**Table 4:** Differences between participatory and conventional research approaches. Source: Adapted from Coppock (2019).

Topic	Engaged Research	Conventional Research
Research Innovation	Higher	Lower
Publication Output	Lower	Higher
Problem-Solving	Higher	Lower
Funding Required	Higher	Lower
Transaction Costs	Higher	Lower

## Discussion

Many researchers may review these findings and conclude that while ER is indeed a noble and personally rewarding undertaking, the challenges of altering how one works in academia or government are too great. In particular, securing funding and new partnerships to conduct ER appear daunting. Such arguments are valid and scientists may rather aspire to broaden their impacts in the real world by doing a better job of communicating research results to development stakeholders. Such efforts could help fill “knowledge- or technology-transfer gaps” often found in developing nations due to outreach underinvestment (Coppock 2019). These gaps are dealt with by Extension faculty at land-grant schools in the USA, but a dominance of top-down thinking is a problem. This process could benefit from more co-production of knowledge via ER.

Applied researchers in developing nations may be well placed to adopt ER, however. In the experiences of the author, such scientists are often motivated by the idea that research should have practical utility and serve citizens in need. One obstacle to adopting more ER is traditional administrations that dole out rewards based on conventional research (Witmer *et al.*, 2010). This is changing, however; researchers can conduct

conventional and ER work, and public accolades for generating real-world impact from ER can be viewed very favourably by unit leaders at research institutions (Coppock 2019).

Another challenge becomes logistics and funding for ER. Applied researchers in developing nations actually have an advantage in conducting ER because target communities can be local and hence accessible over long periods of time. Securing funding is another problem in general. Because ER offers prospects of development impact, this may be advantageous in generating research monies. Researchers can seek partnerships with communities and change agents to create fundable ER projects. Efforts to generate crowdfunding can also occur (Shafi *et al.*, 2019). As researchers gain expertise with development via ER this opens doors to consulting. In conclusion, benefits of ER are diverse and justify more adoption of the approach.

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