

All messages posted from the FAO moderated e-mail conference on "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives" that took place from 5 May to 1 June 2014.

[This document contains all of the 109 messages that were posted during the FAO moderated e-mail conference on "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives". The conference took place as part of FAO's contributions to the project on the Impact of Research on EU Agriculture (IMPRESA, <http://www.impresa-project.eu/>). The goal of the conference was to allow participants from around the world to share and discuss their experiences, lessons learned and perspectives regarding the concepts, approaches and methodologies for ex post impact assessment of agricultural research.

Before the conference began, the 18-page background document was sent to all participants (<http://www.fao.org/docrep/019/as549e/as549e.pdf>). Its aim was to provide an easily-understandable introduction and brief overview to the conference topic. The Introductory Section explained first that FAO is hosting the conference as part of its activities in the IMPRESA project. It then provided an introduction to the general area of evaluation and subsequently narrowed it down to ex post impact assessment (epIA), one component of the whole evaluation package. Section 2 described the main approaches and methodologies used for carrying out epIA of agricultural research. These were classified into two broad groups: macro-level assessments (covered in Section 2.1) looking, for example, at the impacts of agricultural research at the regional or national level and micro-level assessments (Section 2.2), looking at the impacts of specific research-derived interventions. Section 3 briefly considered the issue of how epIA results are communicated to donors and policy-makers and how they subsequently used them. Section 4 provided a series of questions which participants were asked to address during the conference. Section 5 contained references (most of which are available on the web), abbreviations and acknowledgements.

The number of subscribers was just below 500 on 5 March when the conference began and it rose to 618 people on 1 June when the conference finished. Of these, 59 people (i.e. 10%) submitted at least one message. Of these 109 messages, 30% came from people living in Africa; 29% from Europe; 15% from Asia; 13% from Latin America and the Caribbean; 7% from North America and 6% from Oceania. A total of 63 messages (i.e. 58%) were posted by people living in developing countries. The messages came from people living in 38 different countries. The greatest number were from people living in Uruguay, Switzerland, the United States of America, Australia, Ghana, India, Hungary, Indonesia, Italy, the Netherlands, Kenya and Nigeria (all with four messages or more). Participants in the conference also came from a wide range of work environments. Of the 109 messages, 25% were from people working in universities; 23% from national research centres; 22% from independent consultants; 14% from people working in the international agricultural research system (mostly CGIAR centres); 7% from inter-governmental organizations (mostly FAO); 5% from non-governmental organizations and 5% from people working in Government ministries or Government bodies. NB: Participants are assumed to be speaking on their own behalf, unless they state otherwise.

The conference was moderated by John Ruane, from the FAO Research and Extension Unit (<http://www.fao.org/nr/research-extension-systems/en/>). A Summary Document will be prepared and made available at <http://www.fao.org/nr/research-extension-systems/res-home/news/detail/en/c/217706/>

The Messages

Messages are numbered in order of their posting during the conference. The few messages without a number are from the Moderator.

Subject of Messages:

: Welcome to the FAO e-mail conference on ex post impact assessment of agricultural research

- 1: Five selected issues fundamental to epIA of agricultural research
- 2: How to consider the aspects of systemic change in impact assessment strategies?
- 3: Re: How to consider the aspects of systemic change in impact assessment strategies?
- 4: Integrating value of new knowledge in epIA
- 5: A holistic framework for assessing impact of AR4D projects
- 6: Two issues influencing agricultural research and objectivity of epIA
- 7: Impact assessment: Looking at mobile hubs of networks and their arrangements over time...
- 8: Impact evaluation for AR4D: Causality in complex settings

9: Diverse issues related to epIA of agricultural research in the EU

10: Operational limitations of smallholder producers

11: Re: Integrating value of new knowledge in epIA

: Update on the FAO e-conference on approaches and methodologies in epIA of agricultural research

12: Assessing the impact of research: long- vs. short-term and quantitative vs. qualitative measures

13: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

14: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

15: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

16: The evaluation of each investigation for acceptance by farmers and political agents

17: Message from Kolkata

18: Towards effective communication strategies for ex post impact assessment

19: Macro-level assessments of agricultural research - TFP vs. partial productivity measures

20: Case studies and selection bias

21: Re: A holistic framework for assessing impact of AR4D projects

22: Re: Message from Kolkata

23: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

24: Re: Case studies and selection bias

25: Communication and research impact

26: Responding to issues raised in Section 4 of the Background Document

27: Transferability, cost effectiveness and communication of research information

28: Re: A holistic framework for assessing impact of AR4D projects

29: Re: Case studies and selection bias

30: Re: Towards effective communication strategies for ex post impact assessment

31: Macro-level epIA - Four basic issues

32: Impact assessment and small scale farmers

33: Re: Towards effective communication strategies for ex post impact assessment

34: Participatory procedures

35: Partial acceptance of research results // infrastructure

36: Re: Participatory procedures

37: Re: Participatory procedures

38: Technology adoption and impact evaluation

39: Contribution from Egypt

40: Different epIA methods and a control group

41: EpIA when there is partial adaption of innovations

42: Seed and planting material- Impact assessment

43: Project design and impact evaluation

44: Re: Case studies and selection bias

45: Re: Project design and impact evaluation

46: Re: Case studies and selection bias // CGIAR SPIA resources

47: Re: Towards effective communication strategies for ex post impact assessment

48: Main lessons learned from evaluation of INIA, Uruguay

49: Partial innovation adoption; project impact evaluation; and network analysis

50: Re: Partial innovation adoption; project impact evaluation; and network analysis

51: Some lessons learned from assessment of economic impacts of agricultural research technologies

52: Re: Case studies and selection bias

53: Participatory monitoring and evaluation in the Philippines

54: Communicating epIA findings to relevant stakeholders

: Moderator's message: Just passed the half-way stage in this FAO e-mail conference

55: Re: Some lessons learned from assessment of economic impacts of agricultural research technologies

56: Institutional innovation in Latin America and the Caribbean: Evaluation of FONTAGRO

57: Re: Project design and impact evaluation

58: Two caveats to the definition of impact

59: Communicating the epIA findings

60: Re: Two caveats to the definition of impact

61: Re: Participatory procedures
62: Outcome mapping
63: Issues in agricultural research impact evaluation
64: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?
65: Issues in assessment of non-economic impact
66: Re: Issues in assessment of non-economic impact
67: Evaluating impacts of capacity development in research
: Moderator's message: Coming into the final week of this FAO e-mail conference
68: Evaluation of INIA, Uruguay
69: Seeing impacts in a broader and longer term context

70: Alternatives to propensity score matching // Purpose of impact evaluation
71: Difficulties in assessing and evaluating agricultural research
72: Can social network analysis be helpful to impact evaluation?
73: Re: Issues in assessment of non-economic impact
74: Re: Seeing impacts in a broader and longer term context
75: Re: Difficulties in assessing and evaluating agricultural research
76: Re: Alternatives to propensity score matching // Purpose of impact evaluation
77: Re: Can social network analysis be helpful to impact evaluation?
78: Re: Can social network analysis be helpful to impact evaluation?
79: Re: Project design and impact evaluation

80: Participation of actors in EpIA
81: Quantitative methods - Instrumental variable methods
82: Re: Macro-level epIA - Four basic issues
83: Quantitative data on social and environmental dimensions
84: Attribution vs contribution in impact evaluation
85: Evaluating the social impacts of INIA's technologies
86: Re: Attribution vs contribution in impact evaluation
87: Re: Difficulties in assessing and evaluating agricultural research
88: Re: Can social network analysis be helpful to impact evaluation?
89: Re: Quantitative data on social and environmental dimensions

90: Re: Can social network analysis be helpful to impact evaluation?
91: Measuring the impacts of 2012 flooding on livelihoods
92: Re: Attribution vs contribution in impact evaluation
93: Importance of capacity for conducting impact assessment
94: More incentives for research: EpIA results and Research Information Systems
95: Re: Attribution vs contribution in impact evaluation
96: Re: Can social network analysis be helpful to impact evaluation?
97: Cirad's work on IE // A few comments about the e-conf discussions
98: Re: Measuring the impacts of 2012 flooding on livelihoods
99: Institutional impact analysis
: Last days of the FAO e-mail conference on impact assessment

100: Re: Attribution vs contribution in impact evaluation
101: Re: Attribution vs contribution in impact evaluation
102: The benefits of impact assessment - Burundi
103: EpIA methods for forestry
104: Re: Can social network analysis be helpful to impact evaluation?
105: Re: A holistic framework for assessing impact of AR4D projects
106: Different points from the e-conference
107: Questions about the participations
108: Operational considerations - refrained
109: Ex-post impact assessment and smallholder resource-poor farmers

: End of FAO e-conference on ex post impact assessment

-----Original Message-----

From: AIS

Sent: 02 May 2014 11:26

To: 'Impact-L@listserv.fao.org'

Subject: Welcome to the FAO e-mail conference on Ex post impact assessment of agricultural research

Dear Colleagues,

Welcome to this FAO e-mail conference on "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives" !! Thank you for joining.

You can send messages now (send them to AIS@fao.org). Messages will be posted from Monday 5 May onwards while the last day for receiving messages will be Sunday 1 June 2014.

We hope that the conference will be interesting, constructive and beneficial and we encourage you to participate actively. On joining the conference, subscribers received a Welcome Text which also contains the Guidelines for Sending Messages. Here, we would like to briefly remind you of some of the main points about the running of the conference:

1. Participants should introduce themselves briefly (2-3 sentences) when sending their first message to the conference. They should also provide their full work address at the end of the message. When a message is posted, we will replace @ in the e-mail address with (at) to avoid spamming.
2. Messages should not exceed 600 words
3. People posting messages are assumed to be speaking on their own behalf and not on behalf of their employers (unless they indicate otherwise)
4. Messages posted in the conference will also be made available on the web, at <https://listserv.fao.org/cgi-bin/wa?A0=Impact-L>
5. No messages will be posted with attachments. If you receive a message during the conference with an e-mail attachment, just delete it without opening the attachment.
6. The Background Document to the conference, sent by e-mail to subscribers of this conference on 30 April, sets the scene for the conference. We strongly encourage you to read it, especially Section 4 (reproduced below) which provides specific guidance about the questions that participants should address in the conference. The document is available at <http://www.fao.org/docrep/019/as549e/as549e.pdf> (120 KB). Contact me (at AIS@fao.org) if you want to receive the document by e-mail.

After the conference, a summary document will be published, providing an easily readable synthesis of the main discussion points and conclusions.

Finally, we encourage you to tell any potentially interested colleagues or contacts about this conference. A short notice is included below for this purpose.

With our sincere best wishes for a successful conference,

John

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Impact assessment of agricultural research - An FAO e-mail conference

The UN Food and Agriculture Organization (FAO) is one of nine partners participating in a project on the Impact of Research on EU Agriculture (IMPRESA), funded by the European Union (EU) Seventh Framework Programme. In this recently-launched project, FAO is leading work package 1 (on Concept Development and Learning), which has as one of its main aims the establishment of a common framework to update concepts and methodologies for impact assessment of agricultural research. As part of the work package's activities, FAO will host a moderated e-mail conference about impact assessment of agricultural research from 5 May to 1 June 2014.

Evidence suggests that investments in agricultural research play a key role in raising agricultural productivity and enhancing sustainability. In recent years, ever-increasing importance has been given to assessing the impact of agricultural research. This is for reasons of accountability and transparency as well as to ensure that limited financial resources are used in the most effective manner possible. Impact assessment can, in addition, provide empirical evidence of the effectiveness of past investments and thereby ensure the continued support of governments and donors to agricultural research in the future.

This e-mail conference will allow participants from around the world to share and discuss their experiences, lessons learned and perspectives regarding impact assessment of agricultural research (note, the term 'agricultural research' encompasses research in the crop, livestock, forestry, fishery and aquaculture sectors). The kinds of topics to be discussed will include use of different approaches, models and tools to assess the impacts of agricultural research and best practices for disseminating impact assessment results to policy-makers and other relevant stakeholders.

The e-mail conference will focus on ex post (looking at the impacts after the agricultural research is completed) and not on ex ante impact assessment (predicting the impacts that agricultural research might have in the future). The conference title is "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives".

The conference is open to everyone, is free and will be moderated. To subscribe to the conference, send an e-mail to listserv@listserv.fao.org with the following one line in the body of the message (leave the subject line blank):
subscribe impact-L firstname lastname

Where firstname and lastname refer to the person's first and last name. For example, if the subscriber's name is John Smith, then the line should be:
subscribe impact-L John Smith

The background document to the conference was published on 30 April and can be downloaded from <http://www.fao.org/docrep/019/as549e/as549e.pdf> (120 KB). It aims to provide an easily-understandable introduction and brief overview to the conference topic that participants will find useful for the e-mail conference.

After the conference, a summary document will be published, providing an easily readable synthesis of the main discussion points and conclusions.

For more information, please contact AIS@fao.org

[FROM THE BACKGROUND DOCUMENT]

4. Main questions to be discussed by participants in the conference

This e-mail conference enables participants from around the world to share and discuss their experiences, lessons learned and perspectives regarding the concepts, approaches and methodologies for ex post impact assessment of agricultural research. Note that the term 'agricultural research' encompasses research in the crop, livestock, forestry, fishery and aquaculture sectors, so the conference covers epIA relating to any of these sectors. Note also that the aim of the conference is not to discuss the potential positive or negative impacts of any specific technologies or products derived from agricultural research. Instead, the conference focuses on the concepts, approaches and methodologies used for epIA of agricultural research.

The main kinds of topics to be discussed by participants in the conference are described below:

4.1 Approaches and methodologies for epIA

As seen in Section 2, for epIA of agricultural research, both at the macro- and micro-level, a range of approaches and methodologies are available, which have different statistical properties, data requirements and practical characteristics.

- What have been participants' experiences and lessons learned from applying different methodologies (including general issues such as what have been the difficulties in using them?; how was the complexity of the processes from inputs to impacts dealt with?; what methods were used to identify the beneficiaries of the impacts?; how were reliable and good-quality indicators identified?)
- Also, for the future, what perspectives do the participants see for the different methodologies?

4.2 Assessment of non-economic impacts

As seen in Sections 2.1.3 and 2.2.5, for both macro- and micro-level epIA respectively, there is increasing interest in assessing the impacts of agricultural research on environmental (including natural resources management and sustainability), social (including poverty and hunger alleviation), government policy and other non-economic dimensions, although these assessments can represent considerable data and methodological challenges.

- What cost- and time-effective approaches and methodologies can be used to best address the challenges of assessing non-economic impacts?
- What perspectives are there that epIA studies of non-economic impacts will become easier and more commonplace in the future?

4.3 Quantitative versus qualitative methods

As described in Section 2.2, quantitative and qualitative methods have different strengths and weaknesses and their deployment involves use of different skills by the people carrying out the epIA. The importance of their relative roles in impact assessment is also a topic of considerable debate.

- For epIA of agricultural research, what are the relative merits of the two kinds of methods?
- When are qualitative methods to be preferred?
- When are mixed methods, combining quantitative and qualitative, to be preferred (considering also the issue of cost of carrying out the assessment)?
- Are there quantitative or qualitative methods currently used for epIA in other areas which might be particularly useful for epIA of agricultural research?

4.4 Randomised controlled trials (RCTs) versus other methods (quantitative or qualitative)

As described in Section 2.2.1, the drive for more evidence-based and rigorous impact assessment, particularly by donors, has meant that use of RCTs has been championed in a wide range of areas and their potential role is also of considerable interest for epIA of agricultural research.

- How important are RCTs likely to be for epIA of agricultural research and when are they likely to be particularly advantageous?
- How important, cost- and time-effective are epIA studies from RCTs compared to those from other quantitative or qualitative methods, including qualitative narrative stories?

4.5 EpIA in the different food and agricultural sectors

As seen from Alston et al. (2000), the overwhelming focus of epIA studies in the past has been on field crops, with about 1,000 estimates of economic rates of return found in the literature compared to over 300 for livestock and less than 100 for research with a natural resources focus, including forestry and fisheries. According to Raitzer and Kelley (2008), the uneven coverage of epIA work across the different food and agricultural sectors might be one of the reasons why epIA results are not crucial for donors when deciding on research funding allocations.

- Is the uneven focus of epIA work across the crop, livestock, forestry, fishery and agro-industry sectors an important issue?
- If so, what incentives can be provided to ensure that all the food and agricultural sectors are better covered?
- To what degree can epIA methods developed for one sector be transferred to others?

4.6 Cost-effective epIA

As described in the Introduction, organizations carrying out agricultural research are under increased pressure to assess the impact of their research activities. There is also a drive to measure indicators that are not purely of an economic nature and to carry out the epIA work in a more comprehensive and rigorous fashion, which may require gathering data on several relevant indicators and using more than one method (e.g. combining qualitative and quantitative methods). This kind of work entails use of financial and human resources which might otherwise be used for other purposes, such as carrying out research. For example, in their book with case studies of the impact of agricultural research on poverty, Adato and Meinzen-Dick (2007) indicate that each case study costed around 200,000 USD. While noting that the sum is relatively small compared to the total research budget, they say “the challenge now is to evolve and adopt cost- and time-effective approaches and methods...”.

- How can meaningful and high-quality epIA studies be carried out which do not cost too much money?
- What is the appropriate proportion of a research budget to spend on epIA?
- With very limited research funding, is it worthwhile dedicating resources to epIA?
- What is the minimum budget one needs to carry out a meaningful epIA of agricultural research?
- Are there good examples of cost- and time-effective approaches and methods for epIA of agricultural research?

4.7 Communicating the epIA findings

As seen in Section 3, limited information seems to be available about how the final results of epIA studies are communicated to donors or policy-makers and how they then use these results.

- What have been participants’ experiences and lessons learned from communicating the epIA findings to donors or policy-makers?
- What is the best approach and format for presenting the findings to them?
- How can it be ensured that the results will be read and considered by donors and policy-makers?
- What examples are available which demonstrate that the results of epAI studies have been used in a policy process or to make strategic funding decisions?

4.8 EpIA as one component in the overall evaluation package

The primary purpose and role of epIA of agricultural research has been critically examined on occasions (e.g. Ekboir, 2003) and continues to be a topic of current debate.

- What is the primary purpose of epIA of agricultural research today?
- Compared to the other components in the overall evaluation package, how important is epIA today and how important is it likely to be in the future?

-----Original Message-----

From: AIS

Sent: 05 May 2014 19:01

To: 'Impact-L@listserv.fao.org'

Subject: 1: Five selected issues fundamental to epIA of agricultural research

[Thanks to S.K.T. Nasar from India for sending in the first message of this FAO e-mail conference on the "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives". All messages will be numbered chronologically. If during the conference you notice that you are missing any messages, just contact me at AIS@fao.org ...Moderator].

This is S.K.T. Nasar from Kolkata, India. Post-retirement as Director of Research of Bidhan Chandra Krishi Viswavidyalaya, an Agricultural University, I am a freelance farmers’ participatory researcher and writer on current and future issues concerning agriculture. Here, I wish to consider selected issues fundamental to ex post impact assessment (epIA) of agricultural research.

First, agricultural research is largely funded by public exchequer, private investment or a combination of both. Private investors pour in funds mostly aiming at profits and to quickly reach the breakeven point in terms of money spent and money gained. The outcome indeed includes public good but more as a by-product. Public funding, alternatively, is purported for socio-economic and political gain. Either scenario insists on directed research rather than free research independent of bindings or ex ante commitments to the funding agencies. EpIA is easier with money as a major parameter providing quantitative data while assessment of quantified socio-politico-economic gain is complicated. Most epIAs adopt the easier option.

Second, research strategies and interventions in agriculture revolve around variety, seed, agro-chemicals and factor productivity of soil, water and agronomic techniques. Transfer and adoption of technology alongside marketability and marketing of farm produce are considered equally important research areas. Agriculture research is moving in irreversible ways to global demand-driven market economy and epIA needs to cater to ex ante goals set by investors.

Third, investors rather than local community determines the research intervention. Sustainability of natural resources and health of the local community is losing importance. Weather inconsistency and location-specific seasonality are less relevant in agriculture as a function of the global economy. These factors are not in the reckoning of most epIAs. Ex-ante impact projections are majorly for short terms. Long-term epIA with additional assumptions and parameters leaves a large number of factors unconsidered.

Fourth, the Background Document to the conference mentions non-economic impacts which by implication put lesser emphasis on poverty alleviation and food-nutrition security, environmental impacts, biodiversity, genetic contamination, soil-water productivity, pollution and health hazards. Restoration costs of damages created or initiated by interventions are as much 'economic' as the factors included under 'economic impacts'.

Fifth, agriculture is a multi-variate multi-level system impacted by external factors. Parameters for which research intervention was initially launched may lose relevance by the time post-research epIA is initiated. EpIAs need to be based on the most probable future scenario. The opportunity cost, restoration costs and fluctuations in the intervened parameters must be included in epIAs.

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[To contribute to this conference, send your message to AIS@fao.org. For further information, <http://www.fao.org/nr/research-extension-systems/res-home/news/detail/en/c/217706/>].

-----Original Message-----

From: AIS

Sent: 06 May 2014 10:01

To: 'Impact-L@listserv.fao.org'

Subject: 2: How to consider the aspects of systemic change in impact assessment strategies?

I am Ekanath Khatiwada, a private sector development specialist with more than 15 years experience both in Africa (ESA Region) and Asia. My sectoral experience includes; promoting various rural agribusiness enterprises, renewable energy enterprises and programme monitoring and evaluations (PME). I conducted a number of market studies; some of them are cardamom sub sector market study in Nepal, gum acacia value chain study in South Sudan, shea butter market assessment in South Sudan and coordinated a biogas feasibility study for Zambia. I am currently an independent consultant working on market development, present assignments include; a Making Markets Work for the Poor (M4P) feasibility study of renewable energy in Zambia for the SNV Zambia renewable Energy programme and a milk for school (M4S) business model development for the World Food Programme (WFP), Zambia.

I am excited to learn from this impact assessment of agricultural research email exchange conference. Especially how to balance the quantitative and qualitative attribution balance on the agri sector and agribusiness related

project impact assessment. I am sure I will be able to bring some practical aspect of results measurement on market development and value chain.

I would like to ask you my small question here: Agriculture sector is itself very much complex, in such type of the impact assessment process, how do you consider the aspects of systemic change? To explain more: To realise agriculture's full potential, as a driver of food security, environmental sustainability and economic opportunity, requires shifting the way the system operates. Therefore, to better achieve results in agriculture there should be a right mix of right policy, infrastructure, service provision, input supply and markets. This can be achieved by undertaking system analyses and bringing relevant parties together to set a joint agenda for agricultural development, we should address underlying systemic constraints collectively. This multi-actor engagement approach includes a whole series of stakeholders, like smallholders, the private sector and governments. Therefore, I was asking my above question on how to include all these complex environment into the agriculture impact assessment strategies?

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-----Original Message-----

From: AIS
Sent: 06 May 2014 11:13
To: 'Impact-L@listserv.fao.org'
Subject: 3: Re: How to consider the aspects of systemic change in impact assessment strategies?

I'm Amadou Issaka, holding a PhD in Agriculture, with over 20 years experiences in Agriculture education, Natural Resource Management & Poverty Reduction. I have specific experience over 12 years in Monitoring & Evaluation within various institutions (including but not limited to - African Development Bank, World Bank, UNDP, African Union, European Union, etc...). In the past I monitored projects in water resources, animal production as well as Agriculture Education. I'm currently working with the International Institute of Tropical Agriculture (IITA Ibadan-Nigeria) as M&E specialist to implement a five-years R&D Project aiming at strengthening African countries to improve four strategic crops in Africa (Maize, Cassava, Rice and Wheat).

I'm very much excited to learn more about Impact assessment in Agriculture, specially how to measure our Agriculture Research at small household level which seems beyond our control.

Thanks to Ekanath Khatiwada (Message 2) for raising this important issue. I have similar concern as we are currently running a five-year R&D project. This project aims at developing new agricultural technologies (new crop varieties, best-fit crop management options) to increase household cash incomes and household food security. As you know incomes and food security are multidimensional, and may require to look beyond what the project is supposed to achieve. So my question is how to make sure we making impact and how to measure it?

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-----Original Message-----

From: AIS
Sent: 06 May 2014 16:29
To: 'Impact-L@listserv.fao.org'
Subject: 4: Integrating value of new knowledge in epIA

My name is Ed Garrett, previously a farmer from the United States having a diverse background with livestock, crops, farm systems, and multiple scale and locations. I am completing a Fulbright Fellowship at the Hungarian Research Institute of Organic Agriculture in Budapest where I have been doing ethnographic research looking at On-farm Innovation and the needs of beginning farmers in Hungary.

Responding in part to the fifth issue raised by S.K.T. Nasar (Message 1), I want to recommend we take into account the changing body of knowledge on Agriculture (causes and effects) we have when doing our post evaluation on research. Many programs will be found to have excellent post implementation outcomes on the basis of our state of knowledge when the research was first proposed. But as our understanding of the many complex interactions in nature builds new knowledge, these excellent outcomes may now be considered inappropriate.

I see long term projects that were started with current knowledge and after the cycle of sometimes decades to reach impact assessment, we have new knowledge that may void the original intent of the research. I don't make a claim for any single system of agriculture being superior or inferior but we know far more about the impacts of systems on natural resource bases now than 20, 30, or 40 years ago. So how do we do an impact assessment on a program that may have done all it was supposed to do but we now know was based on a flawed rationale for sustainable productivity?

This situation creates a special problem for the study of Agriculture as it creates at least a dual position for evaluation. One is evaluation of the program based on the known world at time of inception. The other is the value of the outcomes in the known world today. It is a problem that we marry ourselves to research because of investment, time, money, emotion, and become less able to consider if the research meets the needs of today.

Moving forward, I recommend that we make an extreme effort to identify places where research was successful but changes in our understanding of processes has caused these outcomes to be minimized in their impact or actually now understood as negative impacts. Doing this may identify preparatory work that needs to be done or research types, funding issues, etc. that contribute more to long term positive impacts and outcomes or research types, methods, etc. that are more at risk.

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-----Original Message-----

From: AIS
Sent: 06 May 2014 16:52
To: 'Impact-L@listserv.fao.org'
Subject: 5: A holistic framework for assessing impact of AR4D projects

I am Huu-Nhuan Nguyen, PhD candidate at University of Queensland, Australia. I am interested in participatory communication approaches for social change and developing innovative impact assessment frameworks for agricultural research for development (AR4D) projects.

I am currently working on developing a holistic framework for assessing impact of AR4D projects underpinned by participatory communication strategies in culturally diverse environments in the Northwest Highlands of Vietnam. By reviewing existing impact assessment practices in the regions I also found out that the assessment of impact of AR4D projects remains problematic in terms of both objectives and methods.

Firstly, most agricultural research initiatives only involve short-term impact assessment while research for development often takes a long time to achieve impacts. Secondly, current impact assessment practices tend to focus more on economic impact and ignore human, social, physical and natural impacts, which are also vital capitals of a sustainable livelihood. Thirdly, although various participatory tools have been employed in impact assessment processes, in many cases because of ethnic diversity local people have not been empowered due to the remaining gaps in understanding social culture, languages and people's perceptions. Fourthly, the results and findings of current impact assessment approaches have been sometimes misleading, attributing larger impact to a single project and ignoring overlapped impacts from the synergistic effects as a result of simultaneous initiatives in the same area. Finally, the impact indicators and feedback mechanisms currently used for impact assessment often aim to establish the returns on investment or cost-effectiveness for donor organizations rather than the sustainability of these impacts for key stakeholders. These weaknesses have led to unconvincing evidence showing how and why specific AR4D have contributed or rather failed to deliver sustainable impacts.

(For those interested in more about the review of existing impact assessment practices in the Northwest Highlands of Vietnam, please see:

Nguyen, H-N, Nicetic, O., Hinthorne, L. and E. Van de Fliert. 2013. Assessing the contribution of participatory approaches to sustainable impacts of agricultural research for development in the Northwest Highlands of Vietnam. *Development Bulletin* 75, pp. 89-91. <https://crawford.anu.edu.au/rmap/devnet/dev-bulletin.php>.

So what should be a holistic impact assessment framework for AR4D?

I agree with Amadou Issaka and Ekanath Khatiwada in Messages 2 and 3 that agriculture is characterized by the complexity and we often have weak evidence about impacts. The framework I developed for impact assessment of AR4D projects is blended from the sustainable livelihood frameworks developed by Scoones (1998) and DFID (1999) and the participatory impact assessment (PIA) approach. The key questions, that are raised for developing an impact assessment framework are: WHY impact assessment of AR4D is being done? WHO benefits from impact assessment results? WHAT information and impact indicators should be achieved? HOW to get information of impacts and HOW impact results are sharing among stakeholders?

The sustainable livelihoods frameworks provide a comprehensive conceptual analysis on ways in which AR4D could have positive or negative impacts on livelihood through changes in choices of livelihood strategies. Adato and Meinzen-Dick (2002) indicated that agricultural technology development is suitable with the complexity of livelihoods strategies if full livelihoods picture is understood. They explained three ways in which agricultural research can fit in a sustainable livelihood framework: 1) by increasing or decreasing vulnerability contexts; 2) by direct or indirect change of livelihood assets and 3) by interactions with policies, institutions and processes.

PIA aims at measuring real impacts created by a development project or program rather than accounting for aspects of its implementation such as input and service delivery, structure construction and trainings. Participatory impact assessment will empower local beneficiaries. By empowering them, we make a shift from short-term, donor oriented and economic focus to local sustainable livelihood development and social change. It should be aware that no standard sets of participatory communication techniques could be developed to fit with different communities and locations.

However, social, human, economic and environmental impact may not be achieved if AR4D projects are not designed in ways that could deliver measurable impacts. Theory of change with causal links between outcomes and impact should be therefore well integrated for impact assessment.

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References:

- Adato, M., & Meinzen-Dick, R. (2002). Assessing the impact of agricultural research on poverty using the sustainable livelihood framework. FCND Discussion Paper 128, EPTD Discussion Paper 89. International Food Policy Research Institute (IFPRI). <http://www.ifpri.org/sites/default/files/publications/eptdp89.pdf> (130 KB)
- DFID. (1999). Sustainable Livelihoods Guidance Sheet. London: Department for International Development (DFID), UK.
- Scoones, I. (1998). Sustainable livelihood: A framework for analysis (Vol. IDS Working Paper 72). Brighton: Institute of Development Studies. <http://mobile.opendocs.ids.ac.uk/opendocs/handle/123456789/3390>

-----Original Message-----

From: AIS
Sent: 06 May 2014 17:08
To: 'Impact-L@listserv.fao.org'
Subject: 6: Two issues influencing agricultural research and objectivity of epIA

This is Godswill Ntsomboh Ntsefong from the Institute of Agricultural Research for Development (IRAD), Cameroon. I am presently the Lipids Analysis Laboratory Manager and Chief of improved oil palm seed production unit at IRAD of La Dibamba. I am equally a researcher and reviewer in peer review journals. My research interventions so far are focused on lipids analysis and integrated crop protection with particular concern on the oil palm. I also focus on the improvement of oil palm smallholder sector as well as Good Laboratory Practices and Management Principles.

For this FAO e-mail conference on “Approaches and methodologies in ex post impact assessment of agricultural research”, I look forward to learning much on the topic from the great experience of all participants. May I point out two main issues that I feel may influence agricultural research and affect the objectivity of ex post impact assessment (epIA) in our context. These are: inappropriate communication and funding mechanisms, and administrative bottlenecks in agricultural research management and assessment.

- At times, the funding mechanism may involve no free prior informed consent (FPIC) of the principal investigator (PI) or research staff. This leads in most cases to incoherent project execution and the procurement of inappropriate materials/equipment by management or a third party due to their lack of clear/technical knowledge about the real use.
- Given that agricultural research mostly depends on weather and seasons with respect to each context, administrative bottlenecks on their part could result in research inputs that do not respect projected and seasonal deadlines leading to “out-of-season” project execution, project failure or incomplete projects.

In the same light as S.K.T. Nasar notes in his fifth point in Message 1, epIA of agricultural research might appear inconsistent in cases where “parameters for which the research intervention was initially launched lose relevance by the time post-research is initiated” due to lateness or inappropriate project execution.

I already have the impression of being in a ship with groomed, experienced marines in the domain of epIA! I will certainly come out of it by the end with my own experience. Thanks to S.K.T. Nasar, Ekanath Khatiwada, and Dr. Amadou Issaka for their messages.

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-----Original Message-----

From: AIS
Sent: 07 May 2014 10:50

To: 'Impact-L@listserv.fao.org'

Subject: 7: Impact assessment: Looking at mobile hubs of networks and their arrangements over time...

I am Silvia Andrea Perez Perdomo. I am from Colombia, but I lived in Uganda for 8 years, which I can say is my second home. Now my third home is here in the Netherlands, where I have been 3 years.

I am particularly interested in this conference on impact assessment of agricultural research because I have been working for more than 15 years in projects related to agricultural research and innovation, working with research and local organisations in Latin American and African countries. Currently I am a PhD candidate at Wageningen University. I am looking at dynamics of innovation-social networks, how these evolve and how they solve their problems, particularly looking how an ambidextrous management in multi-stakeholder innovation platforms (i.e. balancing the exploration and exploitation of capabilities) can help not only to better conduct research but also serve as collective mechanism to evaluate research, so that different stakeholders adjust dynamically their strategies according to the challenges that they want to tackle, with the combined power of managed and resilient networks. Multi-stakeholder platforms have shown to be incubators of innovation and entrepreneurship. My research is being conducted in Uganda, the Democratic Republic of the Congo (DRC) and in Rwanda, where the complexity of problems calls for better ways of collective action with dynamic ways of organization of social-innovation networks to face societal problems, whose complexity sometimes represent various dilemmas or paradoxes that are difficult to manage.

Based on my experience and on the finding of my research, I think that for assessing the impact of agricultural research the units of analysis should be the social organization of networks that takes place at different societal levels over time. This implies looking at how people organize themselves to solve different types of problems, and how different arrangements (technological, knowledge, institutional, inter-organizational relationships, etc) made by networks of people change over time with informal and formal agreements. Assessing impact of agricultural assessment by only looking at organisations, or by continuing to observe dysfunctional organisations or systems, doesn't help to accurately "capture" and assess the new dynamics of the network society, globalization and the open innovation paradigm. The dynamics of glo-cal and virtual communities, whose collective work goes further than organisational, geographical or system boundaries need better ways to track and evaluate outcomes, like in agricultural research. In this way, it is necessary to recognize the roles that actors (like community leaders, farmers, teachers, women, to mention a few) play in agricultural research, sometimes in a very informal but crucial way, which sometimes is not recognized and reported in impact assessment reports; these are people who really live the problems and have the contextual knowledge to better contribute to initiatives for research and development.

I am currently developing a methodological tool for tracking what I define as mobile hubs of innovation networks (including mobile learning hubs), to better capture dynamics of networks when they face different challenges (See more <http://wu.academia.edu/SilviaAndreaPerezPerdomo>). This tool has been used for tracking dynamics of agricultural research in the context of the Sub-Saharan Africa Challenge Program. I hope to contribute with more insights of my research in this discussion.

Looking forward to hear and learn from other participants,

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[These comments by Silvia, related to those by Ekanath in Message 2, about assessing the impacts of agricultural research at the network or system level remind me of discussions held during an FAO Expert Consultation on agricultural innovation systems (AIS) and family farming that took place in Rome on 19-21 March 2012 as part of the initial preparations for the 2014 FAO flagship publication, the State of Food and Agriculture, which will be published later this year dedicated to Innovation in Family Farming. For programmes or projects that have been established using the AIS concept to benefit family farmers, participants in the Expert Consultation agreed that, even though it might be difficult, impacts should be measured, so that it

will be possible to learn from the experiences as well as provide accountability for investments. They urged that the evaluation process be as participatory as possible, involving stakeholders at all the stages. Potential difficulties that participants mentioned regarding measuring impacts in AIS include dealing with the flexible and dynamic nature of AIS (where, for example, the desired outcomes might evolve over time); the complexity of AIS (with many potentially interlinked components, each of which can influence, directly or indirectly, the success and efficiency of the AIS); the need for an "evidence-based baseline", against which impacts can be measured; as well as the long time intervals that are generally required for research etc. The report of the Expert Consultation is available at <http://www.fao.org/docrep/015/an761e/an761e00.pdf> ...Moderator].

-----Original Message-----

From: AIS
Sent: 07 May 2014 15:14
To: 'Impact-L@listserv.fao.org'
Subject: 8: Impact evaluation for AR4D: Causality in complex settings

I am John Mayne an independent evaluation consultant working primarily on development interventions, and in particular working within the Consultative Group on International Agricultural Research (CGIAR) and several of its research programs over the past several years.

The issue of non-experimental approaches to assessing impact is of great interest to me. Several messages to date have referenced the use of impact pathways and theories of change in this light. I wanted to draw your attention to publications that address this issue, one done for the UK Department for International Development (DFID) and one more specifically on agricultural research for development (AR4D) settings:

Mayne, J. and E. Stern (2013). Impact evaluation of natural resource research programs: a broader view, ACIAR Impact Assessment Series Report No. 84. Canberra: Australian Centre for International Agriculture Research (ACIAR). Available at <http://aciarc.gov.au/publication/ias084>

Stern, E., N. Stame, J. Mayne, K. Forss, R. Davies and B. Befani (2012). Broadening the range of designs and methods for impact evaluations, DFID Working Paper, 38. London: DFID. Available at <http://r4d.dfid.gov.uk/Output/189575/>

Both address the issues of causality in complex settings.

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-----Original Message-----

From: AIS
Sent: 07 May 2014 17:08
To: 'Impact-L@listserv.fao.org'
Subject: 9: Diverse issues related to epIA of agricultural research in the EU

My name is Anna Augustyn. I come from Poland, have a background in social sciences (rural sociology) and in the last 10 years have been working as a researcher and consultant in rural / agricultural policies. Among others, I contributed to the EU FP7-funded project RuDI – Impact Assessment of Rural Development Policies incl. LEADER (<http://www.rudi-europe.net/>) - and in the recent 4 years with various expertise for the European Network for Rural Development (<http://enrd.ec.europa.eu/>) e.g. developing methodologies of network self-assessment, evidence-based and strongly applied policy research and analysis for the European Commission. I am an outspoken fan of participatory action research (PAR) as well as using visuals for research purposes.

I joined the discussion for multiple reasons. The main one is the project that I'm incubating right now in Portugal and which is about linking knowledge of researchers (evolutionary biologists) with actors of the fish chain in the context of species conservation and food security. I'm curious to learn how to facilitate their communication and whether the findings from their research can be anyhow useful for local communities. And will researchers be willing to learn from locals, too? This is the very first time they interact, and thus still too early to talk about

impacts, but let's see what the life brings :) The other reason is that I'm currently doing a screening of literature on impact assessment methodologies for a project in Hungary and look for some fresh input.

When assessing ex-post impacts one could also reflect how agricultural research was planned, by whom and with whom, because the issues begin already there. I think in the EU context the issue may be influenced in setting up agricultural research agendas, priorities, programmes, projects etc. With colleagues of mine we run workshops with researchers and practitioners in various EU countries, where we observed that there is a lack of joint effort/reflexivity (or it is very limited) on defining in which directions agricultural research should be going. Practitioners told us that very often researchers approach them with ideas that are rarely corresponding with their actual needs. Also, often because it is nowadays 'trendy' to make transdisciplinary research and researchers need practitioners as formal partners to obtain project funding. So our lesson learnt from this is: better and more inclusive research agenda setting could likely help to achieve greater impacts. In some countries/projects there are good practices already, but still it is not a mainstream on our small continent.

I am also looking for possible answers to some questions that nurture my other activities more recently: 1) How to define agricultural research? (esp. the boundary between agricultural/rural); 2) How to measure impacts of 'excellent' and 'less-excellent' agricultural research?; 3) How to identify and communicate intangible impacts?; 4) How to assess transaction costs against impacts of agricultural research?

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-----Original Message-----

From: AIS
Sent: 08 May 2014 10:03
To: 'Impact-L@listserv.fao.org'
Subject: 10: Operational limitations of smallholder producers

Initial introduction: Dick Tinsley, Professor Emeritus, Soils & Crop Sciences, Colorado State University, approaching 40 years working with smallholder farmers and their communities. Author book: Developing Smallholder Agriculture: A Global Perspective and Manager of the website: www.smallholderagriculture.com

As I reviewed the material I think there is another dimension to evaluating the impact of agriculture research. That is the drag imposed on the results by the limited operational resources available to farmers, particularly smallholders. This is basically a decade long oversight resulting from the limitations of agronomy or other biological research. Agronomy does an excellent job of determining what is physically possible, but says nothing about what is needed to extend the replicated small plot results across a field, farm or smallholder community. It just assumes this is not a problem. The need is to relook at the basic premise that has guided agriculture development research, add the dimension of integrating the technology into the limited operational resources available to smallholder, promoting the supporting technologies, most of which are drudgery relief innovations, which will allow the smallholders to better adopt the research results. A part of this is the expectation that a smallholder with diet between 2000 kcal and 3000 kcal/day can work a full day requiring a diet exceeding 4000 kcal.

The underlying question is who in the research or development effort is responsible to determine the operational limits farmers face that often extends crop establishment more than 8 weeks. Or, given what is available, how will that impact on promoted innovations. Is this an administrative void in the agriculture research and development effort? Can we effectively evaluate the impact of agriculture research in reaching smallholder communities until this is addressed? What are the probabilities that what we see on the ground in need of technical innovation is in reality the optimization of the technology to the limited operational resources the farmer have available to manage their land?

I would now like to refer the group to some webpages for the www.smallholderagriculture.com website. They are: <http://amar.colostate.edu/~rtinsley/BasicPremise.htm>; <http://amar.colostate.edu/~rtinsley/Adoptors.htm>; <http://amar.colostate.edu/~rtinsley/Integration.htm>; <http://amar.colostate.edu/~rtinsley/DietPoster.pdf>. I think

the last webpage which is a poster on dietary energy balance is particular good at highlighting this concern. Feel free to download and distribute it as you feel appropriate.

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-----Original Message-----

From: AIS
Sent: 08 May 2014 10:11
To: 'Impact-L@listserv.fao.org'
Subject: 11: Re: Integrating value of new knowledge in epIA

From David Steane, for many years Head of Animal Breeding and Genetics in the British development agency the Meat & Livestock Commission and later working in FAO - for the last six years before retiring, as chief technical advisor of a project on Conservation and Use of Animal Genetic Resources in Asia.

I was very interested in Ed Garrett's contribution (nr. 4) which raises some extremely valid points. While many will not agree, one could consider the global distribution of the Holstein dairy cattle breed as having some of the long-term effects which Ed mentions. In many countries the importation required (still does) importation of costly feeds (usually subsidized), the adaptation of special housing so that the animals can survive and stops any efforts to improve locally adapted breeds (where they exist which is not always the case - but climate-adapted dairy breeds almost certainly exist elsewhere). I am sure that there are better examples but the fact is that the evaluation of such work now differs from the original and is likely to become even more so as climate change progresses. However the research on crossbreeding done many years ago should have provided adequate evidence for what is required if such an importation was to have long-term benefits. Unfortunately decisions on such matters are based more on politics than on research or other evidence!

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-----Original Message-----

From: AIS
Sent: 12 May 2014 14:25
To: 'Impact-L@listserv.fao.org'
Subject: 12: Assessing the impact of research: long- vs. short-term and quantitative vs. qualitative measures

Olawale F. Olaniyan is a researcher and also a consultant with specialization in the management and sustainable utilization of agricultural resources. I particularly have interests in providing evidence-based information that can guide policy and other regulatory frameworks.

Assessing the impact of research in the context of agricultural sciences is multidimensional just like the challenges of the farmers. Also, it is really amazing to realize that the results or outputs of many agricultural research for development cannot be replicated at the farmers' level and thereby making an objective assessment somehow challenging! This matter even gets worse when the impact of such an intervention is evaluated at a much later time relative to when the project or research was conducted. One reason for this observation is deeply rooted in the smallholder farmer's nature of dropping a technology/approach once the incentives (usually in monetary terms) and external supports are removed. In such cases, you might be surprised that the impact evaluation in the short-term differs from that of the long-term partly due to the reason just described.

In the smallholders' context, especially in the developing countries, quantitative assessment is important but it does not necessarily capture all the essential data needed for impact assessment of an agricultural research or development project; it may need to be complemented with qualitative measures such as story-telling and

participatory group discussions. Through those means, the real appraisal of a project's impact can be feasibly made by the beneficiaries themselves. Such mediums usually provide opportunities to get information which can be fed back into subsequent activities or interventions.

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-----Original Message-----

From: AIS
Sent: 13 May 2014 06:29
To: Impact-L@listserv.fao.org
Subject: 13: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

I am Amadou Binta Ba from Senegal, a PhD student in Climate Change Economics. For my thesis, I am doing an ex-post impact evaluation of a climate change adaptation intervention. To achieve this, I need to learn about impact evaluation methods and so for this reason I am happy to take part in this e-mail conference.

The project I am planning to evaluate is a project which introduced new farming techniques based on agro-ecology farming methods to help family farmers in the Niayes area of Senegal to adapt to climate change. I want to evaluate the impact of the project on the livelihood of farmers measured as income, crop yield and food security. From what I have learned so far about ex-post impact evaluation methods, I think that the propensity score matching method will be the most suitable method for my study because participants in the project self select themselves into the project. The problem I am facing in my evaluation is that I don't master the evaluation methods. I really need training on it as the reading only is not enough, I feel a little bit lost. Any advice on how best to carry out such an ex post impact evaluation would be very much appreciated.

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-----Original Message-----

From: AIS
Sent: 13 May 2014 10:50
To: 'Impact-L@listserv.fao.org'
Subject: 14: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

My name is James Stevenson, I'm based at FAO in the Secretariat for the CGIAR Independent Science and Partnership Council. I spend most of my time supporting the Standing Panel on Impact Assessment which has a responsibility for oversight of impact assessment activities in the Consultative Group on International Agricultural Research (CGIAR).

This is a response to Amadou's question (Message 13) about quantitative methods for assessing the impact of a project which introduces new agro-ecological farming techniques in Senegal. Amadou has exactly the right starting point for this analysis – the problem of self-selection into the project. I want to explain a bit what we mean by this and then come on to answering Amadou's question about possible solutions for it.

What this means is that we expect the people who (when they know about the project) want to take part and then try out the farming techniques, to be different from the rest of the population of farmers. Some sub-set of the people that try out these methods will stick with them in subsequent seasons – the “adopters”. Not only that, we

expect adopters of the techniques to be different from non-adopters in ways that also influence the things that Amadou cares about in her analysis – incomes, crop yields and food security. This is what we mean when we talk about selection bias. A simple comparison of the incomes or crop yields for adopters and non-adopters of the practices in Amadou’s project area would be biased by these differences brought about by self-selection – many other things would be different between these groups other than their choice to be an adopter. This is also referred to as an endogeneity problem.

We might expect the more skillful, more entrepreneurial or more empowered farmers to be the ones to trial and then adopt new techniques. The problem for Amadou’s evaluation is that these attributes affect the outcome we care about (i.e. crop yield or income) in ways other than just via the adoption of the techniques AND that it is very hard to control for these factors ex-post in an impact evaluation. They are sometimes referred to as unobservable factors.

Propensity score matching (PSM) is a method for trying to control the selection bias problem. Say we would like to take a sample of farmers two years after the project has finished and within that sample compare the outcomes for adopters of the techniques’ Amadou is interested in to a sample of farmers who are not adopters of the techniques. PSM attempts to construct a comparison group from among the pool of non-adopters by modeling the probability of adopting on the basis of observed characteristics which are unaffected by adoption. Adopters are then matched on the basis of this probability, or propensity score, to non-adopters. A good introductory text to these quantitative methods from the World Bank is available online, by Khandker, Koolwal and Samad (2010) at <https://openknowledge.worldbank.org/bitstream/handle/10986/2693/520990PUB0EPI1101Official0Use0Only1.pdf> (3 MB).

The problem with PSM is that, when we only have a single cross-sectional survey, the non-adopters in our sample have already expressed their choice not to adopt the technology so what is left over after the propensity score must explain the adoption decision – the unobservable factors are important. De Janvry, Dustan and Sadoulet (2011) wrote a very nice report on the ex-post evaluation of new agricultural technologies in which they critique the use of PSM. This report, for the Standing Panel on Impact Assessment of the CGIAR Independent Science and Partnership Council, the group I work with, is also available online, at <http://gspp.berkeley.edu/assets/uploads/research/pdf/deJanvryetal2011.pdf> (0.5 MB).

What de Janvry and many others in the development economics literature advocate are approaches that seek exogeneity – that is, by constructing evaluations of agricultural technologies in contexts where these unobservable factors are not liable to play such havoc with attempts to control for differences between adopters and non-adopters. Some of these methods (randomized control trials, natural experiments, instrumental variables estimation) are outlined in the World Bank introductory text I linked to earlier. This is becoming a long post, but I just wanted to get these issues out there in the group and allow others to comment.

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-----Original Message-----

From: AIS
Sent: 13 May 2014 11:33
To: 'Impact-L@listserv.fao.org'
Subject: 15: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

I am Matthieu Stigler. I have been working on quantitative impact evaluation in various places, including FAO, and am currently working on qualitative methods for the case-studies component of IMPRESA (<http://www.impresa-project.eu/>).

In response to Amadou (Message 13):

Matching methods have become quite popular recently, so you should find plenty of tutorials and introductory papers that will give you a good overview of the method. Find below a suggested introductory reading list, that should make you feel comfortable to start using the methods.

However, as this e-conference features many people with a great background in qualitative methods, I guess you might benefit particularly in discussing how qualitative methods can enrich your initial quantitative design. As an example, qualitative methods with semi-structured interviews might be particularly suited to investigate how the self-selection process comes into place. This might give you a better overall understanding for the narrative of your study, help you in the quantitative step to select variables for matching, or have an idea of possible effect heterogeneity. By 'effect heterogeneity', the idea is that the effect is not the same for everyone: people might be affected differently by the programme, some even negatively. See for an example, the Integrated Nutrition Project in India reported by Leeuw and Vaessen (2009, http://siteresources.worldbank.org/EXTOED/Resources/nonie_guidance.pdf), where it is mentioned (p. 70) that girls benefited more than boys (although this reversed later on). If one thinks that there is self-selection, it could be the case that girls self-selected more into the programme (as they knew they would benefit more). Knowing of the latter (qualitative analysis of self-selection) would be very informative for the former (quantitative analysis of an heterogeneous impact).

But I have to admit that I have no reference to recommend on this: given my limited knowledge, I haven't seen (m)any papers in qualitative evaluation methods addressing self-selection (which comes at odds with quantitative practice where self-selection is the main and biggest worry of every quantitative analysis), but hopefully more knowledgeable qualitative practitioners will have better suggestions on this!

Suggested reading on matching could come in that order:

- Khandker, S.R, G.B. Koolwal and H.A. Samad. (2010). Handbook on impact evaluation: Quantitative methods and practices. World Bank.
<https://openknowledge.worldbank.org/bitstream/handle/10986/2693/520990PUB0EPI1101Official0Use0Only1.pdf> (3 MB).
- Stuart, E.A. (2010). Matching methods for causal inference: A review and a look forward. Statistical Science 25(1): 1-21. <http://biostat.jhsph.edu/~estuart/Stuart10.StatSci.pdf>
- Caliendo, M. and S. Kopeinig (2008) Some practical guidance for the implementation of propensity score matching. Journal of Economic Surveys, Vol. 22, No. 1, pp. 31–72.
<http://ideas.repec.org/a/bla/jecsur/v22y2008i1p31-72.html>

Regarding software, there is an excellent free package for the open source software R, called MatchIt: <http://cran.r-project.org/web/packages/MatchIt/index.html>. It is well documented (in a published review) so that you will quickly be able to run your own analysis: <http://www.jstatsoft.org/v42/i08>

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-----Original Message-----

From: AIS

Sent: 13 May 2014 12:15

To: 'Impact-L@listserv.fao.org'

Subject: 16: The evaluation of each investigation for acceptance by farmers and political agents

My name is Gabriel Esquivel Lopez. My background is in agricultural production from the Universidad Veracruzana in Mexico. I am currently doing postgraduate studies on an evaluation of the aquaculture sector, looking at social aspects, marginalization, production groups, gender, water use, the environment, food, political factors, laws, among others. My interest in this conference on “Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives” is in all aspects, from evaluating at the macro- and micro-level, to the reporting of results to those responsible for public policy.

While it is important to evaluate the research developed, at the same time this can be used to provide support for investments in agricultural research.

What I think is essential to consider now is taking the research from the laboratory or the experimental field to its application in the field. For this, I would like to highlight the following:

- How to determine the acceptance and adoption of technologies developed so that they will be application priority for our managers and implementers of existing policies in government agencies?
- How to train farmers, especially small farmers, to adopt technologies developed?

Regarding the above, I agree with Message 10 by Dick Tinsley. Seeing the circumstances at least in my country, Mexico, the availability of resources is a key limiting factor for the promotion and transfer of technologies developed by research institutes - i.e. institutes devoted to research in forestry, agriculture, livestock, aquaculture, fisheries, the environment, ecology and water, including the many universities. Most of them are supported to carry out their research. However, what follows is the application in the field, an application that is limited by the lack of resources not only of the farmers but also the specialists, so that by connecting with the field the adoption of the technology can have a strong impact on the rural population and food productivity.

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-----Original Message-----

From: AIS
Sent: 13 May 2014 12:16
To: 'Impact-L@listserv.fao.org'
Subject: 17: Message from Kolkata

This is S.K.T. Nasar, from Kolkata, India, again (Message 1), with thanks to contributors for underscoring the inbuilt complications in the thematic issue. I wish here to mention the ‘idea of agriculture’ and to categorise the types of investment in agricultural research to straighten some complexity of ex ante impact projection (eaIP) vis-à-vis ex post impact assessment (epIA).

1. The enormity of agriculture encompasses aspects from extraterrestrial photon to sub-molecular nano particle, from intracellular structures to supra-organismic agro-ecosystem, and from farming-related ground operations to all spheres related to local, national and global marketing. To this may be added country-based and international policies and laws. Each of these areas is a subject of research with clearly defined eaIPs.

EpIA is straightforward and easy to work out if the projected impact is the exclusive consideration. Complications arise when other criteria than the projected impacts are added. Long-term or delayed impacts make the resolution of epIAs further complex.

Emerging research areas with bearing on agriculture such as sustainability, natural resource conservation/restoration, human development index, weather inconsistency, climate change, ingress of unfettered global open market economy, biodiversity, agrodiversity, biopiracy, infringement of patent regime and WTO’s tariff management have gained importance. Long-term epIAs becomes unmanageably multifaceted if these factors are included in the reckoning.

The only option is to design well-researched eaIPs with defined and time bound goals for calculation of epIAs to be practicable.

2. Funding for agricultural research comes from different sources, namely public exchequer, international agency, private sector, corporate house and high net worth individual - either singly or in combination. The government, international instruments and non-government organisation (NGO) are normally the conduit for funding to research organisations and individual researchers. There exists a substantial number of multi-institutional and multi-national agricultural research programmes. The research during execution is competently monitored in most cases. However, very little attention or funding is allocated for epIAs.

Most epIAs are based on the net present value (NPV) i.e. “the present value of the economic benefits minus the present value of the costs.” NPV completely ignores the opportunity cost (OC). OC is the value of existing parameter intended to be replaced by the outcome of research intervention. For example, a new crop variety replaces an existing extant variety. The extant variety has been producing certain yield till its replacement by the new variety with a higher yield. The actual gain is new yield minus the old yield. The old yield becomes a constant and calls for calculation of the epIA. Such an omission of the OC in the projected impact is common to both micro- and macro-level epIAs. In this case, epIAs would be skewed.

OC must therefore be included in the impact projection without which the real value of epIAs cannot be calculated and the determination of cost-benefit ratio would be less authentic.

3. Expertise for well-defined and statistically valid epIAs is also largely absent. FAO is already aiming at “the establishment of a common framework to update concepts and methodologies for impact assessment of agricultural research” (Background Document for this conference). It must go a step further. It is necessary for UN/FAO and member States to establish independently functioning institutions with expertise in epIAs in the public domain without delay.

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-----Original Message-----

From: AIS
Sent: 13 May 2014 12:17
To: 'Impact-L@listserv.fao.org'
Subject: 18: Towards effective communication strategies for ex post impact assessment

This is Huu-Nhuan Nguyen again (Message 5).

As Godswill in Message 6 mentioned, the communication issues exist in ex post impact assessment of agricultural research. From my review of various impact assessment work for agricultural research, especially those in developing countries, I realize that top-down or one-way communication approach has been practiced by many agricultural research projects. In addition, the single quantitative based approach with structured questionnaires and closed questions is likely to help evaluators to get expected information and results rather than to understand how outcomes and impacts are generated and contributed to development.

Many agricultural research projects have been also implemented in the least developed regions which are home to many minority ethnic communities. However, impact assessment of these agricultural research projects has been conducted in the national or majority language rather than the minority's. Visual techniques have not been properly used. This sometimes leads to misunderstanding or weak evidence about outcome and impacts.

Pretty (1995) also defined two overlapping schools of thought and practice with one emphasis on “participation as a means” to increase the involvement of people in agricultural development processes and another focus on “participation as a fundamental right” to have collective action, empowerment and institution development. Although more efforts have been recently made on using participatory communication strategies to achieve higher participation of local people (key stakeholders and beneficiaries) in impact assessment processes by agricultural research, a lot of them still serve the “fashionable and political correct frill” rather than empowerment of people. Such participatory communication activities focus on making participation “as a

means” that inform people and ask them to give answers to impact assessment questions rather than as “an end” that empower people to make their assessment and having own decision on how impact could be sustained.

I also agreed with Anna in Message 9 that assessing ex-post impacts of agricultural research project should look at how agricultural research was planned, by whom and with whom and for whom. Impact assessment is therefore designed since the agricultural research project start. The other complementary theory based approach such as theory of change or impact pathway as mentioned by Dr John Mayne (Message 8) could also help to develop a good way for assessing real impacts.

In my opinion, an effective communication approach for ex-post impact assessment of agricultural research should put key stakeholders and beneficiaries at the core of impact assessment by empowering them to engage actively in setting impact assessment objectives, defining appropriate impact indicators; developing appropriate method for data collection and analysis and impact sharing mechanism.

However, my remaining concern is how to make participatory communication workable in impact assessment because participatory sessions are often time consuming and costly while resource allocation for impact assessment is often limited?

I am looking forward to sharing more with you about communication issues in ex-post impact assessment of agricultural research.

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Reference:

Pretty, J.N. (1995). Participatory learning for sustainable agriculture. *World Development*, 23(8), 1247-1263.

-----Original Message-----

From: AIS

Sent: 13 May 2014 15:29

To: 'Impact-L@listserv.fao.org'

Subject: 19: Macro-level assessments of agricultural research - TFP vs. partial productivity measures

Hi all, a great discussion. My name is Karlheinz Knickel, I am an independent researcher and consultant based in Frankfurt/Main. I have a particular interest in interfaces of practical, research and policy levels as well as analyses that support the effectiveness of rural, agricultural and environmental policies. I work with the Institute for Rural Development Research (IfLS), which is one of the nine partners in the IMPRESA project (<http://www.impresa-project.eu/>).

I'd like to add a European dimension to the discussions by drawing your attention to an issue relevant to impact assessment at the macro-level discussed by Alan Matthews, who is Professor Emeritus of European Agricultural Policy in the Department of Economics at Trinity College Dublin, Ireland. In his analysis of agricultural productivity growth in the EU, he contrasts Total Factor Productivity (TFP) growth with partial productivity measures such as growth in labour productivity or land productivity (yields per hectare). He concludes that, "given the growth in food demand and the need to minimise the additional demands on land and water, as well as intermediate inputs such as fertilisers and chemicals for environmental reasons, increasing the growth of TFP in agriculture should be a policy priority."

A resulting question for this e-mail conference is:

When wishing to assess the impacts of agricultural research at the macro-level: From your experience, do you think that partial productivity indicators are not appropriate as they do not measure 'true' productivity growth? How much does the conclusion depend on the particular context and, for example, resource situation?

The full analysis by Alan Matthews is available at <http://capreform.eu/what-is-happening-to-eu-agricultural-productivity-growth/>. It also includes cross-references to relevant studies and data like the impact of Common Agricultural Policy (CAP) subsidies on productivity and the goal of achieving green growth in EU agriculture.

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-----Original Message-----

From: AIS
Sent: 13 May 2014 17:20
To: 'Impact-L@listserv.fao.org'
Subject: 20: Case studies and selection bias

Hello everyone, and thanks for all of your contributions which I have read with interest. I am Peter Midmore, coordinator of the IMPRESA project and professor of economics at Aberystwyth University.

My first contribution to this debate is to follow up Messages 13 (by Amadou Binta Ba) and 15 (by Matthieu Stigler) and discuss case study selection issues. While I am a fan of the approach in general for its ability to deal with complex, multi-effect processes at a system level, and its relevance in participatory evaluation, in recent years I have been concerned about the process of selection and whether “interesting” cases which appeal to researchers might have a higher chance of selection, attracting more and earlier attention.

There is in fact a substantial literature from the international relations discipline (see Bennett and Elman, 2006, for a recent review) and suggestion that there might be a temptation to choose only comparative cases that demonstrate the hypothesised relationship between independent and dependent variables. While much of the wrangling is based on an inductive perspective that seeks generalizability from cases – which is in my view irrelevant to the generation of insights that should emerge – nevertheless, given my concern above, it might be possible to accidentally select biased case studies for evaluation. In evaluating the impacts of agricultural science research, therefore, I think there is a requirement for an active search for disconfirming evidence to be built into selection of comparative cases. My question is whether any participants can draw my attention to evaluation studies which have used this validation approach? I don't think any exist in European agricultural research impact evaluation, but I would be keen to hear of experiences from elsewhere.

Reference:

Bennett A and Elman C (2006) Qualitative research: recent developments in case study methods, Annual Review of Political Science, 9, pp. 455-476.

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-----Original Message-----

From: AIS

Sent: 14 May 2014 11:00
To: 'Impact-L@listserv.fao.org'
Subject: 21: Re: A holistic framework for assessing impact of AR4D projects

I am Dr. Atse M. Yapi, an Agriculture and Natural Resource Policy Consultant at the FAO Regional office for Africa, Accra, Ghana. I have been involved in impact assessment of agricultural research technologies from joint research efforts by national agricultural research systems (NARS) and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Mali, Northern Cameroon and Chad for a number of years. Based on my experience, I would like to make some comments on issues raised in previous messages.

Huu-Nhuan Nguyen in Message 5 wrote: "...the results and findings of current impact assessment approaches have been sometimes misleading, attributing larger impact to a single project and ignoring overlapped impacts from the synergistic effects as a result of simultaneous initiatives in the same area."

I think this is a relevant observation, which however is more a problem of transparency than approaches. One possible way of addressing it is to acknowledge in the assessment process all contributing projects and indicate clearly how such contributions are treated in the impact assessment. For example, in assessing the economic impact of sorghum variety S35 in Chad, we have realized that a FAO-supported seed station in the country has been instrumental in the wide adoption of the technology by farmers in areas targeted by the research efforts. The government roads system has also facilitated the extension efforts and thus contributed tremendously in the wide adoption of the technology by farmers. Nevertheless, the methodology we used to assess the economic impact of the technology did not take into account the costs of the establishment of the seed station nor did it take into account the costs of constructing the roads. These costs have been treated as sunk costs and rightly so for obvious reasons. This sort of situations should not in any way be looked at as major constraints to the validity of the assessment made.

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-----Original Message-----
From: AIS
Sent: 14 May 2014 11:07
To: 'Impact-L@listserv.fao.org'
Subject: 22: Re: Message from Kolkata

This is Dr. Atse M. Yapi again.

The second point I wish to raise is a comment with regard to S.K.T Nasar's observation in Message 17 that most ex post impact assessments (epIAs) are net present value (NPV) based, and as such they ignore completely the opportunity cost (OC).

I wish to express my conviction that the use of NPV in combination with economic surplus method provides a robust micro-economic foundation to epIAs of agricultural technologies; and as such should not be overlooked as a valid methodological instrument for epIA. In my view, the opportunity cost issue raised by S.K.T. Nasar could in fact be mitigated by casting the impact assessment process in the economic surplus (i.e., producer surplus + consumer surplus) methodology, and using NPV only as an calculation procedure to arrive at the internal rate of returns (IRR) of the investment in agricultural research for the development of the technology being assessed. The IRR is a single indicator which could be helpful in resource mobilization for agricultural research, as many funding agencies are now looking at areas where their funding support could produce the highest return possible!

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-----Original Message-----

From: AIS
Sent: 14 May 2014 11:12
To: 'Impact-L@listserv.fao.org'
Subject: 23: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

This is Dr. Atse M. Yapi again. I read with interest Binta's contribution (Message 13) and would like to make few comments and suggestions:

1) Binta you want to assessment the impacts (in terms of income, crop yield and food security) of new farming techniques introduced to family farmers in Senegal; and you are not sure about the best methodology to adopt to get the job done. From your objectives, it may be best to adopt a combination of quantitative and qualitative methods of assessment. The rationale here as I see it is that the new farming techniques have succeeded to increase productivity and production of food for those farmers who adopted the new techniques as opposed to those who did not adopt them. You could assess this through on farm survey of farmers in the different areas of importance for the new technologies. The survey should be structured in a way that would allow the average yield gains to be calculated, factor productivity measures as well as income improvement measures to be estimated.

2) It may be possible that project funding agencies would like to know whether the impact of the project is worth the investment. For this reason, you may consider using the net present value approach together with the economic surplus method to arrive at the internal rate of return to the project investment. This will imply that you structure the survey in a way that will allow you to have an idea of the adoption curve and make inference about the life span of the new technology. Note that the economic surplus method is based on the understanding that the adoption of the new techniques produces benefits to both producers (farmers) and consumers (buyers of the products). The benefits to farmers come from the reduction in unit production costs (higher yield) as well as greater output for the market. The benefits to consumers come from a price reduction due to greater output on the market due to high productivity and production.

3) Finally, I am curious to know how many farmers were self-selected to participate in the project? How is their number compared to the total population of farmers in the targeted areas for the new technologies? In the donors' point of view, an impact assessment over those farmers who have participated in the project may not be a good yardstick to assess the performance of their investment into the project. They may wish to see how their investment contributed to food security in the targeted areas. Besides, it is well known that farmers learn quite fast from their neighbors. If they see their neighbors doing well by adopting a new technology, they also tend to do the same. The implication here is that the timing of the assessment of the impact of the project is crucial and should not come just after the completion of the project; but some years after the project in order to allow technology adoption from non-participating farmers to take place, thus increasing the impact of the new technologies.

Hoping that this is of some help, I wish you all the best in your research efforts.

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-----Original Message-----

From: AIS
Sent: 14 May 2014 11:23
To: 'Impact-L@listserv.fao.org'
Subject: 24: Re: Case studies and selection bias

This is Amadou Binta Ba, from Senegal, again (Message 13).

Thanks to Peter Midmore for your contribution (Message 20), you are raising very important issues. As far as I am concerned I don't have experience about evaluation because I am a beginner. But I have some concern about this issue regarding my study. During an interview with local community leaders of my study area I have been told that the project had an effect beyond the target villages. It impacted some neighboring villages because of their position. I think that failure to take into account this type of selection bias can affect the results. This is one of the reason that I need to learn more about the methods and the project as well in order to have a valid control group and to avoid selection bias.

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-----Original Message-----

From: AIS
Sent: 14 May 2014 11:32
To: 'Impact-L@listserv.fao.org'
Subject: 25: Communication and research impact

My name is Peter Stradiot, a private crop consultant in vegetable growing in greenhouses. The regions I advise are mainly in the Mediterranean area and hot climate regions –worldwide. I am also expert in the EU for research evaluation in horticulture. In the need to know more and faster we created also a network of more than 20 independent consultants worldwide.

Thanks for your valuable information.

I only want to tell two experiences from the field.

Did you know that it took more than 30 years to get the idea accepted by the greenhouse growers in NW Europe that CO₂ is a highly needed input to come to higher productions? Is this due to miscommunication of research or are the growers reluctant to believe that a product they don't see or smell has a benefit? It is for sure more complex. The impact of research became clear when the message was translated by consultants to the growers, when salesmen earned money to sell CO₂ machines, when the first believers could not hide anymore their higher production, when the buyers of the vegetables where impressed by a nice looking and strong fruit that has a longer shelf live.

Visible impact of research in a region takes years and a mix of regional demonstration, personal communication and money creation. How to measure the impact of research within 3 or 5 years? I do this by asking questions and listen. If they can tell the research story themselves then they know the impact. Knowledge is deferred money.

The second experience was last year in Cameroon, the city of Bamenda. I met by luck a man who impressed me on the way he put in practice the research done on fertilization by combining crops (leguminosae) but also to use the manure and to limit the run off etc. It was visible in his local region. He is now active in influencing the villagers and owners to make woodland, 12 meter along the river borders to prevent run off. Is he a researcher, a consultant, a governmental official, a teacher? No. He has a normal job, but he was trained by a swiss NGO for some years on impact by communication. So he spent years talking. Even the local king saluted him when passing in his car. The effect of that one person IS visible!

What is the lesson I learned: do research on the different levels: fundamental and applied, publish but do not forget that the R&D outcomes must be translated and explained by men and women to the local situation, and this takes years. The success of research is in my opinion expressed, on the short term, in the number of times

the subject is discussed or mentioned. On the long term you have to do data mining in the old reports to see how it was before and compare it with today.

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-----Original Message-----

From: AIS
Sent: 14 May 2014 11:50
To: 'Impact-L@listserv.fao.org'
Subject: 26: Responding to issues raised in Section 4 of the Background Document

I am Dr. Stanley Weeraratna, a Sri Lankan. I was Professor of Agronomy at Ruhuna University, and later Professor of Soils and Water Resources at Rajarata University, both in Sri Lanka. I worked as a FAO Soil Fertility and Microbiology Expert and later as the Chairman, Sri Lanka Sugarcane Research Institute.

In 2009, the expenditure on agricultural research carried out worldwide was around \$ 50 billion. Hence, it is necessary that the financial and human resources used in agricultural research have beneficial impacts and therefore, it is important that ex post impact assessment (EpIA) of the research carried out are determined. The main focus of EpIA studies has been on economic returns indicated by internal rate of return (IRR), but it is essential that the EpIA of research on non-economic returns are also examined.

The impact of using some agrochemicals in crop production on the environment is a case in point. These impacts may be positive or negative, intended or unintended. Some of these impacts are based on theoretical assumptions. For example in Sri Lanka, some groups of people tend to think that the use of agrochemicals needs to be banned based on a hypothesis that these agrochemicals are responsible for Chronic Kidney Disease which has affected thousands of people in some parts of Sri Lanka. Unfortunately, even some of the policy makers have accepted this theory and taken action to ban the use of some agrochemicals. In a situation where such agrochemicals are recommended it would be desirable if EpIA studies are also conducted. Hence, EpIA studies are *sine qua non* in relation to any recommendation/intervention emanating from research.

My response to the issues raised in section 4 of the background document

With regard to the issues raised in section 4,

I tend to think that both qualitative and quantitative methods are important in EpIA studies, depending on the degree and types of impact to be studied, the costs and time involved.

Randomized controlled trials (RCTs) may be conducted depending on the type of impacts to be studied and the time and cost involved.

I do not think that uneven focus on EpIA on the different sectors is an important issue.

Greenhouse and laboratory studies, use of secondary data would reduce costs and time involved in EpIA studies.

Surveys among appropriate groups of people will be useful to examine the social impacts of the recommendations.

As indicated by Adato and Meinzen-Dick (2007) it is necessary to decide cost- and time-effective methods in assessing the impacts of agricultural research. The different aspects of EpIA studies need to be decided case by case giving consideration to the time, cost and other aspects on impacts to be determined.

I tend to think that EpIA is of equal importance in the overall evaluation package of a research project. With more emphasis on non-economic aspects such as environment, social factors etc. EpIA will be of importance in the future too.

It is important to note that the policies, and plans of the governments on agriculture, the efficiency of the agricultural extension officers involved in implementing the research recommendations influence to a great extent the effectiveness of such recommendations even if EpIA indicate beneficial effects.

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Reference:

Adato, M. and R. Meinzen-Dick (eds.). 2007. Agricultural research, livelihoods, and poverty: Studies of economic and social impacts in six countries. International Food Policy Research Institute.
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-----Original Message-----

From: AIS

Sent: 14 May 2014 12:45

To: 'Impact-L@listserv.fao.org'

Subject: 27: Transferability, cost effectiveness and communication of research information

I am Annie Murimi from Kenya. I am a certified Monitoring and Evaluation professional and currently pursuing a masters degree in Project Management. My undergraduate was in social sciences. I work as a Development Manager at Utooni Development Organization; a Kenyan NGO working with farmers in the arid and semi-arid areas.

First I would like to thank the organizers of this email conference. It is a great opportunity for us to share and learn from each other.

S.K.T. Nasar, I concur with you (Message 1), when you say that research is usually directed by the investors rather than the local community. I think this is caused by the fact that investors are guided by their strategic areas of focus (institutional goals and objectives) and their higher % contribution (cash or in-kind) in the research. In addition, agricultural needs in the community are many and complex at times hence the need to direct it.

Ed Garrett (Message 4), you talked about situations that may cause current knowledge to become void when new knowledge emerges. I consider this very crucial because in my view, research helps us to identify gaps that exist within a given field/area (crop, livestock, forestry etc) and also gives rise to new ideologies; hence making agricultural research/epIA a continuous process.

Responding to Question 4.5 in the conference background document (on EpIA in the different food and agricultural sectors):

According to me, we need continued research in virtually all agricultural sectors (crops, livestock, etc); a lot of diversity exists within our societies. What causes some areas to receive more attention than others is the urgency and/or degree at which issues (e.g. those of pests, diseases etc) occur. Diversity may also be as a result of physical or social factors such as geographical location, community preference, attitude and culture.

Transferability of the methods developed in one area to another is very possible. Lessons learned usually provide good feedback that can be used in another research area.

Responding to Question 4.6 (on cost effectiveness of EpIA):

I would recommend that we improve on collaboration and resource sharing/apportionment. This is a trend in current times; several stakeholders are coming together to support research work. Gone are the days where investors/donors would fund research projects without looking deeply in both internal and external environments. Nowadays, there is increased sharing and networking among them and as such, I would encourage researchers to continue lobbying (sourcing) for funds in consortium. This gives them an added advantage and also helps to save on logistics/administration cost. It also gives room for increased accountability, information exchange and sharing. It also helps improve researchers' capacities/capabilities.

Responding to Question 4.7 (on communication of epIA findings):

With regard to communication of epIA findings, this has always been a challenge. In most cases, the findings are sometimes difficult to decode/interpret; due the level of education or lack of relevant skills. I will give an example with the recent soil fertility results that were shared to us (Kenya). The end users of the report are farmers (including the small-scale farmers who are the majority). I am not so sure how many will be able to understand the scientific terms used in the report- especially those touching on components of the fertilizers (calcium, phosphorous, nitrogen etc). I am also not sure how many have the capacity to know whether the amounts (those of calcium etc.) they have used in their farms are enough or not - most farmers are continually applying the fertilizers with the hope that their crops will do well/they will reap maximum benefits. I see this as an excellent opportunity to conduct a future epIA to establish or evaluate the impact/usability of the new information that came out of the said report. We can for instance conduct research to establish (1) whether a limitation in incomes results in a limitation/hindrance in soil sampling & testing among small scale farmers thereby leading to low or inconsistent yields and (2) whether a limitation in incomes puts small-scale farmers at a disadvantaged level thus making them to be surpassed by their elite counterparts who are able employ or hire services of soil experts. *[The report referred to, entitled "Soil suitability evaluation for maize production in Kenya", is from the National Accelerated Agricultural Input Access Program (NAAIAP) which is a pro-poor, food security and poverty alleviation government initiative. The report, "a useful tool to guide farmers, farmer groups, extension providers, dealers in fertilizers and other stakeholders on the types and levels of fertilizer application for different areas in the country", is available at http://www.kilimo.go.ke/index.php?option=com_content&view=article&id=732:the-national-soil-test-results-report&catid=215:reports ...Moderator].*

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-----Original Message-----

From: AIS
Sent: 14 May 2014 12:54
To: 'Impact-L@listserv.fao.org'
Subject: 28: Re: A holistic framework for assessing impact of AR4D projects

This is Dr. Amadou Issaka again (Message 3).

I agree with Dr. Atse M. Yapi (Message 21) in the sense that impact cannot be attributed to the sole project in a target area. The problem we face is, very often, donors, governments and other policy-makers ask impact assessment specialists to demonstrate (quality/or quantity) what is attributed to the intervention. In addition to that, one of the challenge is how to please or to satisfy everyone regarding your assessment findings, whatever the methodology used. In the past, evaluation is done on demand, while nowadays it is done "if you want to survive".

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-----Original Message-----

From: AIS
Sent: 14 May 2014 14:46
To: 'Impact-L@listserv.fao.org'
Subject: 29: Re: Case studies and selection bias

This is Ed Garrett again, from the Hungarian Research Institute of Organic Agriculture (ÖMKi) in Budapest, Hungary, working with innovation at the farm level and farmer education needs.

In response to the issue of bias in selecting case studies, I would recommend that all cases be recorded and then a randomization of the cases be used for selection. This could help to control for selection of "interesting" studies and also encourage deeper investigation of the cases to fully report on them.

Several comments have been raised with regard to passing research to practice and adoption of new methods by farmers. We work on that here through the use of on-farm research. This exists in multiple forms from simplified demonstration programs to full farmer-led investigation of farmer identified issues. Danish stable schools, farmer field schools, extension train and visit, and participatory research are also subject headings that can be searched for more information to find solutions that fit the makeup of the specific farmer population. Each of these seeks to place advances into the farm program so adoption can run beyond a period of funding.

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-----Original Message-----

From: AIS
Sent: 14 May 2014 15:10
To: 'Impact-L@listserv.fao.org'
Subject: 30: Re: Towards effective communication strategies for ex post impact assessment

This is Matthieu Stigler again (Message 15).

I would be interested in having more details for the message of Huu-Nhuan Nguyen, who advocates the use of participatory methods.

I understand from your message that participatory methods can be used from two perspectives, one trying to involve more stakeholders in the project simply by involving them in the evaluation, the second perspective of full empowerment. Maybe one should add to these a third category, an "instrumental" one, stating that participation will increase the quality of the evaluation itself, just for the sake of the evaluation. I am not sure however whether the two first categories make much sense in a pure and narrow ex-post perspective? Both arguments seem to me to be more appropriate for the monitoring of an on-going project, where the project can still be adjusted and adapted, and involvement in the project makes sense (unlike in the ex-post case where a project would be terminated)?

Furthermore, could you elaborate more on what you understand by participatory assessment? Do you consider an evaluation asking beneficiaries' opinions a participatory approach? So does it equate in some cases to using qualitative methods with open-questions such as focus groups? Or does participatory assessment imply that the synthesis of stakeholders' opinions be made by stakeholders themselves? This seems to me a very critical procedure, with high risks of reproducing social power structures, or of being biased by the economic/political interests of the stakeholders?

Finally, you mention impact pathways, seeing it as complementary. Interestingly, there has been also a recent "participatory impact pathway analysis", (see Douthwaite et al. 2007, 2008). Would you consider this also participatory? Clearly in this case, the method is not chosen by stakeholders, but imposed a-priori, so I am not sure whether one should see it as participatory according to your definition?

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-----Original Message-----

From: AIS
Sent: 14 May 2014 15:57
To: 'Impact-L@listserv.fao.org'
Subject: 31: Macro-level ePIA - Four basic issues

This is from Alessandra Coli and Barbara Pacini, statisticians at the University of Pisa (UniPi) – members of the UniPi team in the IMPRESA project (<http://www.impresa-project.eu/>).

While we have some expertise in experimental and observational methods to assess causal effects of specific interventions at the micro-level, we would like to have some insights on assessing the impact of agricultural research at macro-level, starting from some basic issues.

Regarding methodologies and data requirement, we would like to have some feedback on the following issues:

1) Public versus private R&D funding:

To the best of our knowledge, research expenditure (R&D funding) in agriculture plays the role of treatment variable in this literature. Public R&D funding may have an impact on private R&D funding. In our opinion, the relationship between the two (complementarity or substitutability) should be taken into account when trying to correctly attribute the effects. We wonder whether any participants could suggest to us some empirical studies addressing this issue.

2) Time lag between research investments and selected outcomes:

R&D expenditures cover basic research, applied research, and experimental development. The different kind of research implies a different time interval separating the investment and the research productivity assessment. Therefore it would be necessary to analyse the impact of basic research, applied research, and experimental

development expenditures separately and accurately define the related time lag. To the best of your knowledge, are there European data (at country or, even better, at NUTS 1 level) and studies fitting these requirements? *[The NUTS (Nomenclature of territorial units for statistics) classification is a hierarchical system for dividing up the economic territory of the EU. The NUTS 1 level divides it up into major socio-economic regions (http://epp.eurostat.ec.europa.eu/portal/page/portal/nuts_nomenclature/introduction) ...Moderator].*

3) Focus on the causal mechanism:

A well-defined causal effect should consider the specific target and objectives of R&D investments. The original objectives of the funding should guide in assessing the effectiveness of the investment. In a causal perspective, it does not make sense to compare investments primarily designed to reach different targets and different objectives (economic, social, environmental, etc.). To this end, it would be useful to analyse funding policies (i.e. R&D expenditure) by purpose. We are not aware of studies in this direction.

4) On the use of a counterfactual approach at macro-level:

We agree that the issue of attribution, (i.e. isolating the effect of the intervention from other factors and potential confounders) is central in the epIA literature. As there is no counterfactual situation to observe at the macro level, most studies focus on statistical relationships among research expenditures variables and one or more outcomes of interest. It is possible to interpret such relationships as causal effects under assumptions that may be quite strong (for example, the estimate of the economic return to R&D as a constant elasticity parameter in a parametric production function). We would be interested in methods to conduct proper impact evaluation analysis using a causal inference approach, trying to reproduce a counterfactual at the aggregate level. Our experience in this applied context is quite limited, but we found some interesting suggestions in the recent econometric literature, see for example the synthetic control methods proposed by Abadie et al (2010) for comparative case studies with macro data.

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Reference:

Abadie, Alberto, Alexis Diamond, and Jens Hainmueller (2010), "Synthetic control methods for comparative case studies: Estimating the effect of California's tobacco control program," *Journal of the American Statistical Association* 105:490, 493-505. <http://dspace.mit.edu/openaccess-disseminate/1721.1/59447>

-----Original Message-----

From: AIS
Sent: 14 May 2014 17:39
To: 'Impact-L@listserv.fao.org'
Subject: 32: Impact assessment and small scale farmers

This is Dr C. Virginie Mfegue, plant pathologist in Cameroon.

I've been involved in research projects aiming to empower small scale farmers in terms of diseases and pests control. After setting and conducting the project in a more or less participatory approach, impact assessment is often left besides. When impact assessment is integrated to the project package, the time allocated to this step is somehow short cut. One reason is that research projects are overlapping, within the same regions, and the same groups of farmers, and we scientists are sometimes in a rush to implement new projects. I totally agree with Huu-Nhuan Nguyen (Message 5), mostly on overlapped impact of simultaneous research projects in the same areas.

In my opinion, farmers are willing to contribute to impact assessment for any research project, but their feeling is that scientists are sometimes using them for their personal interest. They are aware that after recording scientific data, scientists will come back to implement new projects, and so on. As a reaction to this situation, they often give biased answers to any impact questionnaire, because they do not see any interest for themselves.

A solution is to build and implement participatory projects based on the real needs of the target communities, and to avoid any donor/scientists oriented scheme. Thus, standardized/ideological impact assessment should be avoided, and replaced by long term evaluation of more subtle parameters than just economic or social ones, defined according to the type of project, the target community, etc....

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-----Original Message-----

From: AIS

Sent: 15 May 2014 11:06

To: 'Impact-L@listserv.fao.org'

Subject: 33: Re: Towards effective communication strategies for ex post impact assessment

This is Huu-Nhuan Nguyen again.

I would like to have further discussion about communication issues in ex-post impact assessment (epIA). Thanks to Matthieu Stigler (Message 30) for your good comments. I would like to discuss two concerns that Mathieu and myself have mentioned:

1) If the active participation of key stakeholders and beneficiaries is needed for ex-post impact assessment

Regarding Matthieu's question about if "the participation" is appropriate for epIA, I would like to elaborate more. As we all know that the key objectives in impact assessment are i) measuring the contribution or gains created by agricultural research projects; ii) drawing learning lessons for better future interventions and iii) recently enhancing development impacts. As the term "participatory" is rooted from "participation", a participatory impact assessment approach therefore implies having active participation of people (key stakeholders and beneficiaries) in impact assessment processes. However, how important the participation is depends much on WHO are the main USERS of the impact results?

In my view, if people are actively involved in impact assessment, ex-post impact results could be more useful not only for researchers but also for development of target communities. If impact results aim mainly at reporting to donors or for requesting more funding and publication purposes, the participation as "an end" of beneficiaries may not be needed. However, recent agricultural research for development (AR4D) initiatives aim at long-term development. It means that impact results could be also utilized as key inputs for development at different levels from individual, household, community, regional level (e.g., farm practices, livelihood strategies, development policies). In this case, key people are main users of impact results. Without understanding fully about impact of innovations as well as being aware that the development intervention is for them, they have no incentives to sustain impacts.

[In Matthieu's Message 30 (a response to Message 18 by Huu-Nhuan) he wrote that two arguments for using participatory methods are to increase the involvement of stakeholders or to empower them but that he was not sure whether they "make much sense in a pure and narrow ex-post perspective? Both arguments seem to me to be more appropriate for the monitoring of an on-going project, where the project can still be adjusted and adapted, and involvement in the project makes sense (unlike in the ex-post case where a project would be terminated)?" ...Moderator].

2) Is an evaluation asking beneficiaries' opinions seen as a participatory approach?

In my point of view, such an evaluation is NOT a participatory approach. This approach helps to "increase the quality of the evaluation itself" (as mentioned by Matthieu, Message 30) via the involvement of people in the evaluation processes rather than local development.

According to my discussion (Message 18), in many existing impact assessments, people participated in passive ways. In some cases, people participated in evaluation process by being consulted but decision made by evaluators. In other cases, people participated by providing resource for being paid in food, cash, and materials. It is also observed that in many agricultural research projects, ex-post impact evaluation is conducted for getting positive results for requesting more funding or publication purposes rather than for the sake of local communities. Impact results are not reported or shared with beneficiaries. As a consequence, in many cases, key stakeholders and beneficiaries have limited understanding about the contribution of impact assessment to development. They consider impact assessment is done for outsiders (researchers, research institutions, NGOs or governments) but not for their own interests and local development. I like the comment from Peter Stradiot (Message 25) that "if they [the farmers] can tell the research story themselves then they know the impact".

So what is participatory impact assessment? In my understanding, participatory impact assessment should not only help to generate information and statistical data on how much change are attributed by development activities but also empower local communities towards sustainability. It, therefore, should enhance equal and equitable participation of stakeholders and beneficiaries in defining and assessing impact indicators. I agree with the idea that true participation in evaluation implies that participation is the goal in itself, which is to empower people by equipping them with the capability to change their own lives (Pretty, 1995; Van de Fliert, 2010). However, the types and levels of participation also depend on WHO are the main USERS of the impact assessment results. In addition, due to the complexity of social and political conditions, the combination of quantitative and qualitative approach in impact evaluation could help to meet both the objectives of implementation actors and beneficiaries.

Finally, I think that impact pathway or theory of change is only useful for tracing impact if it is designed and assessed with perspectives from stakeholders and beneficiaries.

I hope to receive more discussions from participants about communication issues in ex-post impact assessment.

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-----Original Message-----

From: AIS
Sent: 15 May 2014 11:14
To: 'Impact-L@listserv.fao.org'
Subject: 34: Participatory procedures

This is Dick Tinsley again.

I have noted considerable discussion on participatory methods in this conference. I would like to enter a level of caution on this as participatory procedures can easily be leveraged toward the bias of the research promoting an innovation. Too easy to ask leading questions, or receive appeasement replies. Thus these need to be complimented with some more solid observations or other measurements. As much as I have always enjoyed

my many informal discussions with smallholder producers in all the countries I have had the pleasure to work, I tend to be skeptical of reliance on participatory involvement, without some additional inputs.

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-----Original Message-----

From: AIS
Sent: 15 May 2014 16:44
To: 'Impact-L@listserv.fao.org'
Subject: 35: Partial acceptance of research results // infrastructure

This is Dick Tinsley again.

As I have been reviewing the various contributions to this E-consultation, I get the impression that acceptance of agriculture research results is 100% discretionary on the part of the farmers including smallholder farmers, and the transfer of knowledge on research innovations is all that is needed for willing farmers to apply it. I would question this, and wonder how you would factor into your ex-post facto evaluation farmers who have understood the innovations, like it and want to adopt it, but don't have the means to do so, or do so only on a limited area, while make some substantial modifications to accommodate their limited operational resource base. Normally, I look at this in terms of sacrificing quality for extent by which I mean as crop establishment is delayed and potential yields are declining, are the farmers better off planting 0.5 ha of maize at the recommended rate or 1.0 ha of maize at 0.5 the recommended rate? Thus they are accepting the innovations in a modified form. Does this not count as a positive impact? Or do farmers have to accept innovations in their entirety? What can be done to enhance the farmers ability to accept innovations over wider area. I think one has to accept a smallholder primary objective is not maximum yield on an individual parcel, but maximum returns to all farm enterprises and will sacrifice returns on one parcel to enhance returns on another. A concept that can easily bewilder researchers focusing on a single enterprise or field.

Also, I am wondering if the ex-post facto evaluation of research results is fully factoring in the limited financial capacity of most developing country governments in which there is virtually no tax base to derive the revenues in which to provide research/extension services. I usually describe this as a financially suppressed economy in which consumer prices may be 1/3rd to 1/5th developed country prices, but wages are only 1/12th resulting in most of the population spending 80% or more of wages just to feed their families with a meager diet. Since this income cannot be taxed without starving the populations the tax base is severely restricted and with that government services. Often the services are on paper and staffed but with no operating fund with which to function. Thus the term financially stalled. In such case what services are available may be largely on the honor/gratuity/baksheesh system for which the reliability has to be questioned. This might be particularly true for such things as certified seed and soil test results taken for granted in most developed countries. See <http://lamar.colostate.edu/~rtinsley/FinancialSuppressed.htm>, <http://lamar.colostate.edu/~rtinsley/FinanciallyStalled.htm> and <http://lamar.colostate.edu/~rtinsley/VarietyImprovement.htm>.

This would include highways which someone mentioned [*Atse Yapi in Message 21 mentioned the role they had played in contributing to impacts of a new sorghum variety in Chad although costs of the road construction were not included in the economic epIA...Moderator*]. I fully endorse this as essential in getting things moved about. However, donor funding is usually limited to main highway with little support for the unpaved feeder roads that can wonder off 100s km into the bush of Africa. Once off the tarmac, the ton/kg transport costs can triple, which can almost be transparently accounted for. This does wonders to increase input costs and lower farmer produce prices as it is the farmers at the end of the road that have to pay for remoteness. This extra cost will substantially compromise acceptance of research results by shifting the optimal application rates for fertilizer etc. This could give the impression of farmers non-accepting an innovation when they have wisely modified it to their local conditions. This could be a positive but limited impact of research results.

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[At this point, I would just like to remind participants that the focus of this e-mail conference is on the approaches and methodologies used for ex post impact assessment of agricultural research. While discussion of the issues that can increase or favour the positive impacts of agricultural research is tremendously important, it goes well beyond the narrower focus of this particular 4-week long e-mail conference which is about the methodologies and approaches used to measure these impacts. Section 4 of the Background Document (available at <http://www.fao.org/docrep/019/as549e/as549e.pdf>) describes the specific questions which participants are asked to address during the conference...Moderator].

-----Original Message-----

From: AIS
Sent: 15 May 2014 16:45
To: 'Impact-L@listserv.fao.org'
Subject: 36: Re: Participatory procedures

I am Justus M. Kavoi, a senior researcher with the Kenya Agricultural Research Institute (KARI), currently in the final year of my PhD studies (Agricultural extension) at Egerton University, Njoro, Kenya.

My observations on the on-going discussions about participatory procedures in impact assessment are that, there is need to have a blend of the two sides of the coin: 1) Embrace participation/involvement of all concerned stakeholders, especially the farming community on one side because they are better placed to state whether or not the project under review has had any impact on their livelihoods or not and if they could provide evidence to support their information, and, 2) have additional independent inputs from external actors.

A combination of the two is more likely to provide evidence-based findings and conclusions of the impact assessment being carried out.

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-----Original Message-----

From: AIS
Sent: 15 May 2014 16:45
To: 'Impact-L@listserv.fao.org'
Subject: 37: Re: Participatory procedures

Hello again, Ed Garrett finishing my Fulbright Fellowship at the Hungarian Research Institute of Organic Agriculture.

Specifically to Dr. Tinsley's concern about getting good data from participatory research and post impact assessment dialogues (Message 34), I want to stress that each field of research has its own needs for specialized training.

We do treat validation of data very seriously in ethnographic research by working with interview scripts, having our own questions evaluated by those outside of our research to understand in which direction they are leading. We do know that the act of interviewing changes the ideas of the interview subject, so it is best to treat the interview similar to an educational encounter and understand what is expected, how this is achieved, and the risks involved both to the participants and the research, before starting. That said, we do pick up a lot of information from casual contact that then must be independently validated.

Care in planning of the questions, language, order, and even interview style is used to help control biases. There will still be issues, but this is the case with all research, the better the structure of the research fits the specific needs and objectives, the less of an issue there will be with the impact of bias. Here in Hungary, I have used people unfamiliar with my research and subject matter to translate (from English to Hungarian and Hungarian to English) and to code text responses (i.e. list emerging themes in the statements of multiple respondents). Of course, this work is checked for accuracy, but these keep the researcher from inputting a bias on the answers. Then we keep both the original responses as well as any translations so the process can be checked by others, again, validation.

These are a couple of places where bias of the researcher really shows up as we make active decisions about how to interpret and record the data. The raw data (original text, recording, etc.) doesn't change, so it can serve as a benchmark for analysis of bias or validation of data (same things from a practical perspective). If someone is writing down speech from other people (transcription), then the potential exists in this action for bias to enter. The work I've done in Hungary used electronic forms, so we have the respondent's own words. Audio recordings of interviews also work to minimize transcription errors as the extra cues such as tone, speech pattern, word choice, etc. is preserved and some research uses video to capture as much extra detail as possible from interviews.

The main idea though is to ensure that no single question is without at least one other validating data point. In interviews, this can be done by asking similar questions "around" the same point of interest to triangulate a response. We might structure the same question in a social context as well as an economic context and also a historical context.

Like every other form of research, this takes practice and training to master and not all are best suited to this style of research. The same is true of participatory or "on-farm" research. We do understand that there is a self-selection bias towards those wanting to see success of the research. With this knowledge, the bias can be controlled for by program design and through careful evaluation. To many, evaluation is the least important and something that is tolerated instead of the place where the program succeeds or fails.

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-----Original Message-----

From: AIS
Sent: 16 May 2014 11:38
To: 'Impact-L@listserv.fao.org'
Subject: 38: Technology adoption and impact evaluation

My name is Dr. Deogratias Lwezaura, Principal Economist, Ministry of Agriculture, Tanzania. I also serve as M&E specialist of the Eastern Africa Agricultural Productivity Project, Tanzania.

I have been following the good discussion with interest and I have some comments to make.

When I read through the discussions, I see there are still critical methodological issues whose consensus is still not conclusive. For example, evaluating adoption: how do we sample the categories of respondents such as project participants, non-participants, participating district/region or non-participating district/region/province so that we came up with statistical conclusion of adoption rates or proportion of adopters and thus their impact? And, in sampling, how many should be project participants and non-project participants? – several studies I have done I use 50:50. But several points have been made that evaluation should properly be planned or designed right away from project design, identifying the project participants and non-project participants (though there arise ethical issues as to why discriminating other eligible participants) and issues on how do you control for technologies moving from project participants to non-participants as they are in the same villages/district? These issues are critical for conclusive attribution.

On another point: when I was reading Dick Tinsley's comments it came in my mind that, how many hectares or acres of farm under improved technology a farmer has planted should be appropriately considered as adoption? I am posing this because in Africa some farmers own less than 0.25 acres, or ranging from 0.25 acres to 3 hectares. Can we count and treat a farmer with 0.25 acres of improved seed and another with 3 hectares the same and conclude that two farmers have adopted the technology? What benchmark should we use in terms of farm size? In my evaluation I have been doing I have been treating them the same and coming up with proportion of adoption. Think of one snapshot cross section data collection: how do we know that the farmer will use the technology consistently for the rest of the years, or we should consider adoption as in one year? These are some of the challenges we need to have in mind and to work out methodologies for how we deal with them.

But also as we discuss the ex-post Impact assessment (epIA): I see confusion in terminology between assessment and evaluation. Several times these words are used interchangeably, but in fact they seem to be quite different. Assessment can be done at any stage of the project implementation, but evaluation is for impact looking at what went well or wrong and what benefits accrued by the beneficiaries or stakeholders and usually done at the end of the project. Evaluation can use rigorous and systematic scientific methods, bringing in the dimension of counterfactuals (project participants and non-participants; and before and after observations) as a way of overcoming attribution bias. So in my own viewpoint, they are different terminologies.

I am in agreement with several submissions that impact evaluation should be carried some years after the project/program end. But again, how many years? Although to my thinking this would depend on the nature of the technology. In this regard and in my own personal perspective, I was thinking that it depends on a kind of intervention for any impact to be realized. For example, an intervention regarding a supply of improved maize seed varieties: maize can mature within 3 months, giving a farmer higher yield and ultimately selling and accruing higher income. Can't this be registered as impact to those farmers? So it would depend on the nature of technology.

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-----Original Message-----

From: AIS
Sent: 16 May 2014 17:06
To: 'Impact-L@listserv.fao.org'
Subject: 39: Contribution from Egypt

Hello, I am Shams F. El-Shamy, lecturer in Entomology Department, Faculty of Science, Ain-Shams University, Cairo, Egypt. I worked in nutritional ecology of predatory insects (beetles) for agricultural pest in my master in Denmark. In my PhD I worked with different natural control methods to control stored-grain insects in Egypt. Generally, I am interested in natural control and integrated pest management (IPM).

I am really happy to join this e-mail conference at the beginning of my research career. This will help me to have real advice and a whole picture about the agricultural research and their impact assessment.

As everyone said, the epIA of agricultural research is a quite complex task in many cases. In my point of view, in a country like Egypt the agricultural research is actually a multidisciplinary project that should combine between the agricultural practical part and a philosophy part (or social studies) especially when dealing with small-scale farmers. In Egypt and many other developing countries, the agricultural sector is largely based on small-scale farmers beside the large-scale projects. This emphasizes that the small-scale farmers are considered as a key factor in the process of epIA of agricultural research. At this point the socio specialists and social advisors will facilitate the communication between researchers and farmers to adopt any new agricultural techniques. On the other hand, for large-scale projects I think it is a good idea to achieve this through the simplified demonstration programs as suggested by Ed Garrett (message 29).

Add to this, many farmers are looking for a visible and short-term effect, as mentioned by Peter Stradiot (message 25), before adopting any new techniques. So it comes clear the importance of monitoring non-

economic and economic factors that affecting the process of evaluation before and after agricultural research to complete epIA process of agricultural research. Such factors as educational level, culture and poverty especially for small-scale farmers sector will facilitate the implementation of new techniques and ensure the continuity of the agricultural projects for a long term. This agrees with the context of some previous contributors.

Many discussions have been also concerned and dealing with the idea of incorporating the small-scale farmers as end users in epIA of agricultural research [Huu-Nhuan Nguyen (message 5), Anna Augustyn (message 9), Atse M. Yapi (message 23) and C. Virginie Mfegue (message 32)]. Another challenging area, in a country like Egypt now, is how to work with project funding agencies and investors for dedicating resources for agricultural projects.

Finally, I would like to thank you all for your fruitful discussion and contribution. This will help me to create a good team with needed experience and how to underline the major points in my coming research. Thanks a lot.

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-----Original Message-----

From: AIS
Sent: 16 May 2014 17:12
To: 'Impact-L@listserv.fao.org'
Subject: 40: Different epIA methods and a control group

I am Maria Carolina De la Fuente. I am M.Sc Agricultural Economics and agronomist. Three years ago, I was introduced to impact assessment through my Master's thesis in Agricultural Economics. I currently serve as the responsible person for impact assessment at the Institute of Agricultural Research (INIA), Chile.

My interest in being part of this conference arises because of the different types of evaluation methodologies that I have met through my work, since I have come to understand that the application of different methods of impact assessment depends on the area you want to cover. For example, when doing my Master's thesis I had to create a baseline to further evaluate the impact of a government of my country, where the sustainable production of native forests is promoted in small forest owners driven law. For the construction of the baseline, it should be collected information of counterfactual or control groups and beneficiaries groups to determine, in the future, the impact of this intervention. The “ease” (because it never is easy) to generate counterfactual in implementing public policy is mainly because it focuses on a particular geographical area or zone, which can generate some “control” without spillovers effects.

However, knowing how to face the impact assessments in agricultural research, I know about the existence of other methodologies [economic surplus, net present value (NPV), internal rate of return (IRR), benefit/cost (B/C)] which allow to estimate the economic impact of an intervention in order to provide robust information about the profitability of the research investment. However, these methods do not provide a control group, but through the attribution and adoption rate they estimate impacts generated by research in the target population. I have concluded that these methods work in this way because of the difficulty in finding a control group without “spillover effects” or “pure” because of the wide availability of research results (technologies), Am I right?

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-----Original Message-----

From: AIS
Sent: 16 May 2014 18:21
To: 'Impact-L@listserv.fao.org'
Subject: 41: EpIA when there is partial adaption of innovations

This is Atse Yapi again.

Dr. Dick Tinsley's contribution (message 35) raised many interesting points, one of which I wish to comment on here.

Dick wrote: "... and wonder how you would factor into your ex-post facto evaluation farmers who have understood the innovations, like it and want to adopt it, but don't have the means to do so, or do so only on a limited area, while make some substantial modifications to accommodate their limited operational resource base".

It is a reality in most poor rural areas that farmers don't have the means to fully adopt innovations despite the fact that they wish to do so. At best they settle for partial adoption through substantial modifications of the technology to accommodate their limited operational resource base. This is the case for example of agricultural technologies that require great capital investment or substantial modification in the farming system for successful adoption. This reality has led many scientists to question the rationale to devote great efforts and resources to develop new agricultural technologies if these technologies are to be used in the traditional farming environment of smallholder farmers.

How would one factor this reality in ex-post impact assessment? I think this could be done at two levels: first, the impact assessor could redefine the technology in terms of its different "sizes/components", with "full size" meaning the full adoption of the technology without any modifications; "medium size" and "small sizes" depending on the extent of the modifications operated on the technology before adoption. Such a methodology could reveal adopting farmers' preferences based on their limited operational resources! Such an approach was used in a study in Mali (Yapi et al, 2000) and we found that given the traditional farming systems in effect in the country, technologies that are way too advanced are least adopted while technologies that are only a slight improvement from the traditional varieties of farmers are most adopted. This leads to the second way to factor the issue into ex-post impact evaluation; and that is in terms of lessons learned, which would orient future agricultural research efforts towards technologies that are not totally divorced from the traditional farming environment of the smallholder farmers. In the Mali study I mentioned above, scientists have reached greater adoption by considering slight modifications (improving drought resistance for instance while leaving the yield and other characteristics unchanged) in the traditional sorghum varieties well known to farmers.

Thanks for reading this.

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Reference:

Yapi, A.M., Kergna, A.O., Debrah, S.K., Sidibé, A., and Sanogo, O. 2000. Analysis of the economic impact of sorghum and millet research in Mali. (In En. Summaries in En, Fr.) Impact Series no.8. International Crops Research Institute for the Semi-Arid Tropics. 60 pp. <http://oar.icrisat.org/1084/>

-----Original Message-----

From: AIS
Sent: 17 May 2014 06:53
To: Impact-L@listserv.fao.org
Subject: 42: Seed and planting material- Impact assessment

This is Dr V Arunachalam from the Indian Council of Agricultural Research (ICAR) Complex at Goa, India. I've been involved in production of seeds and planting materials of horticultural crops.

I found the messages interesting and useful especially the specific protocols in Message 8 by Dr John Mayne for natural resource management (NRM) research. I found them very specific. But I did not find such specific protocols for seed and planting materials. I would be grateful to know whether such specific protocols exist for seeds and planting materials of improved/local varieties. Because, seed or planting material plays a major role in improving productivity but to analyse the impact partitioning due to seed only is a crucial question. Please suggest to me techniques to address the issues in this situation.

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-----Original Message-----

From: AIS
Sent: 18 May 2014 07:47
To: Impact-L@listserv.fao.org
Subject: 43: Project design and impact evaluation

This is Andrea Sonnino, currently working at FAO as chief of the Research and Extension Unit, but soon back to the Italian research institute the Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (ENEA).

I appreciate very much the discussion of this electronic conference. I would like to underline a point that has been made by several contributors, especially by Dr. Deogratias Lwezaura (message 38): evaluation of impact should properly be planned or designed right away from project design. It seems quite obvious, but this is not always the case.

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-----Original Message-----

From: AIS
Sent: 19 May 2014 11:39
To: 'Impact-L@listserv.fao.org'
Subject: 44: Re: Case studies and selection bias

This is Matthieu Stigler again (my first message was nr. 15).

Coming back to Message 20 by Peter Midmore, I think there is some confusion that has slipped in between two similar, yet distinct concepts: self-selection (Message 13, by Amadou Binta Ba) and sample selection (Message 20). While similar, these concepts have implications at different levels, threatening either "internal" or "external" validity. Quickly defined, internal validity is whether conclusions of a study validly apply to the sample considered, while external validity is whether conclusions that are valid for a sample also apply to the larger

population, or other populations not considered - in other words, whether the results can be generalised to other contexts.

So for Amadou's point, when you have self-selection, this means that within the population you considered, participants might differ from non-participants, implying that you might not be able to find a relevant control group. This means you will not obtain internal validity, as you are not able to describe well the effect of the programme.

On the other side, sample selection means you are not able to observe the whole population, and base your conclusions on a part of the population. This can be within a quantitative study, where you miss some individuals (which differ from the other in a non-random way), or within a qualitative case study, where the simple fact of choosing a case means you do not observe all the cases. With such sample selection, internal validity might still be preserved (your conclusions validly apply for the sample you considered), but external validity is not guaranteed. So obviously, such sample selection is an issue only if you want to be able to claim that your results apply to other contexts (regions, product, etc).

Now Amadou, you mention the presence of "spill-overs effects", which is yet another point. This is considered bad when the "control" participants also adopt the technology, and hence cannot be used anymore as control. If other villages outside your sample also adopted the technology, this should not be an issue for your sample, and could make your claim actually stronger, in the sense that the benefits of the programme could be even higher than what you estimate. *[The reference here seems to be Amadou's second message, nr. 24, where she mentioned her concerns about the fact that "During an interview with local community leaders of my study area I have been told that the project had an effect beyond the target villages. It impacted some neighboring villages because of their position. I think that failure to take into account this type of selection bias can affect the results." ...Moderator].*

Now turning to Peter Midmore's initial point (Message 20), advocating the use of failure case to balance selection of too many positive cases, and Ed Garrett's reply (Message 29), suggesting selecting cases at random, I wanted to mention (although I do not entirely share it) a quite different position in the CGIAR report by Walker et al. (2008), pages 23-26. Remarking that in most cases, agricultural R & D leads to no results, but that in some cases it leads to huge results (hence projects's benefits have a skewed distribution), Walker and colleagues criticise the random selection idea, arguing that it would give a wrong picture, giving almost no chance for success cases to be selected. Going further, they suggest that one just needs to focus on "success stories", which help best understand mechanisms to success.

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Reference:

- Walker, T., Maredia, M., Kelley, T., La Rovere, R., Templeton, D., Thiele, G. and B. Douthwaite. 2008. Strategic guidance for ex post impact assessment of agricultural research. CGIAR Independent Science and Partnership Council (ISPC).
http://www.sciencecouncil.cgiar.org/fileadmin/user_upload/sciencecouncil/Impact_Assessment/SC_epIA_low-res_for_web.pdf (0.5 MB)

-----Original Message-----

From: AIS
Sent: 19 May 2014 11:44
To: 'Impact-L@listserv.fao.org'
Subject: 45: Re: Project design and impact evaluation

This is from Justus M Kavoi again (previous message was nr. 36).

I agree with the views of many participants in the on-going electronic conference on ex-post impact assessment - quite often, whenever a new development project is being designed, in most cases, the issue of participatory monitoring and evaluation (PM&E) is overlooked, especially more so with respect to the budget to carry out PM&E. PM&E is at times viewed as a stand-alone project activity. PM&E needs to be embraced by all development partners and stakeholders that PM&E is part and parcel of the entire project and should be planned for right from the inception meeting of the new project, while taking care/note of the kind of data to be collected - when, by who and for whom; how the collected data will be analyzed and the results/report shared; feedback provided to all the concerned stakeholders at the right time in the correct form of report presentation.

It should be noted that "P" in PM&E stands for Participatory and not for planning as often taken. Instead, even in the project planning stage, the planning itself should be Participatory - where all the stakeholders and project implementers can have the opportunity to positively engage each other in sharing responsibilities/roles and the available meagre resources.

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-----Original Message-----

From: AIS
Sent: 19 May 2014 12:57
To: 'Impact-L@listserv.fao.org'
Subject: 46: Re: Case studies and selection bias // CGIAR SPIA resources

This is James Stevenson again (previously message 14, on selection bias), from the Standing Panel on Impact Assessment (SPIA) of the Consultative Group on International Agricultural Research (CGIAR).

Last week we re-launched the CGIAR impact assessment website following a major overhaul. You can find a lot of useful materials for impact assessment of agricultural research at: <http://impact.cgiar.org>

I would like to thank Matthieu Stigler (message 44) for clarifying the important distinction between self-selection and sample selection. We need to safeguard standards of rigor in impact assessment in order to ensure that we are able to make clear, unbiased recommendations to donors and research agencies about where research is having the biggest impacts on the lives of people living in poverty, and where it is not.

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-----Original Message-----

From: AIS
Sent: 19 May 2014 13:32
To: 'Impact-L@listserv.fao.org'
Subject: 47: Re: Towards effective communication strategies for ex post impact assessment

This is Anna Augustyn again (I sent Message 9).

I would like to add some points to discussion on the use of participatory methods in ex post impact assessment (epIA) of agricultural research, mentioned by a couple of colleagues. I've been working extensively with both conventional and participatory methods, in scientific research and in public policy consultancy. My experience is that a good way is to combine both.

I'm screening now various types of IA (such as social impact assessment (SIA), heritage impact assessment (HIA), environmental impact assessment (EIA) etc.) and I am realizing that concerns are pretty same, though less focused on farmers. I am here more interested in understanding participatory/conventional research in impact assessment as ways of communication with various stakeholders of agricultural research. We do not only have farmers and researchers in epIA, but also donors, policy makers, NGOs, consumers, general public etc. They are all directly/indirectly concerned with the impact of agricultural research, but there is less chance to involve them all fairly into participatory research process. This is why we need to combine both streams. Also because the wider system that validates our research is still very biased towards conventional research methods. Assessing the degree of participation may be quite misleading, if we judge by peoples' presence, enthusiasm and immediate deliverables we observe from participatory research events. I think it is more about changing the attitudes and principles of individuals. They happen in an evolutionary way at personal level, so maybe psychological methods of inquiry could be more of use, if we want to explore it further.

I agree on many points with Huu-Nhuan Nguyen, especially from the communication perspective. Actually conventional and participatory research are also different ways of communication. Some people prefer more interactive and visual communication, some others like algorithms and numbers on a paper. Personally, I am critical about questionnaires (or rather "checklists"): many that I've seen did not correspond with capacities of respondents, mainly because they used too abstract or technical language, or were too detailed and people lost their enthusiasm to answer. So what will be our knowledge about impacts, if we can't communicate well? Will stakeholders read our reports/papers and understand them? And will they learn from these? Maybe it is better to involve them in co-creation of knowledge (shared understanding) on epIA and there are many participatory ways it can be helped.

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-----Original Message-----

From: AIS
Sent: 19 May 2014 15:53
To: 'Impact-L@listserv.fao.org'
Subject: 48: Main lessons learned from evaluation of INIA, Uruguay

This is from Mario Pareja. I am an independent consultant from Uruguay who has worked in more than 50 countries (Latin America and the Caribbean, Africa, Asia) around the world in themes including the development, monitoring and evaluation of projects and programs, natural resource management, agriculture, livelihood security and others.

In 2010 we responded to a call for proposals by INIA (the National Institute of Agricultural Research of Uruguay), forming a four-member team, under my coordination and led and organized by the Instituto Interamericano de Cooperación para la Agricultura (IICA) in Uruguay. We presented a very complete proposal for ex-post impact evaluation of 20 years of investment in agricultural research, development and innovation (R&D&I) at INIA. After winning the bid, we conducted, during the years 2010-2011, the multidimensional (technological, economic, social, environmental and institutional) impact evaluation, combining desk as well as field studies. This was a comprehensive evaluation, including the various dimensions mentioned above, and focusing on institutional, programmatic and project impacts. The process included desk (review of data recorded by INIA and others) as well as field research (various farmers surveys, interviews, focal groups, etc.). We had a local, Uruguayan, evaluation team of 4 experts, which conducted most of the field work supported and guided by an advisory board that included high level scientists and experts on impact evaluation studies, such as Derek Byerlee and Julian Alston, among others, as well as representatives from IICA and the farmers.

The report was published in Spanish. There is a summary and a very extensive and complete report (2 volumes). The Executive Summary is available on the web (reference given at the end of the message).

We have a long list of lessons learned but, in this message, I just want to emphasize a few of them; the more general.

1) In order to evaluate the impact of the results and products of an agricultural R&D&I institution there is a need to look at the micro- as well as the macro-level. When you get started, it is impossible to separate and isolate the institutional, programmatic and project impacts in the field. Impacts of innovations are measured after adoption, and probably after a few years farmers have implemented, but there are technologies recently released showing results (not yet impacts) that need to be considered and others in the pipeline that need to be looked at as "potential future impacts".

2) The main limitation for impact evaluation is the absence of reliable information. From a solid base line (very difficult to establish in a complex production system such as agriculture) all the way to follow up adoption rates and evidence-based economic, social and environmental impacts. Agricultural R&D&I institutions must develop their own, on-going systems and mechanisms to follow up the technologies they produce and release to the farmers and be able to monitor and measure results and impacts. And, foremost, make sure that a base line is taken before releasing the technology.

3) It is easier to evaluate economic impacts (return to investments and other indicators could be traced and measured at the macro scale) than social and environmental impacts. This is due to
a) the limited work done in developing reliable and measurable indicators for social and environmental impacts, and
b) the absence, or difficulty to obtain reliable data on these dimensions [examples are i) social changes which are difficult to attribute to agricultural technologies because they are often strongly affected by the implementation of public policies (employment generation, social safety nets, etc.) and ii) environmental impacts of agricultural technologies (soil and water conservation, biodiversity protection, etc.) often need to be looked at a more macro, regional, scale which poses methodological, and financial, difficulties to an impact evaluation study like the one we conducted].

4) The attribution issue. Usually, an agricultural technology is a result of an initial institutional effort that leads the work, e.g. INIA. But others (universities, farmers' organizations, private enterprises, etc.) may also contribute to its development. Due to this condition, impact is usually difficult to be attributed to a particular agent.

I leave it there, for the time being, but I will be glad to expand in any of these issues as well as others related to our experience.

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Reference:

M. Pareja; J. Bervejillo; M. Bianco; A. Ruíz y A. Torres. 2011. Evaluación de los impactos económicos, sociales, ambientales e institucionales de 20 años de inversión en investigación e innovación agropecuaria por parte del Instituto Nacional de Investigación Agropecuaria (INIA) - Uruguay (Evaluation of the Economic, Social, Environmental and Institutional Impacts of 20 years of Investment in Agricultural Research and Innovation by the National Institute for Agricultural Research (INIA), Uruguay). Executive summary (in Spanish), 41 pages. <http://www.inia.uy/Publicaciones/Documentos%20compartidos/18429151211092410.pdf> (400 KB).

-----Original Message-----

From: AIS
Sent: 19 May 2014 16:37

To: 'Impact-L@listserv.fao.org'

Subject: 49: Partial innovation adoption; project impact evaluation; and network analysis

I am Doris Marquardt, active in GCARD (Global Conference on Agricultural Research for Development) matters since 2009, currently working at the European Academy (EURAC) in Bolzano, Italy, before that at the Germany-based Leibniz Institute for Agricultural Development in Central and Eastern Europe (IAMO), primarily focusing in my on RD and community development issues in practice supplemented by social networking and policy design at a theoretical and practical level. Thanks to the organizers and contributors to the interesting conference.

Picking up Message 41 (by Atse Yapi) on partial adoption of innovation, two other approaches appear also feasible:

- a) not to ask for "that" innovation, e.g. a certain technology that should be spread within a project/programme, but considering that most definitions of innovation state that it has to be seen in a context, e.g. innovative in a certain region;
- b) defining/seeing the aim of the intervention or one of its sub-objectives, i.e. e.g. advisory service or information campaigns, not solely as the adoption of innovation, but stimulating changing behaviour (one could simply go along the steps noted in the theories of adopting innovation (information transfer --> knowledge --> ambition).

Such transformation of the evaluation design brings us to Message 43 (by Andrea Sonnino) on the need for ex-ante definition of the evaluation scheme, with which I totally agree. Yet it might be worthwhile to be supplemented by investigating the impact of parallel action, e.g. flows of information which occur independently from the programme/project to be evaluated, - be it intended as intervention or not - and strive for comparison, because, not seldom, action which is not triggered by an intervention (often called "informal" activities) turn out to be more effective in information and innovation transfer, as certain interventions. Indeed, eventually such "informal action" (e.g. mouth-to-mouth propaganda), which occurs in parallel to the intervention to be evaluated, has at least indirectly benefitted from e.g. research results or experiences with funded projects. Thus, the borders between direct and indirect and non-impact of intervention in such comparison, i.e. an extended with/without comparison as it also investigates the impact of other activities and intervention, are difficult to draw, because information flows and their have to be traced. Here, network analysis, which was also used as an example in the background document for this e-mail conference, can be a helpful instrument.

In the background document, network analysis was mentioned as a qualitative means for evaluation, but it can also be applied with quantitative results, the challenge then is (as often) to gather the data to be fed into the analysis. My question therefore - has anybody experience with applying (quantitative) network analysis in the context of evaluating interventions in the fields of advisory service, information transfer or adoption of innovation, at larger scale? If so, it would be great to exchange experiences in pragmatic way of data collection.

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-----Original Message-----

From: AIS

Sent: 19 May 2014 17:35

To: 'Impact-L@listserv.fao.org'

Subject: 50: Re: Partial innovation adoption; project impact evaluation; and network analysis

This is Mario R Pareja, again. I have just posted a message with the experience we, as a team (with specialists in economics, sociology, environment, and institutions), developed during the evaluation of 20 years investment in

agricultural research, development and innovation (R&D&I) by the Instituto Nacional de Investigación Agropecuaria (National Institute for Agricultural Research, INIA) in Uruguay.

I am now replying to Message 49 by Dr. Doris Marquardt regarding partial adoption of innovations. I am in full agreement, and this derives from our own experience with INIA, that you walk by and do not "see" the innovations... They are a result of a complex interaction of initial investment in R&D&I, often by various institutions, with the farmers practices. Each farmer may adopt and adapt the technology, the innovation, to his/her own farm and apply it accordingly. This poses, on one hand, a greater complexity on attribution issues when evaluating ag R&D&I institutions. But on the other, it is good that so happens. Farming is, usually, a complex system that cannot be reduced to a single technology or innovation. In other words, you cannot tell the difference between full and partial adoption of an innovation.

The latter issue leads us to the fact that impact evaluations of R&D&I must be done with a very open mind and looking at various levels: individual technologies, at the farm level, at the regional level and the country level. Our study of INIA concluded that the investment that this institution made during 20 years provided a benefit/cost ratio, at the national level, of more than 20/1 and that the Agricultural GDP without INIA would have been 11% lower than that achieved by the country.

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-----Original Message-----

From: AIS

Sent: 20 May 2014 09:28

To: 'Impact-L@listserv.fao.org'

Subject: 51: Some lessons learned from assessment of economic impacts of agricultural research technologies

This is Atse M. Yapi again.

This time, I would like to share three lessons learned from my experience in assessing the economic impacts of agricultural research technologies:

1) Impact assessment is a multi-disciplinary undertaking, even though it is in many cases led by the socio-economic divisions of the research institutions. It is participatory as it needs the contributions of all the stakeholders who participated in (i) the development of the technology (research scientists from plant breeders to agronomists, socio-economists and research managers/administrators; as well as farmers); (ii) the dissemination of the technology (extension technicians, seed centers and distribution agents, NGOs and farmers); and (iii) funding agencies. Each one of these stakeholder groups has an interest in the impact evaluation results and thus can orient/shape the impact indicators the assessment is to focus on. For example, funding agencies may be interested in knowing whether they have made a wise decision in investing in agricultural research rather than giving their money directly to the Ministry of Agriculture. In this case the ePIAs exercise will include among the impact indicators, the estimation of internal rate of return (IRR).

2) Factors that have positively/negatively influenced the impacts must be carefully documented. For economic impact assessments, one factor which positively influences impact is the timing of the delivery of the final technology to the end-users (farmers). The shorter that time, the bigger the net present value of the benefit stream, thus the better the impact. In other words, once a technology is ready, scientists should not waste time before putting it in the hands of farmers/end-users.

3) Developing an agricultural research technology is not the end of the story. As long as the technology is not adopted by the farmers/end-users, scientists should not relax. The ultimate objective of the research effort is not to produce the technology per se but to impact on the livelihood of the farming communities targeted by the research. For example, donors will not be satisfied with the number of new cultivars developed through research, but with the impact these cultivars had on the food security of the farming communities.

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-----Original Message-----

From: AIS
Sent: 20 May 2014 09:43
To: 'Impact-L@listserv.fao.org'
Subject: 52: Re: Case studies and selection bias

This is Markus Olapade, Evaluation Specialist at the International Initiative for Impact Evaluation (3ie), for which I am primarily working on the Agricultural Innovation Thematic Window.

I would like to add to a point mentioned by Matthieu Stigler (Message 44) regarding results that vary across different studies and draw your attention to two important tools. If some studies show significant effects while other studies, on the same subject, don't, it becomes difficult to judge which study to believe and which not. Here Systematic Reviews and Meta-Analysis become important.

A systematic review looks at all studies on a subject (published or unpublished ones) and then through a transparent selection process identifies the rigorous ones (ex-ante or ex-post designed) and synthesizes their results. Meta-analysis, in addition, takes the results from the individual studies and creates a weighted average. This provides a statistical method that allows us to interpret the existing body of evidence.

More information on Meta-analysis can be availed on the website of the Cochrane Collaboration:

<http://www.cochrane-net.org/openlearning/html/mod12-2.htm>

More information on Systematic Reviews can be availed on the website of the Cambell Collaboration:

http://www.campbellcollaboration.org/what_is_a_systematic_review/

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-----Original Message-----

From: AIS
Sent: 20 May 2014 10:22
To: 'Impact-L@listserv.fao.org'
Subject: 53: Participatory monitoring and evaluation in the Philippines

I am Sheilah S. Vergara, Program Specialist for Training and Capacity Building, Regional Center for Asia, International Institute of Rural Reconstruction (IIRR), the Philippines. I was also the Program Manager of the Community Agricultural Technology Program (CATP) in the Philippines funded by the Australian Center for International Agricultural Research (ACIAR). CATP was a project of ACIAR but was a program that had several agricultural projects focusing on adaption of select ACIAR technologies by farmer beneficiaries through the assistance of local NGOs. The program aimed to give farmers the opportunity to choose the technology that will suit them best. They were also provided with opportunities to conduct on-farm experiments using locally available materials. I have more than 10 years experience in program and project management and monitoring and evaluation of development projects.

I would like to share my experience on the following:

In CATP, the local NGOs which received grants from CATP to implement activities based on approved proposals instituted participatory monitoring and evaluation where the farmer-beneficiaries were the ones in charge of monitoring the results of new technologies adopted in the field. This was done with the guidance and assistance of the NGO field staff. The advantage of the involvement of farmers in monitoring the results of field experiments is that they get to adjust and develop their own strategies to attain increased production (crops or livestock). They are free to assess what basket of technology would best fit their needs and resources and each of the technologies offered are explained in detail so that the farmers have an informed choice.

Farmers know best what would work for them. And by involving them in the decision making process where they can select technologies that fit their needs, it is easier to involve them in monitoring and assessment of impacts given that they have a greater stake in the success of the project. Farmers who have been involved since the planning stage up to implementation and monitoring and evaluation are more likely to have a feeling of ownership for the project and more likely to continue implementing the project once funding is already terminated.

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-----Original Message-----

From: AIS
Sent: 20 May 2014 10:35
To: 'Impact-L@listserv.fao.org'
Subject: 54: Communicating epIA findings to relevant stakeholders

This is Huu-Nhuan Nguyen again.

Thank for the active discussion from participants of the conference. I would like to discuss more about how the findings of impact assessment should be communicated among actors. From the question topic 4.7 on 'Communicating the epIA findings' in the conference background document, I realized that existing impact assessments seem to aim at reporting epIA findings to donors and policy makers rather than farmers and agricultural extension networks. Therefore, in this message, I want to focus more on how to communicate epIA findings to relevant stakeholders.

As I discussed in Message 33, if we could define clearly who the target users of the findings are, we then could design an appropriate strategy to communicate impact findings and have suitable data collection strategies (quantitative or qualitative or a combination). In addition, when relevant stakeholders understand well about the objective of impact assessment, impact findings are more useful for development.

I agree that we need to have evidence to report to donors or funding agencies about the effectiveness of a research program and draw lessons for better future investments. At the same time, research impact could not be sustained if farmers are not interested in doing so. Dr. Shams Fawki El-Shamy (Message 39) also emphasized the involvement of small-scale farmers in the process of epIA. If we only focus on research donors and policy-makers, we may ignore the expectation of farmers. In addition, local extension actors (e.g., field researchers, extension workers, farmer groups, NGOs) (both formal and informal) often play key roles not only in carrying out research but also in sustaining impacts, especially in poor and remote regions. As Anna Augustyn (Message 47) observed, although these above groups are "directly/indirectly concerned with the impact of agricultural research, there is less chance to involve them all fairly into participatory research process".

The question is how to communicate impact findings with farmers and extension actors? In my opinion, the best way is to involve local stakeholders actively in impact assessment and impact sharing processes. By involving these above groups in impact assessment, we could gain co-creation of knowledge about impact. This will lead

to a shift from “telling impact findings by outsiders” to “learning and sharing impact among all stakeholders”. As a result, the expectation of both donors and key stakeholders and beneficiaries are achieved.

Communicating epIA findings with local stakeholders should be flexibly conducted due to the differences in the nature of research as well as available times and financial resources. To local stakeholders, communicating the epIA could be done right after, or a short period after, impact assessment processes. It could be carried out on fields or at the most convenient places for the participation of different stakeholders. However, simple and understandable languages should be carefully used when communicating impact findings due to different levels of education or relevant skills of key stakeholders.

For example, I conducted one impact assessment of agricultural research for development (AR4D) project in the Northwest Highlands of Vietnam where a majority of target participants are ethnic minority groups and many of them can speak but cannot read the national language. I found out that using structured interview questions does not work in this social context. Instead, using local available materials (e.g., maize seed, stones) and photo stories helps the local community to participate actively in discussion and sharing information about impact. After each impact assessment activities, impact findings were reported back to local stakeholders for further discussion and feedback that helps to increase high validity of impact findings.

To donors and policy-makers, after getting sharing and feedback from key stakeholders and beneficiaries, conventional written type, video, or publication could be produced. However, it is always a challenge that the impact findings as perceived by local stakeholders could be different from donors’ expectations or perspectives. The other potential problem as identified by Mfegue Crescence Virginie (Message 32) is that if local stakeholders believe that impact assessment is carried to implement new projects, they tend to provide “biased answers to any impact questionnaire” rather than what they think. Finally, impact findings are sometimes driven by hard requirements of donors and political power leading to failure in communicating impact findings to meet interests of different groups.

I am looking to get your further discussion and experience about the issues in communicating epIA findings, especially for trans-disciplinary AR4D projects in the context of the least developed regions.

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-----Original Message-----

From: AIS
Sent: 20 May 2014 13:37
To: 'Impact-L@listserv.fao.org'
Subject: Moderator's message: Just passed the half-way stage in this FAO e-mail conference

Dear Colleagues,

This conference began on Monday 5 May while the last day for receiving messages will be Sunday 1 June 2014. We have therefore just passed the half-way stage in this 4-week conference on "Approaches and methodologies in ex post impact assessment (epIA) of agricultural research: Experiences, lessons learned and perspectives".

At this point in time, I would like to take this opportunity to thank all of you who have already sent in messages and who have dedicated your time and effort to sharing your knowledge and experience with the over 600 people who have subscribed themselves to this conference. From the contacts I have had with many of them, I know that these contributions, coming from people living in 27 different countries, have been much appreciated. I hope that you will continue participating actively in this second half of the conference.

I also hope that those who have not already done so, will contribute to the conference. The main questions to be addressed by participants in the conference are provided in Section 4 of the conference background document (reproduced below). Some of these questions, particularly about cost-effective epIA (4.6); epIA in the different food and agricultural sectors (4.5); and assessment of non-economic impacts (4.2) have received very little attention so far.

In addition, some of the messages that were posted requested specific feedback on epIA-related issues and your specific responses to these would also be appreciated. These include:

- Message 13, about quantitative methods, such as propensity score matching, to assess the impact of projects.
- Message 19, requesting feedback about the appropriate productivity measures to use for macro-level assessments of agricultural research
- Message 20, about evaluation studies which specifically searched for disconfirming evidence to be built into selection of comparative cases
- Message 31, about 4 basic issues regarding macro-level epIA of agricultural research (i.e. source of research funding; different kinds of research and thus different time lags; objectives of the research funding; and counterfactuals at the macro-level)
- Message 40, about counterfactuals with economic surplus and similar methods
- Message 42, about specific epIA protocols for seed and planting materials

I remind you that all of the 54 messages posted so far are available on the web, at <https://listserv.fao.org/cgi-bin/wa?A0=Impact-L> and that, after the conference, a summary document will be published, providing an easily readable synthesis of the main discussion points and conclusions. The document will be made available on the FAO website when finalised.

With all best regards

John

-----Original Message-----

From: AIS

Sent: 20 May 2014 15:03

To: 'Impact-L@listserv.fao.org'

Subject: 55: Re: Some lessons learned from assessment of economic impacts of agricultural research technologies

This is Mario R Pareja, from Uruguay, again (previous messages 48 and 50).

I would like to respond to Dr Yapi, Message 51, in relation to economic impacts.

I am in full agreement with the need for participatory and multidisciplinary approaches. In our case (see my previous messages), the evaluation was done by a team composed of economists, sociologists, environment and institutional specialists and we conducted personal interviews (farmers, researchers, authorities, professors, farmer's associations, etc.), field surveys (directed to farmers) and focal groups with technicians that advise farmers.

In relation to economic impacts, I should clarify that the National Institute for Agricultural Research (INIA) in Uruguay is funded by a tax-levy contributed by the farmers, an additional to ALL agricultural transactions taxes, done in the country (internally as well as for export). The government matches these funds. The board of directors is composed of farmers' as well as government representatives. This assures that farmers are in control of agricultural research, development and innovation (R&D&I) and significantly direct the research lines themselves. The economic impact evaluation was then targeted to demonstrate to both groups, private farmers and state representatives, that the money was being used properly.

For the macro-level study, we used the following indicators in a time line of 20 years: 1) agricultural productivity, with indicators of partial productivity for certain crops, beef and dairy production, and 2) total productivity factor (of all agricultural production factors) and total agricultural GDP.

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-----Original Message-----

From: AIS

Sent: 20 May 2014 22:02

To: Impact-L@listserv.fao.org

Subject: 56: Institutional innovation in Latin America and the Caribbean: Evaluation of FONTAGRO

This is Priscila Henríquez, specialist on innovation at the Inter-American Institute for Cooperation on Agriculture (IICA), based at Washington DC. First of all, a disclaimer: I am not an evaluation specialist, so my contributions stem from a pragmatic experience of 25 years working in agricultural research and innovation.

One of my current responsibilities is to provide technical support for the Regional Fund for Agricultural Technology (FONTAGRO), sponsored by IICA and the Inter-American Development Bank (IDB). This is a unique cooperation mechanism to promote agricultural innovation in Latin America and the Caribbean (LAC), formed by 15 countries. FONTAGRO's capital - contributed by its member countries - amounts to \$105.4 million and is invested 50% in TIPS and 50% in US government bonds. FONTAGRO funds proposals with the interests generated by the \$105.4 million.

As international support for agricultural research in LAC has declined over the past two decades, FONTAGRO has emerged as an example of south-south cooperation to promote agricultural technology innovation in its member countries. It co-finances projects that are carried out by consortia of national and international research organizations, NGOs', academia, farmers' organizations and other private sector entities. Proposals are submitted and evaluated on the basis of technical merit and approved by the Board of Directors comprised by a representative of each member country. As of December 2013, FONTAGRO has supported 85 projects for a total of US\$78.06 million. Of this amount, FONTAGRO has provided \$12.01 million, other donors US\$14.82 million and the executing partners such as national and international organizations, US\$ 51.23 million. The topics range from mechanisms to link farmers to markets, climate change adaptation of family agriculture and sustainable use of natural resources, aligned with the Fund's Strategic Plan.

An external evaluation of FONTAGRO as a mechanism to promote research carried out in 2010 revealed that FONTAGRO has contributed decisively to strengthening research and institutions: a countless number of professionals have been formed to MSc and PhD through these projects, which is noteworthy given the lack of opportunities to carry out postgraduate programs in the region, particularly in Central America and the Caribbean. A second finding was that FONTAGRO contributed to the development of 35 new technologies, 15 of which are new to the region and 4 have global implications.

Last year, FONTAGRO conducted an evaluation of the results of 44 projects completed by 2012, and looked in detail at the impacts of seven of them. One of the most interesting findings is that while direct investment by FONTAGRO is considerable, this mechanism acts as a mobilizer of resources from other sources. So, the multiplier effect in the region is evident. During the evaluation period, co-financiers and participating countries had contributed \$55.6 million dollars in the form of financial resources and benefits in kind: laboratories, equipment, materials and qualified personnel. In other words, every dollar contributed by FONTAGRO mobilized the equivalent of \$ 5 additional during the first 14 years functioning. This is important, especially considering the low levels of investment in R&D and innovation in most LAC countries, with the notable exception of Brazil, Argentina and Mexico (accounting for 86% of the regions R&D spending growth from 2000 to 2008).

FONTAGRO and its sponsoring organizations are using the results of these evaluations to create awareness among decision makers about the need to increase their investments of public monies in research and development to a recommended minimum of 1% of GDP while focusing on benefiting farmers of all sizes and scales, particularly on innovation that address the needs of small and medium holders.

Also, just recently the Global Harvest Initiative in partnership with the IDB launched the publication "The next global breadbasket: How Latin America can feed the world" that offers a set of recommendations and action items for governments, the donor community, and the private sector to maximize the potential of LAC to contribute to global food security (<http://www.globalharvestinitiative.org/index.php/the-next-global-breadbasket-how-latin-america-can-feed-the-world/>). The first recommendation is to increase public investment in agricultural R&D.

I just thought I will contribute with this notable example of institutional innovation to promote agricultural research in LAC. I acknowledge the important case of INIA Uruguay highlighted by Mario Pareja (message 48)

as an example of how LAC countries are developing sound innovation systems and the lessons learned from that important experience.

Looking forward to continuing this important discussion.

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-----Original Message-----

From: AIS
Sent: 21 May 2014 09:58
To: 'Impact-L@listserv.fao.org'
Subject: 57: Re: Project design and impact evaluation

This is Silvia Andrea Perez, Wageningen University, again (previous message 7).

I agree with Justus Kavoi (Message 45) that it is important that participation from different stakeholders takes place in the process of impact assessment. I would like to add that the participatory monitoring and evaluation should be done even over time, during the process, going beyond a static pre and post assessment with very predefined plans and goals. There might be opportunities to change and even innovate in the process of a project, so that these also need to be monitored, tracking the events when stakeholders adjust their actions plans. I called this Monitoring, Evaluation and Change (M&E&C), which implies that certain flexibility should be allowed. Good record keeping is crucial over the process, and the longitudinal reports can be used together with the baseline and endline data to make the final impact evaluation of a project.

See the poster I prepared entitled "Tracking the social organisation of innovation: Tracking Mobile Hubs of innovation networks tackling societal challenges" at http://www.academia.edu/5950791/Tracking_the_social_organisation_of_innovation_Tracking_Mobile_Hubs_of_innovation_networks_tackling_societal_challenges

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-----Original Message-----

From: AIS
Sent: 21 May 2014 10:04
To: 'Impact-L@listserv.fao.org'
Subject: 58: Two caveats to the definition of impact

This is Mario R Pareja, again.

I congratulate John Ruane for having done an excellent summary on the conference background paper: "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives". I am only sorry that I joined the conference a bit late so I have just completed its reading. I would like to point to one of the phrases in such a paper included in the following paragraph because I think it is relevant and I often see terms being confused. The paragraph is:

"A key component of RBM [results-based management] practices, among others, is the sequential 'results chain' or impact pathway, in which INPUTS lead to ACTIVITIES which produce OUTPUTS leading to OUTCOMES which then lead to IMPACTS. Inputs include funds, technical assistance and human and other resources; activities include actions taken or work done; outputs include new products, services and capacities; and outcomes represent the likely or achieved short-term and medium-term effects of the outputs (UNDG, 2011). Impact, instead, refers to the long-term effects. Following the commonly-used OECD-DAC (2010) definition, impact refers to the "Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended". These effects can be economic, socio-cultural, institutional, environmental, technological or of other types".

I am in agreement with the general definition of "impact" - multidimensional and long-term change - but, in my modest opinion, it needs two caveats. First, the change has to be, not only long-term, but also sustainable. This means that the farmer could afford to maintain the change without sacrificing his/her own financial, natural resources or social status. This may be implied in the definition but I think it should be explicit. The second caveat is that the change must be reflected in the quality of people's livelihoods. Economic impacts should mean more income for the farmer (economic security), higher GDP for the rural sector, a higher rate for Total Productivity Factors, etc. Social impacts should mean better quality of life (social security): technology that bring learning, training and development of new skills, such as management, access to services (health, school, sports, etc.) and environmental impacts should mean lower soil erosion rates, better water quality, lower rates of use of toxic pesticides, etc. These latter indicators are, for me, the real ones to measure IMPACT!

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-----Original Message-----

From: AIS
Sent: 21 May 2014 11:47
To: 'Impact-L@listserv.fao.org'
Subject: 59: Communicating the ePIA findings

I am Shahid Sheikh from Pakistan, freelance consultant on standardization in agriculture sector to add more value in international trade. I started my carrier from a PL 480 project of US on "Sterile Male Technique for the control of fruit flies in Pakistan" later shifted my services to R&D activities on chemical pesticides up to retirement.

I am happy to join this discussion as getting more and latest information on Impact of agriculture research. Discussions on different ongoing subjects on are very interesting and informative for all stakeholders.

Comments on communicating from Shams F. El-Shamy (Message 39) and from Anna Augustyn (Message 47) is very well discussed. In my opinion about the methodologies, there is lack of communication about the impact of research findings to all stakeholders except to donors and policy makers, I cannot say about other countries but Pakistan is the one country where bureaucracy and its delaying tactics create problems as they do not take an early action.

Now the recent introduction of technologies in the communication field must be utilized for the cause of consumers or the farmers in this case. This is the era of competition and time is running fast, if we did not act in fast-moving world and problems being faced due to climate change which is effecting different climatic zones and different sectors of society.

Agriculture is very dependent on nature and environmental factors. Research in agriculture is a very complicated and time consuming activity either it is qualitative or quantitative research. Agriculture research finding in laboratories after a reasonable period must be demonstrated at the farmer's field either at small level or medium level, impact of research would be proved in the field immediately.

In my opinion, our research organization do not have public relation wings to communicate the activities and findings of positive results of research with all stakeholders as well as agriculture extension staff who have direct contacts with farmers. There is a need to establish public relation wings in each research organization and also allocate sufficient funds for this purpose. I think, funding is the problem in developing and under developed countries, so whenever a research grant is approved, and research findings are positive after a certain period of time, the donor should approve additional funds for demonstrating the results of research findings. I am hopeful that this point will be considered positively by donors and stakeholders.

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-----Original Message-----

From: AIS
Sent: 21 May 2014 11:55
To: 'Impact-L@listserv.fao.org'
Subject: 60: Re: Two caveats to the definition of impact

This is Ekanath Khatiwada, again (previous message 2).

I fully agree with Mario R. Pareja (Message 58) on the logic of results based management (RBM) system, which is becoming one of the popular tools within the UN, World Bank groups and other development programmes on the ground. RBM system captures the results attributions beyond the technical aspects.

As a non-technical person in this field, I enjoyed reading most of the posts. From the previous posts, it seems we are very advanced in the scientific result measurements in agriculture sectors and somehow I am missing the market point of view. Therefore, as a market development practitioner, I would equally suggest to capture the results of economic impact, increased market value of agriculture produce, increased jobs and income. Of course, we should not leave out the "outreach" element.

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-----Original Message-----

From: AIS
Sent: 21 May 2014 13:03
To: 'Impact-L@listserv.fao.org'
Subject: 61: Re: Participatory procedures

I am Dominique Barjolle, deputy director of FiBL, the Research Institute of Organic Farming in Switzerland. I have done much research (and worked directly) in the past on Innovation in Agriculture, and am currently involved in the IMPRESA project (<http://www.impresa-project.eu/>), with the role of designing the case studies together, among others, with Matthieu Stigler.

I very much agree with the point of view of Justus M. Kavoi (Message 36). This is an important point, as the participation in the evaluation is one of the major tools of lessons learned and future improvement.

I would like to stress in this matter an important point, that is the fact that participation is, from my point of view, more an approach regarding HOW to conduct an evaluation, but not a METHOD as such.

Participatory check-lists, focus groups, questionnaires with stakeholders are methods to gather the diversity of the points of view. Regarding the evaluation of research impact as such, there are some established (or less established but interesting new methods) like Total Factor Productivity or inputs/outputs, impact assessment, contribution analysis (Mayne 2012), Pattern Matching (Coryn et al, 2011), maybe Social Network Analysis, etc.

Participatory approaches are useful in elaborating the impact pathway, and are a way to collect some data. They are (for me) not a "method" as such to evaluate impact of research.

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<http://www.wmich.edu/evalphd/wp-content/uploads/2010/05/A-Systematic-Review-of-Theory-Driven-Evaluation-Practice-from-1990-to-2009.pdf> (300 KB).

-----Original Message-----

From: AIS
Sent: 21 May 2014 13:28
To: 'Impact-L@listserv.fao.org'
Subject: 62: Outcome mapping

I am Dr. Deogratias Lwezaura, again, Principal Economist in the Ministry of Agriculture, Tanzania.

I am in agreement with Mario Pareja (Message 58) in the definition of outcome, impact and sustainability. However, I want to allude to the definition and approaches derived from the outcome mapping tool developed by the International Development Research Centre (IDRC). According to outcome mapping: success of a program or project is assessed or looked at the outcome level, of which significantly I am in agreement. Outcome is any observed changes in people's attitudes, behaviour, practices, activities, values, etc. This is the most important as far as technology and innovations are concerned. What matters is to change attitudes, minds, behaviour and practices of people in any interventions for innovation, then impact and sustainability will come into reality. Impact can be in short-term or long-term - such as increased yield, income, agricultural GDP, Total Factor Productivity. So, my thinking is that any assessment and any interventions should have more focus on changing mindset, attitudes, behavior - that seem to me as the most important.

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[The outcome mapping approach is mentioned, and an on-line IDRC reference is provided, in Section 2.2.2 of the conference background document...Moderator].

-----Original Message-----

From: AIS

Sent: 21 May 2014 13:53

To: 'Impact-L@listserv.fao.org'

Subject: 63: Issues in agricultural research impact evaluation

My name is Hailemichael Taye from Ethiopia. I am Results Based Monitoring and Evaluation Expert in a R4D project, at International Livestock Research Institute (ILRI). This is very interesting topic and discussion where I expect to learn a lot. I have got information about this program lately and this is my first email.

There are some issues that need more attention while we think of impact evaluation (IE) in agricultural research. The first important thing we need to clarify is how we define impact. This is because how we define the term dictates the IE methods and designs to be employed, the type of data to be collected, the analysis and conclusions to be drawn.

There are various definitions of impact. One of the definitions of 'impact' refers to the final outcome level of the causal chain. This could be increased income, improved nutritional status, improved wellbeing etc. In this case, impact evaluation is about identifying the changes in terms of these impact variables. Here we can use both quantitative and qualitative (mixed) method for IE. On the other hand, others working in impact evaluation define impact as the difference in the indicator of interest (Y) with the intervention (Y1) and without the intervention (Y0). That is, $\text{impact} = Y1 - Y0$. In this sense, impact evaluation is a study which tackles the issue of attribution by identifying the counterfactual value of Y (Y0) in a rigorous manner. This requires rigorous quantitative data and needs the application of sophisticated statistical analysis (quantitative IE method). Some argue that these two definitions should overlap and impact evaluation should be about attributing the impact indicator (the final outcome in the results chain), like income, to the intervention by using rigorous methods.

The other challenging issue in impact evaluation of agricultural research is disentangling the impact of research and extension. If agriculture research should bring impact, the research results should first reach the farmer and be applied. For this, the extension system has a huge task which by itself requires resources, methods and interventions and needs to be monitored and evaluated (including impact evaluation) by its own. A good research result may have poor impact due to poor extension system. Therefore, it is difficult to differentiate the impact of research and extension. To add an insult to the injury, there are lots of literature detailing the difficulty of capturing the impact of extension itself due to various factors.

In terms of the quantitative approach of evaluating impact, it assumes a linear and rigid way of relationship along the results chain from input to output to outcome to impact. However, in agricultural research and extension there are a lot of actors (multi-institutionalism and plurality), sources of information and technology etc. (beside the formal intervention) with complex interactions and inputs. Agricultural development in general is not linear; rather it is a dynamic and complex process that requires the contribution of multiple stakeholders at various levels along with the necessary mix of technical, socio-economic, institutional and policy conditions. This questions the possibility and importance of attribution studies in agricultural research and extension IE.

We need to consider these issues while developing impact evaluation tools for agricultural research.

Hailemichael Taye

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-----Original Message-----

From: AIS

Sent: 22 May 2014 09:23

To: 'Impact-L@listserv.fao.org'

Subject: 64: Re: Ex-post impact evaluation of new farming techniques in Senegal - propensity score matching method?

My name is Daniel Suryadarma, I am the senior scientist in charge of impact assessment at the Center for International Forestry Research (CIFOR).

I am replying to the question by Amadou Binta Ba about impact evaluation methods (Message 13). Basically, identification of propensity score matching (PSM) requires two assumptions:

First, the unconfoundedness assumption. That is: after controlling for all observable characteristics, no other characteristics – observed or unobserved – influence both participation in the program and the outcomes on which the impact is being evaluated.

Second, common support. That is: for all observable characteristics, we can observe participants and non-participants.

Looking at the two assumptions above, the first one is the most difficult to accept. For this reason, most quantitative impact evaluations no longer use matching. There are other evaluation methods working on weaker identifying assumptions, and matching should only be used as a last resort.

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-----Original Message-----

From: AIS

Sent: 22 May 2014 16:02

To: 'Impact-L@listserv.fao.org'

Subject: 65: Issues in assessment of non-economic impact

This is Huu-Nhuan Nguyen again.

In my previous discussion (Message 5), I already mentioned that current impact assessment practices tend to focus more on economic impact and ignore non-economic impacts (e.g., human, social, physical and natural impacts) which are also vital for measuring the contribution of agricultural research for development (AR4D) to local livelihood. Mario R. Pareja (Message 48 & 58), also discussed that “the change must be reflected in the quality of people's livelihoods” (Message 58).

Because AR4D is considered an innovation process in which knowledge is generated and adapted to local contexts, there is a consensus that impact assessment of AR4D should not only look at short-term economic gains but also human, social and environmental impact. There have been various discussions on using the sustainable livelihoods framework, developed by the British Department for International Development (DFID, 1999) as a lens for assessing impacts of AR4D.

In sustainable livelihood perspectives, the non-economic impact of agricultural research includes: i) human capital (e.g., knowledge and skill, health); ii) social capital (e.g., trust, membership, informal safety net, communication); iii) natural capital (e.g., soil, forest, biodiversity) and iv) physical capital (e.g., capitals road, transportation, sanitation, healthcare system). These capital groups are interconnected. Any change of more than two capital groups could lead to a large variation of the rest.

According to Meinzen-Dick et al. (2003), the sustainable livelihood framework is a good tool for analysing the causal relationship between poverty and people's access to livelihood resources and their diverse livelihood

strategies. By using a sustainable livelihoods framework, both direct changes (e.g. improved income, health, food etc.) and indirect changes (assets, activities, ability to cope with and to recover from vulnerability context) are assessed. Being guided by sustainable livelihood framework, livelihood impact (including non-economic impact) could be assessed at the individual to household and household group, community, regional, national and international level.

However, by reviewing existing literature in this field, I also learned that there are some limitations and challenges in adopting the sustainable livelihood framework for impact assessment. First, the notion of power and politics and empowerment is often missing in the sustainable livelihood framework. Second, farmers with the same livelihood assets may pursue different livelihood strategies because they are affected by different perceptions, geographic settings or access to market. Third, defining and quantifying indicators for assessing impacts on livelihood is challenging and research results are likely incomparable due to heavy reliance on participatory techniques and qualitative data. Moreover, initial assets endowment (e.g., agricultural inputs, livestock) for technology adoption could also help to accumulate livelihood assets, measuring rural livelihood impacts of AR4D should pay attention to separate these investment. In addition, the sustainable livelihoods framework does not present historical factors like problems of previous development interventions that could influence a reception of target groups to new interventions. Finally, within the sustainable livelihood framework, a focus is made on households and local complexity leading to less attention to larger scale and external policy or institutions.

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-----Original Message-----

From: AIS
Sent: 23 May 2014 09:12
To: 'Impact-L@listserv.fao.org'
Subject: 66: Re: Issues in assessment of non-economic impact

This is Mario Pareja, again, responding to Message 65 by Huu-Nhuan Nguyen.

I am in agreement that the sustainable livelihood framework could be used for measuring impacts from agricultural research for development (AR4D). However, I expand, and place stress on the limitations - additional to the ones mentioned by Nhuan and to the ones I stated in my previous messages - that need to be taken into consideration. They are the following:

(1) The baseline. Where do we start from? This is very difficult to assess since, in most cases, baselines studies are only conducted for development projects but not for AR4D institutions. With the latter, you deal with a larger and more complicated set of production systems and livelihoods and so of variables (economic, social, environmental, institutional) and regional diversities. This is a major limitation to assess impacts from research, development and innovation (R&D&I) institutions, such as national agricultural research systems (NARS) and Consultative Group on International Agricultural Research (CGIAR) centers. You are often limited to measure impacts from a particular technology and/or on a particular production activity in a particular region (just as a development project). But this is not the real world you may want to address.

(2) Adoption data. Even if you can "see" a technology adopted you can never be sure where it comes from. Is it a result of the R&D and extension efforts of the particular institution your are evaluating, or is it a combination

effort of various of them? And, farmers may adopt not exactly the technology or innovation the institution developed but an adapted, by themselves, version of it. How do you recognize the innovation?

(3) Indicators. The economic ones are simple to come up with and have been standardized in several studies. But the other dimensions, that most participants of the e-mail conference seem to consider important, such as social and environmental dimensions, how do we measure them? Science has been reluctant to place more efforts into the development and validation of social and environmental indicators that could be a measure of impacts directly resulting from R&D&I and not from public policies.

(4) Attribution issues. Any of the impact dimensions is affected by a multiplicity of factors related to policies that government may implement and they affect adoption, or not, of the innovation (incentives, disincentives). Many institutions may contribute to the polishing of the innovation (and that is natural and good!) so here there is an additional confounding factor.

Possible solutions:

(1) NARs and CGIAR centers should have and/or strengthen their own socio/economic units to gather and standardize data: improve on baselines, tracking information (monitoring) of adoption rates and possibly modifications of technologies made by farmers, manage a set of indicators to measure impact, etc.

(2) A menu of indicators should be developed and made available to the agricultural R&D&I institutions to measure economic, social and environmental impacts (I must add, based on our experience, that "institutional" impacts are also important) resulting from their innovations.

(3) Streamline the "evaluation culture" within the national and international R&D&I institutions. Many of them think they are above the good and the bad and, with the excuse that "research takes time", they refuse to adopt a strict, evidence-based evaluation system of individual researchers, projects, programs and of the institution.

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-----Original Message-----

From: AIS
Sent: 25 May 2014 17:56
To: Impact-L@listserv.fao.org
Subject: 67: Evaluating impacts of capacity development in research

This is Julien de Meyer, until recently working as Agricultural Research Officer in the FAO Research and Extension Unit in Rome and now a freelance consultant in Australia.

FAO in collaboration with the SOLINSA project (www.solinsa.net, funded by the 7th Framework Programme of the European Commission) recently conducted a case study in South Tyrol in Italy to assess their apple production innovation system. I led that study and we found that in the last decades, the productivity of the system had increased dramatically: In 40 years, from 1960 to 2000, the labor needed to farm a 1 ha apple orchard was reduced from 1000 man/hours to 450 man/hours and at the same time the yield increased from 25 to 55 tons per ha (FAO, 2014). This was due to a combination of factors with an important role played by the research and extension system. As well, once production was increased, research in Dynamic Controlled Atmosphere for long term storage of apples was successful and allowed producers to reduce post-harvest losses, avoid the use of chemicals for conservation and increase their ability to store apple for up to 12 months giving a significant marketing advantage. In this case, it took only 20 years from the beginning of the research process to a wide adoption of the technology. Thanks partly to its investment in agriculture research, South Tyrol evolved from being one of the poorest provinces in Italy at the end of the Second World War to becoming one of the richest today, an obvious economic impact.

We tried as well to understand why the innovation system in South Tyrol was becoming more efficient in addressing production and marketing constraints. What was the reason behind the reduced time lag between research and wide adoption? This for me illustrates an important point regarding the non-economic impact of research. An often overlooked fact from epIA is that any research initiative, whether it is successful in developing technologies or proving or disproving a research hypothesis, increases the capacity of individual scientists working on it. This individual increase in capacity is then partly captured by their institutions (Gordon and Chadwick, 2007). In the case of South Tyrol, this then permeated the whole innovation system and in the case study, we reached the same conclusion as the economist Paul Romer (1997): "the more we discover new things, the better we get at the process of discovery itself. Knowledge builds on itself" (Interview with Joel Kurtzman for the magazine Strategy+Business).

An Australian Centre for International Agricultural Research (ACIAR) paper by Gordon and Chadwick in 2007 looked specifically at capacity building in research and provides an interesting framework to evaluate it and some of their rule of thumb that could be used to develop the epIA mixed model. For example, they found that improvements in human capital explain around 30% of the increase in total factor productivity (TFP). Thus, accepting that all agriculture research process results in capacity improvement, we could then include in any ex post evaluation a value calculated from the annualised productivity growth increase in agriculture and the value of the research initiative being assessed. I recognize that calculating this value could present many empirical challenges. However, this value represents the often forgotten fact that agricultural research has a value as a public good that is independent of the specific results of the research initiative being assessed.

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-----Original Message-----

From: AIS
Sent: 25 May 2014 17:56
To: Impact-L@listserv.fao.org
Subject: 68: Evaluation of INIA, Uruguay

This is Mario Pareja, from Uruguay, attempting to share with all of you our experiences in evaluating 20 years of investment in agricultural research & development & innovation (R&D&I) by the National Institute of Agricultural Research (INIA) in Uruguay (INIA-UY). In this message, I would like to provide you with a general framework for the evaluation, the team we formed and other issues related to the juridical-legal and institutional contexts, as well as some of the conclusions. Not all these may be applicable to the CGIAR centres but we believe they could be of use to the national agricultural research systems (NARS) in reform or to be created.

Late in 2009, INIA-UY celebrated its 20 years of existence. INIA-UY was born as the national institute for agricultural R&D&I in Uruguay in 1989, substituting the previous chain of independent research stations that existed in the country, all attached to, and coordinated by, the Ministry of Agriculture. The bid for an open call for proposals was regarded as a welcomed act of openness and transparency of INIA-UY. They called for an external and independent multidimensional (economic, social and environmental) evaluation of its investments during 20 years. The Interamerican Institute for Agricultural Cooperation (IICA) responded to the bid preparing a proposal that finally won the bid. A local team was formed with J. Bervejillo, as economist; M. Bianco, as sociologist; two environmental specialists, A. Torres and A. Ruiz; and myself, as coordinator of the team and institutional specialist. An international advisory board to the local team included D. Byerlee, consultant and specialist on agricultural R&D&I impact assessment; J. Alston, Professor of University of California Davis and specialist on impact assessment of agricultural R&D&I; E. Alarcon, IICA, specialist on institutional

assessments; M. Otero, IICA representative in Uruguay; and A. Lapido, dairy producer in Uruguay. All of my messages are on behalf of and credit to all the team members, although the opinions are mine.

It is important to stress the factors that played a role in INIA-UY's creation and shaped its legal-judicial framework, as well as the institutional set-up, because they are key elements in explaining many of the INIA-UY's successes.

First, by the late 1980's, the agricultural sector of Uruguay, basis for the country's economy, and for decades its producer of export products (beef, wool, dairy and agricultural products: rice, wheat, barley, maize, soybeans, etc.) was rapidly losing its competitiveness at the international level and showed very low productivity indicators. This fact was well known by farmers and growers and an issue of concern for most of them. Their organizations, specially one of them (the Federation), reached a point that, at one of their meetings, and responding to a complete inertia from the state regarding funding to agricultural research, pledged their own funding for agricultural R&D&I as the only way to recoup competitiveness and increase productivity. They actually proposed to be taxed in order to fund, themselves, agricultural research!

Second, the very small group of researchers that had remained (a large majority of them had left the country or moved to the private sector) at the agricultural research stations were lobbying for more funding for research and for reshaping the structure of agricultural R&D&I system. They organized themselves, built upon a previous successful state-private sector joint venture, that of rice, and were extremely active contacting farmers, farmers' organizations and politicians as well as influential decision makers. Their objective was to seek additional funding for salaries (to retain qualified researchers), research expenses (to actually be able to do research), human capital development (send people to training activities and post-graduate education) as well as develop social capital (networking with other institutions of the country, including private sector, as well as from abroad).

Third, the political stage was set up for changes. The dictatorship, that had kept the country in darkness and agricultural research without funding for more than 11 years, had fallen and a new breed of enthusiastic politicians took over. Democracy allowed that, soon, a proposal for a law to create INIA was on the table and it took a whole year of discussion in the parliament for its approval. It was, as a legislator interviewed by us put it, "one of the most discussed laws in history"!

The result was something that we, as evaluators of INIA-UY, stress as one of their main accomplishment: (1) **LEGAL FRAMEWORK:** INIA is a public organization (managing and generating public goods) but under the private juridical framework (not a state organization); (2) **BUDGET FOR R&D&I:** INIA was assured a budget as a % of the agricultural GDP co-financed by producers (tax levy) and the government matches these funds; (3) **CO-MANAGEMENT:** the government and producers sit and shared decisions at the general board of directors but also at the regional advisory boards attached to the research stations; (4) **MANDATE:** INIA was mandated a clearly defined agricultural R&D&I responsibility; not an extension one. INIA's only responsibility in this theme is to coordinate extension and diffusion of innovations with other institutions of the country and a mechanism was provided in the law for INIA-UY to do so.

Well. This is like beginning the story by the end, by the conclusions. We believe that this view is essential in order to capture some of the issues - the scenarios - that make R&D&I a success or a failure. It's not enough to look at the field, measure some indicators about a technology, come back to our desks and then conclude yes or not. We need to understand more about the processes that have shaped and established the R&D&I systems in our countries: how they came about and how are they now working.

With pleasure, and if times permits, I will comment later, in future emails, on the methodologies we used for each one of the dimensions: economic, social, environmental and institutional.

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-----Original Message-----

From: AIS

Sent: 25 May 2014 18:01
To: Impact-L@listserv.fao.org
Subject: Moderator's message: Coming into the final week of this FAO e-mail conference

Dear Participants,

This e-mail conference began on 5 May and the last day for sending messages to me for this conference is 1 June. The final messages will be posted on 2 June and the conference is then finished.

About 620 people have subscribed themselves to the conference and it represents a unique opportunity for people to share their knowledge and experiences and to learn from each other regarding the approaches and methodologies that can be used for ex post impact assessment (epIA) of agricultural research.

I want to sincerely thank all of you who have sent so many stimulating and informative messages so far. They are all available on the web, at <https://listserv.fao.org/cgi-bin/wa?A0=Impact-L> and, in chronological order, <https://listserv.fao.org/cgi-bin/wa?A1=ind1405&L=Impact-L&O=D&H=0&D=0&T=1>. The message archives are searchable, with a 'free text' search button on the right hand side of the webpage.

We are now coming into the last week of the conference and I would like in particular to encourage those who have not already done so, to contribute to the discussions.

As you know, the main issues to be discussed are described in Section 4 of the conference background document (<http://www.fao.org/docrep/019/as549e/as549e.pdf>). In addition, I mentioned some specific questions raised by participants in the moderator's message I posted earlier this week (after Message 54).

With best regards

John

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-----Original Message-----

From: AIS
Sent: 26 May 2014 13:00
To: 'Impact-L@listserv.fao.org'
Subject: 69: Seeing impacts in a broader and longer term context

My name is Uma Lele, am an independent researcher, who worked at the World Bank, and with and on the Consultative Group on International Agricultural Research (CGIAR), and the Global Water Partnership in various capacities-as Technical Advisory Committee (TAC) member, leader of the World Bank's CGIAR meta evaluation 2003 and on various Evaluation and advisory panels of international organizations.

I have read the discussion of all 60 plus contributions with much interest. With the benefit of hindsight of 40 years of experience, I feel we need to look at impacts of technologies from three perspectives:
(1) productivity growth (partial productivity of land, labor, water but also total factor productivity (TFP) taking into account all inputs),
(2) their short and long term distributive effects -who participated in TFP growth, why and how and who did not and why not, and
(3) sustainability (understanding whether the increased fertilizer, water use is fiscally, institutionally and environmentally sustainable) and thus whether the increase in production is leading to improved incomes and food security of the poor and other consumers over the long haul.

As many have pointed out in their comments, role of capacity of national institutions, policy makers and individual scientists tends to be critical, as is the extent and the quality of delivery of services made possible by physical and human infrastructure. Good performance in one period does not guarantee it in the next period - if one or more of the public policies, institutions, external and internal environment deteriorate - the reverse is also true. Therefore countries need sustained long term capacity to monitor changes in the external and internal environment in a package of areas ranging from research and extension, agricultural education to agricultural finance and market access as together they determine productivity growth. Routine data collection, monitoring and evaluation which feeds into policy is critical. You can find my various papers on my website, www.umalele.org. I would particularly bring to your attention a paper on the Role of the Rockefeller Foundation by Lele and Goldsmith (1989) and another on Good governance of food, water and energy security by Lele, et al. (2013). But there are many more.

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-----Original Message-----

From: AIS
Sent: 26 May 2014 13:21
To: 'Impact-L@listserv.fao.org'
Subject: 70: Alternatives to propensity score matching // Purpose of impact evaluation

This is Daniel Suryadarma again. In my previous message (nr. 64), I discussed the main drawback of propensity score matching (PSM). Earlier today, I started out writing about a number of evaluation methods that should be considered ahead of PSM. Halfway through, however, I began to think that it is much more efficient to just recommend a book that I had used when I was teaching quantitative impact evaluation in Australia - Gertler et al on *Impact Evaluation in Practice*, which can be freely downloaded from the World Bank website (reference below). This book has not been mentioned before in this conference, and I think it goes much deeper into each method than Khandker et al's book. [*Khandker et al (2010) 'Handbook on impact evaluation: Quantitative methods and practices', also from the World Bank, was recommended in Messages 14 and 15...Moderator*].

Having taken the methods discussion out of the way, I think it may be useful to reiterate the purpose and, from there, the most basic foundation of impact evaluation. From my point of view, the purpose of any impact evaluation is to do two things: measure effect size – that is: how big the impact is; and determine causality. This also applies to ex post impact assessment of agricultural research.

Based on the purpose, an impact evaluation rises and falls on one thing: the counterfactual. That is: what would the outcome have been, had the program/research not been implemented? The central issue of impact evaluation is the validity of the counterfactual. Without an explicit construction of a counterfactual, there is no impact evaluation.

Finally, I am going to make a statement that may be controversial. Since the main purpose of an impact evaluation is to measure effect size, quantitative methods must be used. Without quantitative estimates, there is no impact evaluation.

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Reference:

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-----Original Message-----

From: AIS

Sent: 26 May 2014 13:27

To: 'Impact-L@listserv.fao.org'

Subject: 71: Difficulties in assessing and evaluating agricultural research

I'm AbdulJabbar Alkhazraji, an Iraqi scientist and researcher holding a PhD, with 36 years of experience working with Governmental Departments, Educational Faculties and Private laboratory equipment's companies with different positions in Iraq.

I see that the difficulties we're faced with in Iraq and most of developing countries in assessing and evaluating agricultural research include the following:

1st: The lack of strategic policies in the agricultural sector.

2nd: The absence of coordinating system between research scientific centers (universities, research center...etc) and private sector.

3rd: The instability of agricultural planning and programs for long time, due to instability of the political situation.

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-----Original Message-----

From: AIS

Sent: 26 May 2014 13:42

To: 'Impact-L@listserv.fao.org'

Subject: 72: Can social network analysis be helpful to impact evaluation?

This is a joint contribution from Matthieu Stigler (I previously posted Messages 15 and 44), Dominique Barjolle (Message 61) and Sylvain Quiédeville from the Research Institute of Organic Farming (FiBL) in Switzerland. Part of FiBL's work in the IMPRESA project (<http://www.impresa-project.eu/>) is to prepare a case study manual which will document the methodological framework to be used later in the project for six case studies of scientific research-based innovation.

Before the conference ends, we would like to ask the participants their views about the potential of social network analysis (SNA) for ex post impact assessment (epIA), which will be very useful for us to prepare the IMPRESA case-studies guidelines.

In a nutshell, SNA analyses links between individuals in a network, usually through network maps and various indices of clustering and concentration, centrality and power within the network. In this way, SNA gives a picture of how information can be transmitted (or not) among actors. This appeared to us very promising in the case of agricultural R&D, where the diffusion of innovations can be facilitated/hindered depending on the type

of network structure. As SNA was further advocated for epIA by several authors (see Davies, 2005; CGIAR, 2008), this led us see positively its inclusion as an epIA method in the e-conference background document (Ruane 2014).

However, our initial enthusiasm for SNA for epIA has somehow decreased now, and we see several problems to use SNA for epIA:

-SNA is clearly interesting to get an idea of how information is transmitted. It does, however, not say anything about the effect of receiving that information on the actors, whether the information will change their behaviour and, if yes, based on which mechanisms. It is, however, precisely these elements which SNA cannot describe that are of main interest in an epIA.

-We agree SNA can help identify key actors in a network, which will prove helpful for qualitative data collection such as focus group discussions, key informant surveys, etc. But SNA is a costly operation, and a simple search of key players through informal contacts can be much cheaper and faster.

-SNA is a static approach, providing few insights into the dynamics of innovation diffusion and learning. It is true that SNA can be made dynamic by surveying the network multiple times, but this seems again costly, and particularly difficult in a pure ex-post situation.

But we would be happy to hear the participants' views on these points. Are we understating the potential of SNA? Can SNA be used for epIA? At which stage? Has anyone particular experience of using SNA for epIA?

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-----Original Message-----

From: AIS
Sent: 26 May 2014 18:02
To: 'Impact-L@listserv.fao.org'
Subject: 73: Re: Issues in assessment of non-economic impact

My name is Fred Zaal, I'm a senior advisor at the Royal Tropical Institute (KIT) in Amsterdam. Please look at www.kit.nl/sed for more information on my affiliation.

The issue discussed must occur on many occasions and in many ways. The non-economic impact is hard to assess in comparison with the quantitative methods developed for the economic impact of agricultural research for development (AR4D). Indeed, in our work we've come across this often, and have used the livelihoods approach to try to collect qualitative data in a systematic way. The issues mentioned (baseline, adoption, indicators and attribution) by Mario Pareja (Message 66), I recognise very clearly as limitations.

We (and this means: a large team of people from various Dutch, Ghanaian and Burkinabé universities, KIT, and a number of NGOs in the Netherlands), have tried to develop a systematic way to address these limitations, mostly because we were interested in something else entirely: to use the word evaluation to describe the value that beneficiaries experience from interventions. Asking them in a very systematic way solves some of the limitations discussed, or at least it makes clear that there are indeed complicating starting points for innovation processes, complicated routes along which innovations reach the farmer, a complicated set of indicators that should and can be taken along, and a partial solution to the problem of attribution in general.

We have called this method Participatory Assessment of Development (www.PADev.nl), and found that it helped greatly in getting the information needed to assess the context of an AR4D process and in fact any other intervention. Using the livelihood framework and asking separate groups in local communities, a systematic way was developed of identifying relevant changes, alternative interventions that may have played a role, and assessments by the people that should know best, the farmers, of the impact.

The project ended last year. Since then this method has been used in many projects, as it can be adapted to local needs and circumstances quite easily. The experiences are also written up and published on the website. I think it could help in developing a (mixed) method that would give more insight in the non-economic impact, and especially the impact as it has been experienced by farmers (men and women, young and old, migrants and long-term residents, different ethnic/religious groups, etc, depending on the groups asked).

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-----Original Message-----

From: AIS
Sent: 26 May 2014 18:03
To: 'Impact-L@listserv.fao.org'
Subject: 74: Re: Seeing impacts in a broader and longer term context

From Mark Reader, Research Assistant in Rural Business, at the University of Cambridge, UK. 27 years in agricultural research, development and economics.

As someone whose job is now to measure physical production and economic viability of farms in England, I would like to support the view of Dr Lele [Message 69] in drawing attention to a role for ongoing monitoring in the context of ex-post Impact Assessment.

Evaluating impacts of projects, ex-post, might miss some key factors in the agro-economic system (sector) and exclude key observations about possible failures in that system. Namely:

- 1). Is supply balancing demand (for example: what is production in 'kCalories per capita per day', or in 'grams of protein per capita per day')? These should be realistically assessed, rather than simply measured as 'food consumed per day'.
- 2). Are the production units (which are, in practice, almost invariably families) in the target region economically viable?

While these fundamentals, which require resources to measure, are out of balance or unknown project evaluations might not always give usable information.

The driving forces, to keep both of these in balance, I am pleased to say I wholeheartedly agree with Dr. Deogratias Lwezaura [Message 62], are really the "mindset, attitudes, behavior" in society.

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-----Original Message-----

From: AIS
Sent: 26 May 2014 18:04
To: 'Impact-L@listserv.fao.org'
Subject: 75: Re: Difficulties in assessing and evaluating agricultural research

I am Abdulmojeed Yakubu, a Senior Lecturer of Animal Breeding and Genetics at Nasarawa State University, Keffi, Shabu-Lafia Campus, Lafia, Nigeria.

I quite agree with the view of AbdulJabbar Alkhazraji (Message 71) as regards the difficulties faced by most of the developing countries in assessing and evaluating agricultural research. In Nigeria for instance, having access to internal research funds is a very serious problem as there are very few of such research granting bodies. Evaluating research output is not given a priority attention by the government as this is done mainly by research institutes and organizations of foreign extractions. Take, for instance, the distribution of the indigenous Shika Brown layers released by the National Animal Production Research Institute (NAPRI) in the year 2000. Up till now, there is no published report to indicate how this innovation has impacted on the lives of Nigerians.

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-----Original Message-----

From: AIS
Sent: 26 May 2014 18:04
To: 'Impact-L@listserv.fao.org'
Subject: 76: Re: Alternatives to propensity score matching // Purpose of impact evaluation

This is Mario Pareja, from Uruguay, again. This is in reply, or better in support of, Dr Suryadarma (Message 70).

I stress the importance of the statement made in that message that "The central issue of impact evaluation is the validity of the counterfactual. Without an explicit construction of a counterfactual, there is no impact evaluation.". Absolutely!

In our economic impact evaluation we concluded that the agricultural GDP without the National Institute of Agricultural Research (INIA) would have been 11% lower than the one achieved in 20 years by Uruguay. I translate, from Spanish, a statement on the economic conclusions that our economist, J. Bervejillo, wrote: "...taken as a starting point the year that INIA began its work, when the total factor productivity (TFP) reached a value of 124, we can state that without technological change between 1990 and 2009, the agricultural GDP would had been 2,795 million USD (that means, 68%, or 124/181). The residue of 32% corresponds to the

increase in total productivity during the last 20 years. In 2009, this residue equalled 1,315 million USD. INIA is responsible for a fraction of the 32%".

In relation to the other, so-called controversial, statement in Message 70, i.e. "Without quantitative estimates, there is no impact evaluation": It sounds great on paper, but it is almost impossible to apply that rigorously in the field. With the exception of the economic dimension, in which you may have quantitative data, the social and environmental impact evaluations - at least in our developing nations in which data collection systems are not fully functional and complete - often require qualitative information gathered from the direct users of the technologies as well as from the field technicians. I will detail the ones we use in future messages.

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-----Original Message-----

From: AIS
Sent: 26 May 2014 18:05
To: 'Impact-L@listserv.fao.org'
Subject: 77: Re: Can social network analysis be helpful to impact evaluation?

This is Ed Garrett, previous Fulbright Fellow at Hungarian Research Institute of Organic Agriculture (Messages 4, 29 and 37), in response to Message 72 by Matthieu Stigler and colleagues on the use of Social Network Analysis (SNA).

There are several people at the University of California, Davis who are working on the use of SNA as a tool for epIA. When I combine the questions, comments, and concerns of Matthieu and colleagues in Message 72 with education models, there seem to be some methods to manage complexity and cost. One that seems most promising is the development of electronic forums for dissemination of research and extension work.

Properly developed and staffed, the electronic forum is not going to be available to all whom you may want to study, but is more likely to capture your key players or node centers. Monitoring traffic (comments, questions, suggestions, improvement, drift, and partial implementation of innovations or research findings) can be followed and polls taken either through study of the forum traffic or through actually sending an invitation to those on the network.

Some caveats is that this type of tool, the electronic forum, would need to be developed within the cultural and practical context of the users. As one can see from this FAO e-conference "forum", there is a major portion of the population that consumes information and a relatively small portion that actively participates. Digital Green has had some success with increasing participation by turning most of the production and development of contents for forums over to members of the study or learning group with only minor influence from the monitors. In places where electronic access or where literacy is low, special care needs to be taken to develop tools and interfaces that encourage participation. These can be graphics and animations instead of text or speech, and establishing multiple local kiosks to provide the ability to participate to those without their own access. This is drawing from multiple disciplines, education, information and communication technology (ICT), International Development, Agricultural Development, Extension Services, and so on.

The above comments are offered to address the two issues of SNA being "static" and cost to identify key individuals as an ongoing electronic forum provides a clear picture of who is passing knowledge, their understanding of the knowledge, and an ability to monitor changes to the innovation network over time.

To make best use of a forum to provide for epIA, it should be a part of the original method of interacting with researchers, participating farmers, and others. This then puts the need for design of evaluation, communication, and documentation into the pre-project development cycle rather than an ad hoc event at the end. In some settings though it should be possible to establish post-hoc communities of practice that could allow SNA to produced valuable data. Self-selection will be an issue as will be aligning data on or in any "web" with those who may not have access.

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-----Original Message-----

From: AIS
Sent: 26 May 2014 18:08
To: 'Impact-L@listserv.fao.org'
Subject: 78: Re: Can social network analysis be helpful to impact evaluation?

This is Hippolyte Affognon from the International Centre of Insect Physiology and Ecology (Head of Social Science and Impact Assessment Unit).

A contribution to message 72 (from Matthieu Stigler, Dominique Barjolle and Sylvain Quiédeville):

I think that social network analysis (SNA) can be very helpful to impact evaluation as social network is very important for knowledge dissemination. As we know, knowledge and information are elements that propel an increase in agricultural productivity and rural incomes. Impact is consecutive to adoption following knowledge and information dissemination. SNA can then be used as a method for identifying effective and relevant pathways for disseminating research results within a multisector system of organizations with the aim of strengthening adoption and impact. Also SNA can be used in capturing the spillover effects of technology adoption on impact.

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-----Original Message-----

From: AIS
Sent: 27 May 2014 09:54
To: 'Impact-L@listserv.fao.org'
Subject: 79: Re: Project design and impact evaluation

This is Litha Magingxa from the Agricultural Research Council of South Africa where I am responsible for overseeing the package of work that analyses and packages outputs from bio-physical agricultural research for the different stakeholders including impact assessment.

I am joining this fascinating discussion rather late. I agree fully with the points raised by Silvia Andrea Perez (Message 57).

To be able to tell a comprehensive story, it is necessary to develop into the project plan, a system for constantly tracking and documenting change in a determined set of variables or areas. This is crucial because change does not only take place at the end of the project but is a gradual and incremental process during the implementation phase. While we are all aware that for certain variables, it may not be worthwhile to monitor in a short space of time, there are certain variables that can show us the progressive impacts and sometimes, this is what is necessary to demonstrate to research funders that the intervention holds promise and more resources can be provided for further investment.

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-----Original Message-----

From: AIS
Sent: 27 May 2014 11:45
To: 'Impact-L@listserv.fao.org'
Subject: 80: Participation of actors in EpIA

This is Andrew Fieldsend of the Research Institute of Agricultural Economics in Budapest and IMPRESA national expert for Hungary. IMPRESA (<http://www.impresa-project.eu/>) aims to evaluate the impact of EU research on agriculture, collecting data on recent trends in investment in agricultural research, and developing a framework combining case studies, econometric analysis and modelling for assessing its impact. Hungary is one of 20 European countries in which IMPRESA has begun a country-level analysis of the agricultural research expenditures and an assessment of the availabilities of data regarding public and private investments in agricultural research.

My earlier career was in crop development, including 16 years working on the development of novel oilseed crops for a private sector pharmaceutical company. My research mainly covered plant breeding and agronomy and crops were grown commercially across the world including Canada, France, Hungary, Netherlands, New Zealand, UK, USA and (former) Yugoslavia. Whilst following this interesting and stimulating discussion a few points have come to mind:

As a commercial company we monitored the impact of our research in terms of value-added through quantitative indicators such as yields per hectare (which over time translated into lower prices paid per tonne of seed in real terms), and seed oil content and quality (see, for example, Fieldsend [2007]). This can be considered as ongoing evaluation, carried out each year in each growing area. Data collection was considerably helped by the fact that seed was grown on contract with individual farmers via a commercial seed company in each country. I wouldn't say that we knowingly used any kind of qualitative indicators although in fact we kind of did: these crop species were not easy to grow and whether or not enough farmers were prepared to grow the crop at the contract price on offer was a reflection, at least in part, of the impact of our research.

Shahid Sheikh (message 59) said "our research organization do not have public relation wings to communicate the activities and findings of positive results of research with all stakeholders". I am not offering any criticism of this statement, rather I would use it to illustrate a point. Whilst we compiled detailed "guidelines for growers" publications that were disseminated via the commercial seed companies mentioned above, a key aspect of our work was that the researchers themselves visited each of the growing areas once a year with a view to meeting as many farmers as possible. This gave the researchers themselves the opportunity/responsibility to "communicate the activities and findings of positive results of research with all stakeholders" rather than to somehow delegate the task to someone else. At the same time it gave the researchers the opportunity to see at first hand the impacts of their research, and to get first hand feedback from the most important players (the farmers) on what worked, what did not and why not, and what new areas of research and development should be explored. Again there was no doubt a qualitative impact in that giving the farmers the chance to meet the researchers first hand (hopefully) increased their confidence in growing the crops.

Finally, one technique that we did not use, but no doubt could have done with relatively little organisational effort, was the facilitated group learning approach (see, for example, Murphy (2012) and Owen and Williams (2012)). Whilst, as the name implies, the technique might at first be considered as a way of communicating information TO farmers, in fact the evidence shows that it provides an inclusive environment not only in which farmers are more willing to volunteer information and opinions, but which also stimulates discussion and the dissemination of information.

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References;

- Fieldsend, A.F. (2007). "The impact of plant breeding on seed oil content and quality in evening primrose crops," in Proceedings of the Joint International Conference on Long-Term Experiments May 31st–June 1st Agricultural Research and Natural Resources; Debrecen-Nyírlugo, Hungary: 29–36. <http://web.t-online.hu/aff56/Andrew/p21.pdf>
- Murphy, J. (2012). The contribution of facilitated group learning to supporting innovation amongst farmers. *Studies in Agricultural Economics* 114 (2), 93-98. <http://dx.doi.org/10.7896/j.1106>
- Owen, W. and Williams, E. 2012. The utilisation of groups for innovation and knowledge transfer. *Studies in Agricultural Economics* 114 (2012) 99-105. <http://dx.doi.org/10.7896/j.1218>

-----Original Message-----

From: AIS
Sent: 27 May 2014 17:23
To: 'Impact-L@listserv.fao.org'
Subject: 81: Quantitative methods - Instrumental variable methods

I am Alice Bonou from Benin Republic (West Africa). I am an Agricultural Economist and am currently a PhD student in economics of climate change. Hello to everyone, and thanks for all of your contributions which I have read with interest.

First I would like to thank the organizers of this email conference. It is a great opportunity for us to share and learn from each other. I am only sorry that I joined the conference a bit late so I have just completed the reading of all posts.

My first contribution to this debate is to follow up Amadou Binta Ba (Messages 13), Matthieu Stigler (Message 15), Peter Midmore (Message 20), Atse M. Yapi (Message 23), Daniel Suryadarma (Message 64).

Self-selection could be based on observed characteristics, unobserved factors, or both. Propensity score matching (PSM) methods deal with the self-selection bias problem (Mendola, 2007) but assume that selection bias is based only on observed characteristics and unobserved characteristics do not have a significant effect on treatment. However, the PSM method fails to deal appropriately with the selection on unobservable problem which may be handled by the Double-difference methods (DD). However, like PSM, Double-difference methods do not deal appropriately with the problem of non-compliance.

Instrumental variable (IV) based methods are used in order to remove both overt and hidden biases and deal with the problem of endogenous treatment. I used this method by calculating the non-parametric Local Average Treatment Effect (LATE) in order to evaluate the impact of adoption of new high-yielding varieties (NERICA) of rice on its varietal diversity in Benin Republic (Bonou et al, 2013).

For my PhD research, I am trying to estimate the impact of 2012 flooding on the livelihood of farmers in the Niger Basin (micro-level Impact Evaluation). I have some concerns and would appreciate your help regarding them:

My first concern is which outcome of interest will be appropriate (yield, income, total expenditure, school expenditure, health expenditure, calorie intake, subjective wellbeing....)?
My second concern is the benchmark. Which farmer should I considered flooded? Is it the one who lost more than 50% of his farm by flooding?
My third concern is about the sample size. How many farmers (flooded and non-flooded) at least I need to run the Impact Evaluation model?
The last concern is that, till now I have not been able to find an appropriate instrumental variable which explains treatment status (flooded) but is redundant in explaining the outcomes (yield for instance) as I want to use Instrumental Variable (IV) methods.

ir. Alice BONOU-FANDOCHAN, Msc
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References:

Mendola, M. 2007. Agricultural technology adoption and poverty reduction: A propensity-score matching analysis for rural Bangladesh. *Food Policy* 32: 372-393. <http://impact.cgiar.org/agricultural-technology-adoption-and-poverty-reduction-propensity-score-matching-analysis-rural-bang>

Bonou, A., Diagne, A. and G. Biauou. 2013. Agricultural technology adoption and rice varietal diversity: A Local Average Treatment Effect (LATE) Approach for rural Benin. Contributed Paper presented at the 4th African Association of Agricultural Economists (AAAE) Conference, Hammamet, Tunisia, September 22-25, 2013. <http://ageconsearch.umn.edu/bitstream/158482/2/BONOUAAAEUpdate.pdf> (400 KB).

[According to Gertler et al (2011, see Message 70): "An instrumental variable is a variable that helps identify the causal impact of a program when participation in the program is partly determined by the potential beneficiaries. A variable must have two characteristics to qualify as a good instrumental variable: (1) it must be correlated with program participation, and (2) it may not be correlated with outcomes Y (apart from through program participation) or with unobserved variables". The instrumental variables technique is also described in some of the references provided in the conference background document, for example, in Leeuw and Vaessen (2009), under their Section 4.2 (Quantitative methods addressing the attribution problem)...Moderator].

-----Original Message-----

From: AIS

Sent: 27 May 2014 17:39

To: 'Impact-L@listserv.fao.org'

Subject: 82: Re: Macro-level epIA - Four basic issues

This is Peter Midmore (coordinator of IMPRESA) here again.

I'm responding to query 1 of Alessandra Coli and Barbara Pacini's Message 31. They seek empirical studies addressing the relationship between public and private R&D funding, particularly in terms of impacts deriving from any complementarity or substitutability between the two.

I have just come across an article by Fuglie and Toole (2014) in early view of the *American Journal of Agricultural Economics* entitled "The Evolving Institutional Structure of Public and Private Agricultural Research", which raises and explores a number of issues regarding the role of private biotech activities. Also, the reference list could be a useful starting point for analysis.

Hoping this is helpful!

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[Regarding methodologies and data requirement for macro-level epIA of agricultural research, Alessandra and Barbara in their Message 31 invited feedback on four issues, the first of which was: "1) Public versus private R&D funding: To the best of our knowledge, research expenditure (R&D funding) in agriculture plays the role

of treatment variable in this literature. Public R&D funding may have an impact on private R&D funding. In our opinion, the relationship between the two (complementarity or substitutability) should be taken into account when trying to correctly attribute the effects. We wonder whether any participants could suggest to us some empirical studies addressing this issue"...Moderator].

-----Original Message-----

From: AIS
Sent: 28 May 2014 09:21
To: 'Impact-L@listserv.fao.org'
Subject: 83: Quantitative data on social and environmental dimensions

This is Daniel Suryadarma, again, replying to Dr Mario Pareja (message 76).

While I take the point about data scarcity in developing countries, many social and environmental outcomes are still quantifiable. A quick look through World Development Indicators (<http://data.worldbank.org/indicator/all>) proves this. And in impact evaluations, we should use these quantitative data as much as possible – including collecting primary data when necessary. As I said previously, solely relying on qualitative data does not allow an estimation of impact.

[In Message 76, Mario wrote "In relation to the other, so-called controversial, statement in Message 70, i.e. "Without quantitative estimates, there is no impact evaluation": It sounds great on paper, but it is almost impossible to apply that rigorously in the field. With the exception of the economic dimension, in which you may have quantitative data, the social and environmental impact evaluations - at least in our developing nations in which data collection systems are not fully functional and complete - often require qualitative information gathered from the direct users of the technologies as well as from the field technicians. I will detail the ones we use in future messages"...Moderator].

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[One example of the use of the World Development Indicators, from the World Bank, in epIA is Thirtle, Lin and Piesse (2003) who used secondary data, mainly World Development Indicators, to investigate the impact of investments in agricultural research on poverty levels in 48 countries in Africa, Asia, Latin America and the Caribbean. Thirtle, C., Lin, L. and J. Piesse. 2003. The impact of research-led agricultural productivity growth on poverty reduction in Africa, Asia and Latin America. World Development 31: 1959–1975. <http://impact.cgiar.org/pdf/158.pdf> (300 KB)...Moderator].

-----Original Message-----

From: AIS
Sent: 28 May 2014 10:39
To: 'Impact-L@listserv.fao.org'
Subject: 84: Attribution vs contribution in impact evaluation

This is Hailemichael Taye, again. In my earlier email (Message 63), I discussed the challenges of impact evaluation (IE) in agricultural research and extension from defining IE itself to methodological/conceptual limitations in terms of attributing impact to research and extension (R&E) interventions. One of the challenges emanates from the complex and dynamic nature of agricultural research and extension interventions and processes. Now, it is widely understood that agricultural R&E is not a linear process where research develops the innovations, extension disseminates and farmers will adopt and use it. Rather, the innovation development to dissemination to adoption to impact continuum is characterized by complex and dynamic processes and multi-institutional and plural actors with interweaved roles and contributions. This makes attributing impact to research and extension difficult. It is important to note that even if attribution is nice for impact evaluation, as it helps us

to know whether or not the intervention has made a difference, it should not be taken for granted that it works for every intervention. As I mentioned in my earlier email, the characteristic of the intervention highly dictates the type of impact evaluation.

Because of their inherent characteristics, using attribution analysis in research and extension interventions would lead us false claims. That is why a number of impact evaluations (using attribution analysis) on agricultural extension programs have reported exaggerated rate of returns. Hence, we need to incline to analyze the contribution of research and extension interventions to outcome indicators. Contribution analysis is an approach for assessing causal questions and inferring causality in evaluations. It offers a step-by-step approach designed to arrive at conclusions about the contribution of an intervention to particular outcomes. The essential value of contribution analysis is that it offers an approach designed to reduce uncertainty about the contribution the intervention is making to the observed results through an increased understanding of why the observed results have occurred (or not!) and the roles played by the intervention and other internal and external factors.

There are various literatures on how to conduct contribution analysis including the steps, tools and instruments. Please see Mayne (2001, 2008).

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References:

- Mayne, J. (2001). Addressing attribution through contribution analysis: Using performance measures sensibly. Canadian Journal of Program Evaluation 16: 1-24.
<http://betterevaluation.org/sites/default/files/WKSHP%20Perrin%20-%20Mayne%202001%20%28article%29.pdf> (170 KB).
- Mayne, J. (2008). Contribution analysis: An approach to exploring cause and effect. ILAC Brief No. 16. Institutional Learning and Change (ILAC) Initiative. http://www.cgiar-ilac.org/files/ILAC_Brief16_Contribution_Analysis_0.pdf (130 KB).

[The contribution analysis approach was previously mentioned in the conference background document and in Message 61 (by Dominique Barjolle)...Moderator].

-----Original Message-----

From: AIS
Sent: 28 May 2014 11:12
To: 'Impact-L@listserv.fao.org'
Subject: 85: Evaluating the social impacts of INIA's technologies

This is, again, Mario R. Pareja, from Uruguay, continuing to share our experience on the impact evaluation of the National Institute for Agricultural Research in Uruguay (INIA-UY). This message attempts to summarize our experience in evaluating the social impacts of INIA's technologies in 20 years. To do it, I should state that I am quoting from the social impact chapter of our evaluation and so give the proper credit to the sociologist that worked in our team, Dr. Mariela Bianco, Full Professor of the University of Uruguay. Since I am writing on their behalf, I repeat the credits to the members of the teams that participated in the evaluation (provided at end of message).

First, in view of some of the emails recently read I would like to emphasize the definition of impact given by John Ruane in his conference background document, with which I coincide fully:
"A key component of RBM practices, among others, is the sequential 'results chain' or impact pathway, in which INPUTS lead to ACTIVITIES which produce OUTPUTS leading to OUTCOMES which then lead to

IMPACTS. Inputs include funds, technical assistance and human and other resources; activities include actions taken or work done; outputs include new products, services and capacities; and outcomes represent the likely or achieved short-term and medium-term effects of the outputs (UNDG, 2011). Impact, instead, refers to the long-term effects. Following the commonly-used OECD-DAC (2010) definition, impact refers to the "Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended". These effects can be economic, socio-cultural, institutional, environmental, technological or of other types".

So, following this definition, and the associated "results chain" that leads to it, an increase in crop yields is not, for us, an impact per se but rather an output or an outcome. The impact should be measured in what sustainable benefits that increased yield will bring to the farmer and his family.

Along this line, at the social impact level, we use the following definition: "The social impact of a technology is the influence that the scientific and technological outcomes have on the quality of life of a population, expressed in economic, social and/or cultural benefits" (Estébanez, 2003). The empirical evidence that allows us to measure changes in social variables and attribute them to the investment in research & development & innovation (R&D&I) is particularly complex. Social phenomena are usually multi or pluri-causal. This may explain why, at an international level we still lack standardized methodologies and indicators to measure the relationships between investments in agricultural R&D&I with social change.

In our study of the evaluation of INIA-UY, we prioritized three aspects that, due to the Terms of Reference and the purpose of the impact evaluation, we considered relevant.

(1) The connection - the brokerage - between INIA-UY's decision makers, as well as its staff, and the final users of its products, the producers. We focused on the evaluation of the mechanisms and processes of knowledge exchange, social needs and demand detection and their integration into INIA's programmes as well as the characterization of the main social actors, the stakeholders, and their incidence in promoting scientific and technological changes. These included studies of the integration and functionality of the board of directors as well as the regional advisory boards to each research station, as well as the technical thematic teams. The focus was on research agendas and transfer of the knowledge generated.

(2) A second issue was that of the perception of technology adopters in relation to social changes that the technology itself had promoted or brought about. Case studies and thematic public opinion polls were the instruments used and 13 pre-defined indicators were used to measure social change. They fell into the following categories: a) training and employment; b) health; c) income; and d) management and administration (capacity development).

(3) The third issue included in the social impact study was that of the perception of INIA's researchers about the social impacts of their research. In other words, we were attempting to evaluate if the researchers, as well as the institution as a whole, were conscious of the importance of ex-ante, as well as follow up (monitoring) of the social changes that the technologies they released were promoting, if any, in the target populations. The instruments used in this section were personal interviews as well as electronic consultations to all INIA's staff researchers, and a review of decisions made by the Board during the past 20 years.

Reference:

- Estébanez, M. E. 2003. Impacto social de la ciencia y la tecnología: estrategias para su análisis. In: RICYT: El estado de la ciencia. Principales indicadores de ciencia y tecnología iberoamericanos / interamericanos. Buenos Aires: RICYT (95-103). <http://www.unsch.edu.pe/portal/oficinas/investigaciones/CTS%20-%20Estrategias%20Análisis%20de%20Impacto%20Social.pdf> (200 KB).

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-----Original Message-----

From: AIS
Sent: 28 May 2014 11:47
To: 'Impact-L@listserv.fao.org'
Subject: 86: Re: Attribution vs contribution in impact evaluation

This is Daniel Suryadarma, yet again. I found the comments by Hailemichael Taye (Message 84) interesting, but I disagree with the main thrust of his email.

Hailemichael criticized attribution analysis for lacking internal validity [he wrote: “using attribution analysis in research and extension interventions would lead us false claims”]. He proposed that contribution analysis can be a solution [he wrote: “The essential value of contribution analysis is that it offers an approach designed to reduce uncertainty about the contribution the intervention is making to the observed results through an increased understanding of why the observed results have occurred (or not!) and the roles played by the intervention and other internal and external factors”].

I disagree with Hailemichael on two fronts. First, a lack of internal validity occurs when the researchers fail to use appropriate evaluation methods – be it attribution or contribution analysis - or apply the methods incorrectly. So, arguing that internal validity is inherent in attribution analysis and non-existent in contribution analysis is simply wrong.

Second, attribution analyses can, and have been used to, provide an in-depth understanding why observed outcomes have or have not occurred as a result of an intervention. Proper attribution analyses do not merely measure impacts and then provide no explanation as to why they have occurred, but extensively use theory of change and also examine the intermediary steps between an intervention and the final outcomes.

For those interested to read further on the debate, I recommend two interesting essays by Howard White (2009a, 2009b).

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References:

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-----Original Message-----

From: AIS

Sent: 28 May 2014 12:40
To: 'Impact-L@listserv.fao.org'
Subject: 87: Re: Difficulties in assessing and evaluating agricultural research

I am Francis Mukoyi from Zimbabwe. I am a plant breeder currently working on cotton with the Cotton Research Institute, Kadoma. Greetings to all participants who have shared their knowledge with us. The whole conference has been an eye opener in many respects of project evaluation.

My career is mainly in crop development, having worked with various crops including rice and Irish potato in the last years. Participatory crop improvement techniques have been the mainstay activity in our programs and I work with farmers from the selection of segregating breeding materials through to the selection of stable advanced materials. I have often realized that there are problems especially with the adoption of new varieties where all stakeholders especially farmers are not included in the process. This failure of adoption of technologies makes evaluation at the end of the chain difficult. The same applies when a project is run without it being adopted and masterminded by the beneficiaries. The evaluation of the impacts of any new technologies to the farmers can be influenced by the adoption rate. Messages 80 (by Andrew Fieldsend), 83 (by Daniel Suryadarma) and makes it clear that there is need to rely on both quantitative and qualitative data in impact assessments. In the case of assessing the impact of variety adoption to farmers it may be difficult to come up with realistic indicators as proposed by Litha Magingxa in message 79. Some of the changes and indicators take several years to be seen.

In cementing my input, I strongly agree with Dr AbdulJabbar Alkhazraji, Message 71, especially on the lack, or absence, of a coordinated system between research scientific centers (universities, research center...etc) and private sector. This makes impact assessment of products of agricultural research relatively difficult to assess. It is my hope that by the end of the conference, indicators can be identified for impact assessment of research products.

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-----Original Message-----

From: AIS
Sent: 28 May 2014 15:08
To: 'Impact-L@listserv.fao.org'
Subject: 88: Re: Can social network analysis be helpful to impact evaluation?

This is Matthieu, Sylvain and Dominique, again (Message 72).

We would like to thank Ed Garrett (Message 77) and Hippolyte Affognon (Message 78) for their responses to our previous message (72)!

We must say however that we are still not totally convinced about the potential of social network analysis (SNA) for ex-post impact evaluation. In one word, how can a method based on observing links between people say anything about changes and evolution of individual people?

We really liked Ed Garrett's proposal to do a social network analysis of social networks such as web forums, etc. This indeed circumvents SNA's issue of being static, as well as costly, and furthermore offers a simple way to conduct surveys or polls. But such a case, where a forum is initiated at the beginning of the process and accessed by everyone, is closer to an ideal case which unfortunately does not apply for the cases we intend to cover.

We agree also with Hippolyte that networks play an important role for knowledge diffusion which is a key element for adoption. So here SNA might be helpful to understand a few links in the pathway from R&D to adoption. But for the impact evaluation step looking at the effect of adopting the technology (or being linked to a

network transmitting information) on the actors, on their behaviour, etc, we are still unclear how SNA will provide useful information.

Finally, Hippolyte, we are not sure we understand the point that SNA can also be used to capture the "spillover effects of technology adoption on impact". Are you referring here to peer-effects leading some to adopt based on the adoption of peers, or are you referring to the fact that the impact on some might depend on whether peers adopt? And, in both cases, how would you see the contribution of SNA to answering the question of whether adoption leads to impact?

Thanks a lot!

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-----Original Message-----

From: AIS
Sent: 28 May 2014 16:03
To: 'Impact-L@listserv.fao.org'
Subject: 89: Re: Quantitative data on social and environmental dimensions

This is Mario Pareja again, responding to Message 83, from Dr. Daniel Suryadarma.

I should state my full agreement with Dr. Suryadarma about the need of quantitative data for the social evaluation of the impact of agricultural research & development & innovation (R&D&I). But I still think that some social impacts could be identified, qualitatively, by perception of the target population per se, the farmers and their families, as well as by technicians and decision makers.

My concern about the quantitative data, in terms of the social dimension, is that of attribution. Social status is affected by a large set of variables (government employment generation programmes, non-rural income, provision of public services by the state, etc.) totally unrelated to agricultural R&D&I. So, aggregated data at the national level is usually unreliable because they introduce confounding factors. These data are not enough to evaluate research impacts.

On the other hand, field measurements of social variables are difficult to conduct in the short time given to external evaluation exercises. (That is why I insist that research centers should have their own socio-economic units to establish baselines and monitoring programs).

In Message 85, I describe our approach to evaluate potential social impacts of INIA-UY technologies from a qualitative point of view. It is not perfect but it helped to have an idea, a view, of the social dimension.

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-----Original Message-----

From: AIS
Sent: 28 May 2014 16:16
To: 'Impact-L@listserv.fao.org'
Subject: 90: Re: Can social network analysis be helpful to impact evaluation?

This is Silvia Andrea Perez again.

I have used social network analysis and I think that it is very useful for post-impact evaluation and even for doing the baseline.

To give you some examples: it is useful to track the groups of actors participating in a process or project, to map their linkages (or missing linkages), how they exchange resources (for instance, information) and the direction of exchanges; the redundancy of linkages (power issues involved, types of leadership?), the flow (or not flow at all) of resources, etc. It can be useful to identify the diversity and types of interactions among stakeholders, the frequency of interactions, the density of the network, structural holes, etc.

And I see many other possibilities to map different indicators, and even to track them over time. I have used it in combination with network analysis, to track what I have defined as mobile hubs of innovation networks. This is a methodological contribution of my research. You can see the general description of this methodology in a poster I prepared entitled "Tracking the social organisation of innovation: Tracking Mobile Hubs of innovation networks tackling societal challenges" (link given in Message 57).

Social network analysis also has possibilities of doing quantitative analysis, so I would recommend it as a tool for impact evaluation.

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-----Original Message-----

From: AIS
Sent: 29 May 2014 09:18
To: 'Impact-L@listserv.fao.org'
Subject: 91: Measuring the impacts of 2012 flooding on livelihoods

This is Atse M. Yapi again, trying to respond to the first of the concerns of Alice Bonou in her message (nr. 81).

Alice wrote: "For my PhD research, I am trying to estimate the impact of 2012 flooding on the livelihood of farmers in the Niger Basin (micro-level Impact Evaluation). I have some concerns and would appreciate your help regarding them: My first concern is which outcome of interest will be appropriate (yield, income, total expenditure, school expenditure, health expenditure, calorie intake, subjective wellbeing....)?"

Alice, I must say that I am surprised that you want to estimate the impact on farmers' livelihood of an intervention undertaken two years ago (2012 flooding). I wish to recall the sequential impact pathway in Results Based Management (RBM) in which INPUTS are used in ACTIVITIES to produce OUTPUTS, which when properly used lead to OUTCOMES which when sustained produce long term effects called IMPACT. I have the feeling that what you are after is an estimation of the results/outcomes of an experiment (the 2012 flooding) you conducted two years ago, not really an assessment of the impact that intervention had on the livelihood of the beneficiaries/farmers. Your own questioning "which outcome of interest will be appropriate (yield, income, total expenditure, school expenditure, health expenditure, calorie intake, subjective wellbeing....)?" supports the point I am making.

Please note that "yield" in itself is not an indicator of livelihood improvement, although it is an important outcome that is needed to achieve livelihood improvement under some conditions. A farmer can have a good harvest through the use of a high yielding variety, but if much of that output is lost after harvest, or does not find a market outlet, it may not lead to any improvement in the livelihood of the farmer.

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-----Original Message-----

From: AIS
Sent: 29 May 2014 09:57
To: 'Impact-L@listserv.fao.org'
Subject: 92: Re: Attribution vs contribution in impact evaluation

I am Hailemichael Taye again. This is a response to the comment given by Daniel Suryadarma (Message 86) after my email on attribution vs contribution in impact evaluation (Message 84).

Let me clarify some issues first. I have never attempted to compare the two approaches in general terms and concluded one is always best over the other. What I was repeatedly saying is the impact evaluation (IE) approach (contribution vs attribution) to be selected should consider the characteristics of the intervention. Second, I only was questioning the appropriateness of "attribution" for complex and dynamic interventions and never criticized any of the approaches in terms of internal or external validity.

Coming back to the debate stuff, yes there are a lot of debates on various issues in IE such as qualitative vs quantitative methods (there are also proponents of mixed method approaches), attribution vs contribution, etc. Let's put the theoretical debate on "attribution vs contribution" aside as it will continue among scholars based on their professional inclination. Personally, I don't buy in such debate because I believe that each approach will have its own strengths and weaknesses and the best bet is to use each approach when it is appropriate. I have raised the issue of attribution and contribution not to drag in to this famous debate. It is only because of the inherent characteristics of agricultural research and extension (complexity and dynamism). Most agree that attribution is not always possible and contribution analysis would be appropriate when the intervention is complex and dynamic. As I have clearly put in Message 84, attribution analysis is nice but not always possible.

So, the debate should be whether contribution analysis could be used for impact evaluation of agricultural research and extension programs. I would be happy to read ideas on how attribution analysis could be used to measure impact of interventions in dynamic and complex settings using linear models. For example, an agricultural research intervention could develop an intervention (say improved variety and its complementary practices) but extension workers and farmers could modify or combine it with other innovations (fertilizer rate, spacing, planting date etc.) from other sources and could improve their yield. Sometimes, the combination of the innovation could change from year to year using various sources. How can increased yield be attributed merely to the improved variety from the research program? How can one disentangle the impact of research from extension since extension and farmers also could have a role not only in dissemination but also in the research process as they could modify part of the innovation? What I am saying is that one cannot attribute yield increase to research output merely because of continuous modification and combination of the innovation, other sources of innovation, the role of extension and farmers (and other actors) in the research process etc. But, definitely, one can logically analyze the contribution of the research, extension, and other actors who have contributed to increased yield.

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-----Original Message-----

From: AIS
Sent: 29 May 2014 10:50
To: 'Impact-L@listserv.fao.org'
Subject: 93: Importance of capacity for conducting impact assessment

I am Suresh Babu, currently a Senior Research Fellow at the international Food Policy Research Institute (IFPRI) in Washington. I am conducting research on institutional development including national agricultural research systems (NARS) and their management. Previously I was a research economist at Cornell University's Food and Nutrition Policy Program.

This has been a rich exchange of ideas and views on this forum. At IFPRI we have been looking at these issues for the past 30 years. Much of what was done as part of this effort is available on www.IFPRI.org. I am appreciative of the issues and challenges raised in the forum. I am in India currently working with and discussing similar impact assessment issues with scientists of the NARS. The capacity for conducting such analysis is grossly missing, and not fully recognized and appreciated.

The following link <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=2376660> is to a review of a book, edited by Anadajayasekeram et al (2007), that brought together several case studies of impact assessment of agricultural research. The book also has comprehensive review of impact assessment methods.

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Reference:

- Impact of Science on African Agriculture and Food Security. Edited by P. Anandajayasekeram, M. Rukuni, S. Babu, F. Liebenberg and C. L. Keswani. CAB International (2007), pp. 310.
<http://www.ifpri.org/publication/impact-science-african-agriculture-and-food-security>

-----Original Message-----

From: AIS
Sent: 29 May 2014 11:46
To: 'Impact-L@listserv.fao.org'
Subject: 94: More incentives for research: EpIA results and Research Information Systems

I am Birge Wolf, from the Faculty of Organic Agricultural Science of the University of Kassel, situated in Witzenhausen, Germany.

Thanks a lot for organizing this very interesting e-mail conference. I am very delighted about all these competent and reflective contributions – I will need some more time to read them all.

I would like to contribute to all the messages about issues that influence the impact of agricultural research, findings about lack in knowledge transfer and adequate participative approaches of research and focus on the networks of innovations that are needed to achieve impact.

An important influence on the impact of agricultural research is the inner-scientific reputation system, which is based on citation-based performance indicators. Though a narrow view on scientific impact does neither assess societal or broader impact nor serve as a proxy for it. Accordingly, researchers have to deal with trade-offs in contributing their time and resources towards activities that increase the likelihood of societal impact or to force to achieve scientific impact, while only the latter serves reputation. As long as this will remain the situation, funders will often gain less societal impact with their research than they need or expect.

Ex post impact assessment (epIA) is conducted, because Impact is desired, but can epIA produce “take home values” which researchers can use to show evidence that their approaches have impact in real life? Can epIA result in certificates, prizes or additional funding? Can epIA results be fed in any way into a current Research Information Systems (CRIS)? (CRIS are informational tools to provide, manage and disseminate research information. The main tasks are to enter data only once, and make them usable for different purposes, also for

evaluation. CRIS are increasingly used by institutions and interoperability between CRIS and with other systems like open-access-repositories. See also http://www.eurocris.org/Index.php?page=concepts_benefits&t=1). Or can CRIS be expanded to an extent that reduces the effort of data collection for ePIA and can be used by research institutions and funders to acknowledge researchers' contributions for practice on society? Would it in future be possible to look from a publication on the one side to the open data for verification and on the other side towards the contributions for and the impact on practice and society?

In a German Project within our institution together with the Center for Evaluation, Saarbruecken, we are working on evaluation beyond scientific impact in the meaning to balance incentive effects. There we focus on improved documentation to serve evaluation beyond scientific impact. The aim of our research project is to compile the data needed for evaluation beyond scientific impact, structure them in coherence to already developed standards of current Research Information Systems (e.g. CERIF) and develop a conjunction of these data to the documentation requirements in proposals and reports (until now we focus on the requirements of German federal research with some interlinks to EU). For those who might be interested in this, see Wolf et al (2013, 2014). [*CERIF refers to the Common European Research Information Format* (<http://cordis.europa.eu/cerif/>) ...Moderator].

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References:

- Wolf, B., Lindenthal, T., Szerencsits, M., Holbrook, J.B.; Heß, J. 2013. Evaluating research beyond scientific impact: How to include criteria for productive interactions and impact on practice and society. *GAIA - Ecological Perspectives for Science and Society*, 22: 104-114.
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-----Original Message-----

From: AIS
Sent: 29 May 2014 13:58
To: 'Impact-L@listserv.fao.org'
Subject: 95: Re: Attribution vs contribution in impact evaluation

This is Matthieu Stigler again (Message 15).

I would like to react to two issues: attribution vs. contribution (Message 84, by Hailemichael Taye), and the claim that impact evaluation requires to quantify an impact, and hence can only be done through quantitative methods (Message 70, by Daniel Suryadarma).

I am a little bit skeptical about Daniel Suryadarma's point (Message 86) about the fact that quantitative impact evaluation (IE) methods do investigate intermediary steps in a pathway, and I would welcome references to studies that do this. [*Daniel wrote "attribution analyses can, and have been used to, provide an in-depth understanding why observed outcomes have or have not occurred as a result of an intervention. Proper attribution analyses do not merely measure impacts and then provide no explanation as to why they have occurred, but extensively use theory of change and also examine the intermediary steps between an intervention and the final outcomes"...Moderator*].

A general point is that the whole quantitative IE methodology is based on the "effects of causes": for a given cause, estimate its counterfactual effect. This is the opposite of the "causes of effects" approach, that seeks the

causes of observed effects. In most cases, however, IE looks at the single causal effect of a single cause, without asking whether other variables have themselves a causal interpretation (relegating them to a vague status of "covariates", "controls", etc.). In fact, I am not even sure for example that the book Daniel recommended in Message 70 (Gertler et al, 2011) defines what a cause is (beyond the definition of a cause's counterfactual effect).

Indeed, I have seen very few quantitative studies estimating explicitly an impact pathway (note, I define here a pathway as a non-trivial chain with more than one arrow linking output to impact). The only case I am aware of is that of Thirtle et al (2003), who investigate a detailed chain from R&D to Productivity to GDP to Inequality to Poverty (to appreciate how complex his pathway indeed is, see a representation of it prepared for the forthcoming IMPRESA guidelines for case studies, this diagram is currently available at https://dl.dropboxusercontent.com/u/6113358/Permanent/IPA_Thirtle_2003.pdf). Ironically, Thirtle et al's (2003) study would nowadays probably be rejected by 99% of scholars doing "causal analysis" and, in fact, the tools that allow us to do quantitative analysis of a pathway (the structural/simultaneous equation models SEM) are considered nowadays an object of the past and are very rarely mentioned in "impact evaluation handbooks" (I could not find it in Gertler et al 2011). But again, this is just my ignorance in this domain, and I'll be most happy to see methods and cases analysing pathways in a "causal manner".

Finally, I note that Daniel in Message 70 associates impact evaluation with quantification of effect, and hence links it exclusively to quantitative methods. [*Daniel wrote: "Since the main purpose of an impact evaluation is to measure effect size, quantitative methods must be used. Without quantitative estimates, there is no impact evaluation"...Moderator*]. Interestingly, the possibility of quantitative methods to produce "single number estimates" has been questioned recently, with several scholars criticizing the "incredible certitude" and very strong assumptions needed to obtain such "single number estimates" (see Manski, 2011; Manski and Pepper, 2000). When trying to rely on more realistic assumptions, they discovered that all that quantitative methods can do is to inform on "estimates of intervals of numbers", not on "single number estimates", or on bounds such as maxima and minima (which is technically called point identification versus interval identification). In some cases, minimal assumptions allow us only to infer the sign of an (impact) estimate not its magnitude (see Machado et al, 2013).

The last point is very interesting, as it links to the previous discussion on attribution vs. contribution. I must say first that I am a little bit confused over what "contribution" means, for it seems to be at the same time a definition of a type of causality (a contributory cause) and a method to infer that type of causality. It is indeed not very clear to me how "contribution" differs from "partial attribution" (see White [2010] for a similar point), as well as whether contribution is about effects of causes (what the definition suggests) or causes of effects (what the method suggests). My (very) personal interpretation is that contribution can be seen as a "unquantified partial attribution" where one just seeks to determine whether the effect is positive or null (or negative depending on the context). In that sense, contribution analysis gives the same insights as "serious" (as opposed to "rigorous") quantitative methods discussed above, with eventually the supplementary advantage that it claims to also uncover the causes of the effects.

To conclude, the whole question of whether epIA should estimate impacts (i.e. whether should be on effects of causes, or also on causes of effects) depends in my opinion on the goal of the impact evaluation itself. If epIA is purely for accountability purpose, quantitative methods giving a precise estimate with less analysis of the mechanisms might be the most suited for donors or newspapers. On the other hand, if the epIA wants to serve policy questions such as replicating or scaling up, qualitative methods with less precise estimates but better insights into the mechanisms might be preferred, (let alone the fact that, as far as I know, almost no quantitative method is informative about the scaling-up relevant "treatment effect on untreated" - zero-blinded randomized controlled trials (RCT), instrumental variables (IV) and difference-in-difference (DiD) are not; regression discontinuity design (RDD) only very marginally by definition; matching would actually be the only method).

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<http://impact.cgiar.org/pdf/158.pdf> (300 KB).

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-----Original Message-----

From: AIS

Sent: 29 May 2014 14:06

To: 'Impact-L@listserv.fao.org'

Subject: 96: Re: Can social network analysis be helpful to impact evaluation?

This is Silvia Andrea Perez again, responding to a request from a conference subscriber for a brief easily understandable description of social network analysis (SNA). I try and do this here.

When you want to do SNA for ex post impact assessment (epIA), let's say of farmers who are adopting the positive selection technology on potatoes, what I did was to go and interview the group of farmers. I used a semi-structured questionnaire to ask farmers various things:

1. Who was training them on the positive selection technology (let's say person A)
2. The names of the people who were going to the training (A, B, C, D, names of the extension agent, the farmers and other people)
3. I ask each person to name one person with whom he/she had more interactions with (B,C,D,A)
4. What kind of interactions (for sharing knowledge, sharing agricultural inputs, etc).
5. What was the frequency of the interactions
6. What were the outcomes of those interactions (clean seeds, not so much difference, not any difference)
7. etc.

These are questions just to give you a simple example. If you want to track changes over time, you can collect data in at least two phases over the process.

Then what I do with the data is to put it in MS excel, with the specification of different indicators that you want to observe. Then the matrices generated in excel are exported to a software for conducting social network analysis (UCINET and Netdraw for visualisation of networks), so with this software I generate the networks.

When you visualise the networks (the "picture" of interactions) you can assess if A had interactions with B, C, D and if B, C, D interacted with A, or among themselves. You can see in the network what was the direction of interactions, if A had a top down approach with farmers over time, or if farmers were also interacting with A, and with other peers. The direction of interactions is useful as an indicator to show whether the learning process was participatory or with a top down approach. You can also observe if there were farmers who were not participating. So in the network they would be like isolated dots.

This is more or less how I am applying it in my research.

I would recommend this book:

Analysing social networks. Stephen P. Borgatti, Martin G. Everett and Jeffrey C Johnson. Sage, London. 2013.

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-----Original Message-----

From: AIS

Sent: 29 May 2014 18:41

To: 'Impact-L@listserv.fao.org'

Subject: 97: Cirad's work on IE // A few comments about the e-conf discussions

From Danielle Barret, Senior advisor to DG Research & Strategy of the “French Agricultural Research Centre for International Development” (Cirad) in charge of “Innovation-Impact Task-force” co- coordination.

I have been highly interested in the discussions launched by John Ruane’s synthetic document on impact evaluation of agricultural research. Some of us thought that the IMPRESA project was addressing the European zone. But surprisingly, most of the participants talked about impact evaluation in Southern contexts. A subject of high interest for CIRAD. *[The macro-level and micro-level impact assessments that will be carried out through the Impact of Research on EU Agriculture (IMPRESA, <http://www.impresa-project.eu/>) project will all be from the European region. The project is divided into six work packages (WP) and FAO is leading WP1, which is looking at contemporary issues regarding agricultural research and the concepts and methodologies for impact assessment of agricultural research. Although the general objectives of the IMPRESA project are looking at agricultural research in the EU, the issues regarding concepts and methodologies to be used are general and valid for all parts of the world...Moderator].*

A. What are we doing on Impact evaluation?

The ARD/AR4D (agricultural research and development/ agricultural research for development) challenge is development and since 2000, this has meant the UN Millennium Development Goals (in brief: food security; poverty alleviation; natural resources’ sustainability) soon to be turned in called Sustainable Development Goals. Working in Southern contexts and seeking for impacts means that every research should refer to these ultimate goals whenever working at global, regional, national or local, & farmer levels.

Cirad is clearly putting learning and beneficiaries & stakeholders’ demands as first objectives of impact evaluation (before accountability to donors) and is considering projects (or rather succession of projects) and programs as the subjects of evaluation (rather than the institution). Five Impact evaluation studies have been produced between 2000 and 2005 at a macro level, looking at the economic dimension of impact (Reference 1). Lack of robust data made it unsatisfactory. Four long-term projects were evaluated last 2012 (Reference 2) at both national and regional levels, looking at diverse dimensions of impacts (economic, social, organizational, sanitary). They highlighted two major points: the constitution of the productive capacity in a long run (social capital, human capital, socio-technical capital) and the intermediation role of research, to explain the contribution of Cirad to the respective outcomes and impacts of the projects. The method was mainly qualitative (Impact pathway descriptions, time-frame diagrams, storytelling).

This year, Cirad launched an “Innovation-Impact Task-force” which will enlarge the former exercise to 12 case studies (selected from around 60 projects).

Firstly, we will thoroughly examine some methodological issues with some international experts:

a) case studies boundaries and nested levels of observations;

- b) quanti-quali mixed methods
- c) partners' role within impact evaluation (IE)
- d) organizational/institutional impacts...

Secondly, we will discuss the two options of using a set of methods to adapt to the diversity of case studies or using a standardized method for all of them before implementing the case studies.

Once the case studies will be finished, the aim of the Task force is to disseminate the results among partners and stakeholders and to promote an impact culture among the Cirad researchers and their southern partners. The mechanisms and milestones highlighted within the impact pathways designs and other analyses might be used for ongoing projects and ex ante for next ones having similar features.

B. A few comments about some of the ongoing discussions in the e-mail conference

1. The subject of the evaluation: institution or project/program?

The choice is mainly linked to the objective of evaluation. Focusing on accountability to donors may explain the choice of an institution (see messages 48, 68 by M. Pareja); as learning and answering beneficiaries & stakeholders 'demands are our first concerns, we choose to evaluate the impact of set of projects or programs.

2. The quanti/quali and mixed method debate

Framed by J. Ruane (see Section 2.2.3 of the conference background document) this debate received interesting although controversial answers (such as messages 12, 15, 26, 41, 70, 76...) offering finally a kind of simple "recipe" (quantitative method for technical innovations and economic dimension of impact; qualitative methods for other dimensions of impact). It may sound reasonable in theory but in practice the question of data prevails. Adaptation to the evaluation topic and to the local conditions seems a basic rule.

3. Contribution vs attribution debate

(Still controversial after reading the last messages 84-86-92-95 with H. Taye, D. Suryadarma and M. Stigler's contributions). From our own practice dealing with complex and long-term case studies, attribution seems a fallacy. We have long adopted a systemic view of ARD (AIS: agricultural innovation system) which allows dynamic analyses of actors' role in the innovation processes (Reference 3). The contribution approach can fit with this conceptual framework (see References 4 and 5).

3- The partners' participation to the IE

This question received much attention (messages 5, 30, 32, 33, 51, 57, 61...especially the exchanges between A. Yapi, H-N. Nguyen, M. Stigler & D. Barjolle) of the e-conference. In my opinion, we could make a distinction between

- (i) long-term ex post impact evaluation in which local participants are either "experts" attached to the evaluation team or stakeholders & beneficiaries concerned by interviews and focus groups and
- (ii) ongoing participatory projects having designed a monitoring and evaluation (M&E) process for following up the changes arising, which are associating stakeholders and beneficiaries all along their process (see messages 57 - S.A. Perez; 58 - M. Pareja; 63 - H. Taye; 73 - F.Zaal; 79 - L. Magingxa...)

Basically, we found from our own practices and from the literature that ex-post IE exercises are necessarily long-term ones that have no or little utility on short term research design & policy. However, they bring a lot of lessons to learn and use. So to tackle this time-lag of ARD/AR4D efficiency for beneficiaries' sake, and having in mind time and cost constraints, the solution could be doing less ex-post IE but more participatory research projects equipped ex ante with concepts (such as AIS), and M&E&IA methods and tools that would ensure that outcome and impact matters and framework designs for data collection are shared with local actors from the beginning.

Finally, some of our methodological concerns have not (or little) been evoked, such as the organizational/institutional dimensions of impact or the best ways of tackling the nested dimensions of complex case studies. Other colleagues might come back on these topics.

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References:

(1) 5 studies by Claude Freud (Cotton in Cameroon; Bananas & plantains in Cameroon; Catfish in Vietnam; SCV in Brazil)

(2) (Coffee in Nicaragua; Mango export in West Africa; Advisory services in West Africa; "Peste des petits ruminants" in Morocco) - Alami, S., D. Barret, E. Bienable and L. Temple (2013). Synthèse d'études de cas sur l'évaluation d'impact de la recherche agronomique dans les pays du sud: cirad. <http://hal.cirad.fr/cirad-00904862/en>

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(5) Spaapen, J. & van Drooge, L. (2011): Introducing 'productive interactions' in social impact assessment. Research Evaluation, 20: 211-218.

-----Original Message-----

From: AIS
Sent: 29 May 2014 18:45
To: 'Impact-L@listserv.fao.org'
Subject: 98: Re: Measuring the impacts of 2012 flooding on livelihoods

This is Mario Pareja, again, replying to two messages, one from A. Bonou (No. 81) and the following one from Dr. Yapi (No. 91).

I am in full agreement with Dr. Yapi in all the points that he makes regarding the "results chain" and time lags. Moreover, to evaluate the impact of a flooding falls outside the "results chain of impacts from ag-R&D&I". Since I have quite a bit of experience in disaster management (I worked for CARE for several years), mainly on the issues of environment in disasters, I recommend that you, A. Bonou, visit the group M&E for Development Professionals in LinkedIn. There you will find interesting discussions going on about monitoring disaster impacts on livelihoods and the like.

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-----Original Message-----

From: AIS
Sent: 29 May 2014 18:59
To: 'Impact-L@listserv.fao.org'
Subject: 99: Institutional impact analysis

This is Mario Pareja, again. In this message I would like to describe the approach we followed, and some of the methods used, to evaluate something that has not been referred to, in this excellent exchange organized by FAO, nor clearly fully defined: the institutional impacts.

The reasons we undertook this perspective for impact analysis were basically two:

- (1) the assumption, later proved correct, that the potential economic, social and environmental impacts of 20 years of investment in agricultural research & development & innovation (R&D&I) could be explained by the type and level of development (legal and juridical framework, funding, organization, human and social capital, etc.) of the institution being evaluated, and
- (2) that R&D&I interventions, could have, per se, institutional impacts (new or improved farmers organizations, for example) that could add -catalyze- to the other dimensions of impact. I will comment on issues and a few results that I consider very relevant and illustrate some of the reasons for National Institute for Agricultural Research (INIA) success. In my experience, studies of multidimensional impact evaluations of agricultural R&D&I must also include the institutional impact analysis

1. GENERAL INSTITUTIONAL SCENARIO

- (A) The first issue studied was the history of the institution: how it came about, how was its development, who worked for it, resistance factors and incentives, etc.
- (B) The first issue evaluated was the juridical framework of the Institute. The innovation, back in 1989, was that INIA was created as a public institution but under the private juridical framework. This meant that INIA had the independence from government bureaucracy to recruit and fire personnel, to run its budget with state control but without all the bureaucratic limitations associated to the procedures of state institutions. The president of the board is a government designed individual, usually from the Ministry of Agriculture, but he/she shared decisions with 4 representatives of farmers' organizations.
- (C) Funding. Tax levy volunteered by farmers as a % of all agricultural transactions, internal and external (exports) which is more than sufficient for the Institute.
- (D) Clear mandate: agricultural R&D&I and knowledge management. No extension mandate but responsible for coordinating technological transfer with other organizations.

2. UPDATING: PLANNING

Issues looked at were:

- (A) Strategic planning: frequency, rigour, innovation, resource allocation, etc.
- (B) Implementation of those plans in the actual research.
- (C) Alignment with public policies so they would not collide.
- (D) Coordination with other agricultural sector institutions in priorities and complementarity.
- (E) Demand-driven versus offer-driven research and the role of farmers in their definition (in coordination with the social impact dimension studies).

3. HUMAN CAPITAL

- (A) Development of its professionals: training through short courses, seminars, workshops, etc. and postgraduate work (for example: evolution of the proportion of M.Sc. and Ph.D. degrees along the 20 year time period.
- (B) Professional evaluation policies and procedures: a dual advancement system that would provide incentives for both hard science researchers as well as good "communicators" that could interact well with other technicians as well as with farmers. Also selection and incentives for good programme and research station managers.
- (C) Retiring and retaining: a retirement policy that plans for scientist replacements before the "old" scientist is gone, complemented by partial retainers of those scientists that could continue to have contributions to INIA even after retirement.

4. SOCIAL CAPITAL

- (A) Nationally. Networks with other institutes, such as universities, farmers' organizations, Ministry of Agriculture, etc.
- (B) Internationally. Thematic networks as communities of practice to improve institutional learning and develop joint programs and projects with other INIAs as well as with international organizations (IICA, FAO, FONTAGRO, PROCISUR, FLAR, etc.). Agreements and memos of understanding with reputed universities worldwide.
- (C) Outreach: how INIA projects itself, nationally and internationally through scientific and technical events.

5. FINANCIAL MANAGEMENT

How the institution managed funds received: priorities, allocation, efficiency of use, etc.

6. FIELD LEVEL INSTITUTIONAL IMPACTS

Agricultural R&D&I institutions, through their diffusion of innovations, project themselves to other intermediate (extension) organizations as well as farmers. As a result of their interventions, often times they promote farmer's organizations (for example, to improve the genetic basis of certain species, or to improve commercialization). The sustainability of these new farmers organizations is often underestimated in impact studies although they are, by themselves, a real accomplishment that will contribute to the sustainability of the technology adopted. This was the case of INIA-UY at least in two cases: (a) a group of thin wool Marino growers that improved their genetic basis for production; and (b) a group of horticultural and fruit growers that switched from high levels of use of pesticides, some to a fully organic production and others to a "green production". The latter of the groups is still functional 10 years after completion of the INIA's project.

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-----Original Message-----

From: AIS

Sent: 30 May 2014 09:22

To: 'Impact-L@listserv.fao.org'

Subject: Last days of the FAO e-mail conference on impact assessment

Dear Colleagues,

There are just 3 days left, so I especially encourage those who haven't yet done so to share your views, experiences and knowledge regarding the approaches and methodologies that can be used for ex post impact assessment (epIA) of agricultural research, based on the specific questions in Section 4 of the Background Document or responding to issues raised in the very many high-quality and stimulating messages that have been posted so far.

Messages can be posted to the conference any day up until Sunday 1 June. These final messages will be posted on Monday 2 June and the conference will then be closed. As usual, send your messages to AIS@fao.org

All of the messages posted so far are available on the web, at <https://listserv.fao.org/cgi-bin/wa?A0=Impact-L> and, in chronological order, <https://listserv.fao.org/cgi-bin/wa?A1=ind1405&L=Impact-L&O=D&H=0&D=0&T=1>. The message archives are searchable, with a 'free text' search button on the right hand side of the webpage.

With all best wishes,

Best regards

John

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-----Original Message-----

From: AIS

Sent: 30 May 2014 09:59

To: 'Impact-L@listserv.fao.org'

Subject: 100: Re: Attribution vs contribution in impact evaluation

This is Daniel Suryadarma, replying to Matthieu Stigler (Message 95) in order to provide an example that was requested. Although the example is not in the field of agricultural research, I hope it suffices as it is in the education sector - which I would argue is at least as complex as the agricultural research for development (AR4D) field.

I was involved in a project that implemented four interventions to strengthen school committees in Indonesia, with the ultimate aim of improving learning outcomes. The project extensively used a theory of change (ToC) developed at the start of the project. I have put the ToC up on my website: <http://www.danielsuryadarma.com/pdf/ToC.png>. The resulting research paper by Pradhan et al. (2011), in which we estimate the merits of each box in the intermediary outcomes, can be downloaded (also published in Pradhan et al., 2014). We also implemented a qualitative study (Bjork, 2009 - which unfortunately is not publicly available) to illuminate the quantitative findings. I'm not taking any credit (all due to my brilliant colleagues), but this project is an example of how a rigorous quantitative impact evaluation is then enriched by a similarly rigorous qualitative evaluation.

And I think, this is how proper impact evaluations should be implemented. The issue is not about qualitative vs quantitative methods. The best impact assessment studies that I know of combine many methods, building the body of evidence, explaining the intermediate outcomes, consider external validity, and internalizing (as much as possible) the complexities and contexts – including taking into account other causal factors. I take the point (and the skepticism) that this is not (yet) the norm in the world of impact evaluation, but the world is moving in this direction – and we all need to play a part.

I have another point, to respond to Matthieu's last paragraph. In my opinion, the goal of impact evaluation is not accountability. It is R&D. Impact evaluations allow us to learn which interventions work the best, have the highest efficiency, etc. This is why Impact evaluations require quantitative estimates. We need to be able to compare the merits of one intervention with other potential interventions with the same goal. The choice is not between one intervention and no intervention, but between one intervention and a plethora of other interventions.

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Indonesia. American Economic Journal: Applied Economics, 6(2): 105-26. April 2014 issue.
<http://www.aeaweb.org/articles.php?doi=10.1257/app.6.2.105>

-----Original Message-----

From: AIS
Sent: 30 May 2014 11:20
To: 'Impact-L@listserv.fao.org'
Subject: 101: Re: Attribution vs contribution in impact evaluation

This is Ekanath Khatiwada again (previous messages 2 and 60).

I liked the discussion about the attribution vs contribution.

It is evident that most of the projects/programmes prefer to generate information about what is changing during the life of the particular project/programme. Some time is not reflected much about the extent to which those changes were caused by the programmes or the projects. In some cases they would have happened anyway without the project/programme interventions? This is the question of attribution; to what extent were observed improvements actually caused by the particular project?

Without going on much about the "attribution and contribution" in detail here, I would like to share a definition from the DCED results measurements framework (DCED, 2013), which outlines the definition below; I hope we can take some tips from this guideline as well.

" 'Attribution' describes a direct causal link between activities and the outcomes, based on an estimation of the counterfactual situation. By contrast, 'contribution analysis' describes the intervention as one of many contributory causes to the outcome, based on a results chain or theory of change".

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Reference:

- DCED. 2013. Guidelines to the DCED Standard for Results Measurement: Estimating attributable changes. 8 pages. www.enterprise-development.org/download.ashx?id=2012

[The Donor Committee for Enterprise Development (DCED) has 24 members – bi- and multilateral donors and agencies as well as private foundations – who share the vision of making private sector development (PSD) more effective. The DCED Standard for Results Measurement specifies eight elements of a successful results measurement system, and the guidelines referenced above by Ekanath cover the fourth element (i.e. estimating attributable changes). The eight elements of the Standard are 1) Articulating the results chain; 2) Defining indicators of change; 3) Measuring changes in indicators; 4) Estimating attributable changes; 5) Capturing wider change in the system or market; 6) Tracking programme costs; 7) Reporting results; 8) Managing the system for results measurement. See <http://www.enterprise-development.org/page/implementing-standard> for more information...Moderator].

-----Original Message-----

From: AIS
Sent: 30 May 2014 12:37
To: 'Impact-L@listserv.fao.org'
Subject: 102: The benefits of impact assessment - Burundi

I am Leonard Ntakirutimana, Msc, Territory Intelligence specialist, Burundi. I work in the unit of "Institutional Audit and monitoring and evaluation of institutions performances" (ASEP), Bureau d'Etudes Stratégiques et de

Développement (BESD). We do evaluation of Annual Action Plans (AAP) of the Government of Burundi each semestrial level.

The Impact of impact assessment is very interesting. Assessments are made in different localities (territory, community). Each community has its own behaviour, history, culture, and so on. The result of assessment are different because of the characteristics of the community. In Burundi, the impact of impact assessment is transparency, good governance, comprehension of community knowledge, community needs for improvement, etc. The impact of assessment can also be the change of the project in good way. If there isn't something in the evaluation which impulses the community to do well in the aimed objectives - aimed governance, correction - it can't be a good evaluation.

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-----Original Message-----

From: AIS
Sent: 31 May 2014 17:16
To: 'Impact-L@listserv.fao.org'
Subject: 103: EpIA methods for forestry

This is E.M. Muralidharan from India. I work with the Kerala Forest Research Institute, Peechi and am involved in research in forest biotechnology.

Although a bit late in the conference, I thought it would be pertinent to ask a question here in the hope that someone could provide information.

Not surprisingly, I found little reference to ex post impact assessment (epIA) in forestry in the messages so far. I would have expected that the methods would be different and more challenging when compared to the other sectors, given the longer time frame involved in a typical forestry intervention and several non-tangible and non-economic implications that might be felt far beyond the immediate location. In many cases, particularly in the developing world, there would also be issues relating to indigenous people, biodiversity, carbon etc. where epIA studies could play an important role in framing policies.

Considering that activities like the UN REDD+ programme are receiving much attention in recent years, epIA methodologies fine tuned (if needed) for forestry will be sought after.

Can someone enlighten me if there are indeed many such studies as contrasted with ex ante impact assessment?

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[REDD+ is the approach adopted by the United Nations Framework Convention on Climate Change (UNFCCC) to reduce greenhouse gas emissions from forests. REDD+ stands for reducing emissions from deforestation and forest degradation in developing countries, plus conservation, sustainable management of forests and enhancement of forest carbon stocks. See <http://www.un-redd.org> for more information...Moderator].

-----Original Message-----

From: AIS
Sent: 31 May 2014 17:30
To: 'Impact-L@listserv.fao.org'
Subject: 104: Re: Can social network analysis be helpful to impact evaluation?

This is Petya Slavova, a sociologist from the Department of Sociology, Sofia University, Bulgaria and a member of the IMPRESA project team.

I would like to comment on Message 72 by Matthieu Stigler, Dominique Barjolle and Sylvain Quiédeville.

In my view the usefulness of social network analysis (SNA) in ex post impact assessment (epIA) of case studies is problematic for several reasons:

- As mentioned in Message 72, SNA cannot tell us anything about the use of information which was transmitted among the actors in the network and this is exactly that we want to know, i.e. how and why some information can be transformed into a useful tool for creation and diffusion of innovations while other information stays just as “an information”.

- I am not convinced that we need to use quantitative method such as SNA to explain qualitative types of phenomenon like case studies on creation and the diffusion of innovations. The creation and diffusion of innovation is something which comprises different type of actors but their number is usually limited. So we need to know much more about their characteristics and contribution to creation and diffusion of innovation and less about their number, and about the number of links between them. The creation and diffusion of innovation can be quantified but we should know why we need this. What is the purpose to do that? To understand the leadership relationships in a small community, or powerful relationships, or to know the centrality of one actor in the small networks (20-30 actors) we do not need sophisticated quantitative techniques such as SNA.

- The creation and diffusion of innovation is a process, and SNA is not a suitable tool to study the development of the phenomenon as a process (it can be done but it is time and cost consuming).

- We will make epIA and we should ask the actors about their concrete and simple activities in the past. SNA works with this type of data – simple and singular actions which need to be codified in numbers. For example, if we want to study the distribution of information among the actors i.e. to measure the centrality or the powerfulness of the actors we need to ask our respondents “to whom did you sent information” and “from whom did you receive information”. The problem is that such questions may not work well because they need something to be remembered comprehensively and in varying details and the collection of non-reliable data poses serious methodological problems. Moreover, the creation and diffusion of innovation is highly competitive and sometimes people are not willing to share information about who exactly did something, because of professional competition.

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-----Original Message-----

From: AIS
Sent: 31 May 2014 17:50
To: 'Impact-L@listserv.fao.org'
Subject: 105: Re: A holistic framework for assessing impact of AR4D projects

My name is Uche N. Chikezie from the Federal University of Technology (FUTO), Nigeria.

I agree with the views of many participants in this FAO email conference.

Huu-Nhuan Nguyen in message 5 said that impact assessment of agricultural research projects in the Northwest Highlands of Vietnam have been conducted in the national or majority languages rather than the minority ethnic communities. This is similar to the impact assessment situation in Nigeria.

Most government organizations and research institutes focus their Impact assessment more at the regional/national level while paying less attention to Impact assessment at the grassroots/minority communities. This results in a poor assessment of the outcomes and impacts of these agricultural research and technologies. Micro-level assessment of the farm-level impact of biotechnology research applications is strongly recommended in Nigeria for a more efficient impact assessment of agricultural research project.

Agricultural household modeling in an African farming system recognizes that small-scale farmers produce mainly for the household food consumption and only partly for sale, and manage farm resources accordingly. Hence, there is a need for an analysis of the farmers' perceptions on the consumption and production attributes of the new varieties, adoption of the outcome of the new research technologies, and for an evaluation of household response to changes in commodity and input prices, as well as access to off-farm employment opportunities. Supporting the views of Dr. Atse M. Yapi (Message 51) - the ultimate objective of research effort is "not to produce the technology per se but to impact on the livelihood of the farming communities targeted by the research".

The results from farm household modeling can be used as input data for assessing the national and regional ex-post impact of biotechnology innovations.

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-----Original Message-----

From: AIS
Sent: 02 June 2014 15:36
To: 'Impact-L@listserv.fao.org'
Subject: 106: Different points from the e-conference

I am Shams Fawki again (my previous message was nr. 39).

At the end of this great email conference I would like to thank John Ruane and FAO for the coordination. I would like also to thank all the professors, consultants and participants in these very interesting discussions and knowledge exchange.

As we are dealing with the agricultural ecosystem and nature that are out of our control in some ways, thus we always will have a surprising (unpredictable) part in our work. So it is very important to look at the ex post impact assessment (epIA) process as a flexible and long chain process that is unique for each case. Some of these chain components are essential and some others are complementary. These parts or elements varied between the new agriculture technologies or interventions, the researchers, institutions, universities, policy makers, donors, stakeholders, farmers, or even a statistical analysis used and many others.

During the conference, much debate has been discussing many controversial issues such as the qualitative vs quantitative methods or a combination of them, and whether the social network analysis is useful or not. As I mentioned, some approaches will be essential in the IA process and some will add some values depending on the intervention used, the area (country, locality or community), the target group (national level, private sector, small scale-farmers and their situation) and what is available for the research group. Thus I think it would be a good idea to create a case studies bank rather than the methodologies themselves and focusing on the key factor/factors for each case and point out the weak points. Thus we can create a whole and clear picture about what approaches could be applicable for a specific case study and what are not. This email conference could be

considered as a step to create this bank. At this stage I think the meta-analysis would be very useful as mentioned by Markus Olapade (message 52) to capture the power for each element in the whole process.

I would like also to thank Mario Pareja (message 48, 66, 68, 85, 89 and 99), Julien de Meyer (message 67) and Andrew Fieldsend (message 80) for sharing their programme and experience.

Concerning communicating the epIA results, I would like to thank Anna Augustyn (message 47), Sheilah S. Vergara (message 53), Huu-Nhuan Nguyen (message 54), Shahid Sheikh (message 59) and Daniel Suryadarma (message 83) for their very interesting discussion about incorporation of the stakeholder and farmers as part of the evaluation process especially in the developing nations.

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-----Original Message-----

From: AIS
Sent: 02 June 2014 15:37
To: 'Impact-L@listserv.fao.org'
Subject: 107: Questions about the participations

My name is Marisa Gonnella. I'm a professor of Rural Sociology and Rural Extension of the Universidad Nacional de Rosario, Argentina.

I send questions by participants. Questions:

1- For the participants, is it more important to analyze the impact or the process of intervention through which it is expected to have an impact? For example, for the Conference participants, is it more important to meet the goals of the Conference or to analyse the impact the conference may have on them from the interaction gained from the knowledge of different realities. The answer to this question would be that when objectives and forms of participation are connected, we would be able to analyse both the impact of the Conference and the achievement of the conference goals. But there are also participations: there are interactions among participants that exceed objectives and arise from participation.

2- How is the knowledge conveyed by the producers analyzed when they participate, and can participation modify the previously set goals? In your experience, how are these cases analyzed?

3- What has your experience been as regards a modification of the objectives? Has the impact changed?

4- For the future, do you consider it suitable to continue speaking of impact analysis?

Perhaps in this last point, it is necessary to delve into research that focuses not only on the analysis of adoption of technologies. This is a usual element that emerges in the methodological concerns and does not relate only to the increase in productivity. In the document it is clear that the impacts are related to the objectives set. What happens when there is participation and these objectives could still be changed?

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-----Original Message-----

From: AIS
Sent: 02 June 2014 15:37
To: 'Impact-L@listserv.fao.org'
Subject: 108: Operational considerations - refrained

This is Dick Tinsley, Colorado State University, again.

While I have refrained from submitting comments for the last couple of weeks, I have read all 105 postings, much of it dealing with social issues and economics, which I am not all that well versed in. However, agriculture research is still a biological activity and needs to be substantially evaluated in biological terms. Thus, I would like to go back to my original posting (nr. 10) concerning the operational limits farmers have in accepting research results, particularly smallholders in developing countries with limited labor, even more limited energy to fuel that labor and limited access to contract tillage to minimize the labor. Thus allow me to ask the group as the discussion wrap-up, to consider how the operational limitations are impacting on agriculture research evaluations and is this an administrative void in the agriculture research - dissemination - acceptance process. John was reluctant include my original posting fearing it would divert the discussion. However, I think there were only 4 postings that mentioned it, and 2 were mine. I think that indicates the operational consideration for accepting agriculture research are just not on the radar screen. How can they be brought to the forefront and addressed, and once that is done will it increase the impact of agriculture research.

Thank you.

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-----Original Message-----

From: AIS
Sent: 02 June 2014 15:38
To: 'Impact-L@listserv.fao.org'
Subject: 109: Ex-post impact assessment and smallholder resource-poor farmers

I am Datta Rangnekar from Ahmedabad, India, involved since long in agriculture (crop and livestock) based rural livelihood development work in western and central India.

Firstly, let me thank the FAO for organizing these e-conferences as these provide good opportunities for learning and exchange of views and experiences. I was hesitant to convey my viewpoints on post-facto evaluation of agricultural research since I am more of a development worker than a specialist.

An article in the Times of India, Ahmedabad edition, of 30th May 2014 encouraged me to put across my viewpoints on the subject, however, my views would be biased towards utility of products of research for smallholder resource-poor farmers. The article discussed development of life saving drugs by two pharmaceutical multi-national corporations (MNCs) and their affordability for low income groups from developing countries like India. It starts with quoting statements of senior officers of two MNCs. The chief executive officer of one company states - 'we developed drug for patients who can afford it' while the President of the other states 'we try and never forget that medicine is for the people ... the profits will follow'. The research groups of these MNCs are clear about the objectives of research for drug development, however, the difference is that the 2nd MNC considers that the drug should be affordable to low income groups who account for the bulk of the population and that is where the demand is.

I have been a user (for about 5 decades) of products of research (technologies, recommendations and trained technical persons) in development programmes aimed at facilitating improvement in the livelihoods of smallholder producers. The most prevailing production system of the majority of these producers can be described as 'Low external input, crop-livestock mixed farming -dependent on rains' and most products of research are not appropriate for this system. I had a strong perception about good product of research that it

should 'not only be technically sound but also economically beneficial and socially adoptable by small farmer' (adoption of a long term nature and without subsidy or grants). However, after referring to reviews on agriculture research and participation in workshops and seminars on research-development linkages, I realized that there is hardly any project planned with a 'pro-poor' approach and it would not be fair to judge research programmes where objective is different. I found that most research proposals state 'benefit to the farmer' as the objective but hardly any proposal defines the kind of farmer they are aiming to benefit. I have also been wondering why the research groups are not concerned and accountable about 'Utility of products of research for smallholders' who account for the bulk of the farmer population in a country like India. And I wonder whether assessment/evaluation of agricultural research can consider the extent to which smallholder resource-poor farmers have benefitted from research outputs/products. Things have not changed much since a report was published by Roling way back in 1990 based on review of agriculture research in developing countries

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Reference:

- Roling, N. (1990). The agricultural research-technology transfer interface: A knowledge system perspective. Chapter 1 in Kaimowitz, D. (editor). Making the Link. Agricultural Research and Technology Transfer in Developing Countries. ISNAR, The Hague, The Netherlands.
http://pdf.usaid.gov/pdf_docs/pnabe269.pdf#page=15 (6.5 MB).

-----Original Message-----

From: AIS
Sent: 02 June 2014 15:39
To: 'Impact-L@listserv.fao.org'
Subject: End of FAO e-conference on ex post impact assessment

Dear Colleagues,

The last messages have just been posted (numbers 106 to 109), so this FAO conference on "Approaches and methodologies in ex post impact assessment of agricultural research: Experiences, lessons learned and perspectives" is now officially closed.

I would like to sincerely thank all of you who participated actively in this conference. My impression is that there is a very large demand for clear and easily-accessible knowledge about how to best assess the impacts that agricultural research is having on people's lives, their communities and their countries, and that a large number of people joined this conference in order to learn and to get an updated overview about this complex and fast evolving area. So, a big thanks to those of you who made this possible by dedicating your time and effort to sharing your knowledge, ideas, experiences and viewpoints with the rest of us.

The Background Document to the conference is available on the web at <http://www.fao.org/docrep/019/as549e/as549e.pdf> (120 KB). All of the messages posted so far are available on the web, at <https://listserv.fao.org/cgi-bin/wa?A0=Impact-L> and, in chronological order, <https://listserv.fao.org/cgi-bin/wa?A1=ind1405&L=Impact-L&O=D&H=0&D=0&T=1>. The message archives are searchable, with a 'free text' search button on the right hand side of the webpage.

A summary document from the conference will soon be prepared and sent to all of you.

In the meantime, I can provide a brief summary about participation.

The conference ran from four weeks. The number of people who subscribed themselves was under 500 on 5 March when the conference began and it rose to 618 people on 1 June when the conference finished. Of these, 59 people (i.e. 10%) submitted at least one message. People were asked to introduce themselves in their first message and they typically provided their full work address and a description of their professional background and current occupation. Based on the address, an analysis was carried out of participation by country,

geographical area and work place. Note, the analysis is based on where people were living when they posted the message and does not indicate where they come from originally.

Of the 109 messages, 30% came from people living in Africa; 29% from Europe; 15% from Asia; 13% from Latin America and the Caribbean; 7% from North America and 6% from Oceania. A total of 63 messages (i.e. 58%) were posted by people living in developing countries.

The messages came from people living in 38 different countries. The greatest number came from people living in Uruguay, Switzerland, the United States of America, Australia, Ghana, India, Hungary, Indonesia, Italy, the Netherlands, Kenya and Nigeria (all with four messages or more).

Participants in the conference also came from a wide range of work environments. Of the 109 messages, 25% were from people working in universities; 23% from national research centres; 22% from independent consultants; 14% from people working in the international agricultural research system (mostly CGIAR centres); 7% from people working in inter-governmental organizations (mostly FAO); 5% from non-governmental organizations and 5% from people working in Government ministries or Government bodies.

We hope that you found this conference informative, interesting and that, like me, you learned a lot from the very many excellent messages prepared by the participants.

To conclude, I would like once again to thank all of the 59 people who sent in their messages to the conference.

With best wishes

John

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