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**Policy Brief: Impact assessment policies and practices of EIARD members.<sup>1</sup>**

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**1. Introduction**

The overall aim of this study is to 'review and compare the policies and practices of different EIARD members in impact assessment to increase relevance, uptake and coordination of efforts by and for EIARD members, stakeholders and policy-makers'. This policy brief is based on a study which explored current methodological advances and debates in impact assessment and analysed the current impact assessment practices of EIARD members. The purpose of this brief is to suggest practical recommendations for improvement and greater coordination among EIARD members in this area.

Responses to an information request on country impact assessment policies and practices were received from 16 countries, plus the EC, along with relevant documents. Internet searches were made to identify further case study materials. However, there was limited information on impact

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<sup>1</sup> This policy brief on "Impact assessment policies and practices of EIARD members" has been developed by Agrinatura in the framework of the action "Fostering European Aid Effectiveness for Agricultural Research for Development". Main authors are Gilles Saint-Martin ([gilles.saint-martin@cirad.fr](mailto:gilles.saint-martin@cirad.fr)), Adrienne Martin ([A.M.Martin@greenwich.ac.uk](mailto:A.M.Martin@greenwich.ac.uk)) and Valerie Nelson ([valairn@ntlworld.com](mailto:valairn@ntlworld.com)). This action is funded by the Food Security Thematic Programme of the European Union, through a delegation agreement with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and implemented by the European Initiative on Agricultural Research for Development (EIARD).

This policy brief is intended to share knowledge and promote more efficient ARD policies. It does not necessarily reflect the official position of EIARD or of individual EIARD members.

assessment methodologies or the way in which findings had been used. Databases did not always provide links to relevant documents nor did 'evaluation' appear as a category in the thematic search options. A list of 224 projects was screened to select those which explicitly considered outcomes and impacts. 44 project or programmatic reviews were considered in detail, along with 6 synthetic reviews.

#### Main messages

- There have been **important recent achievements in the field of ARD impact studies** and methodological recommendations, from the CGIAR and other scientific and academic bodies and networks in Europe, America and Australia. The complexity of assessing and attributing impact has led to the development of a large number of approaches, using econometrics, sociology of innovation, participatory approaches, etc., which require specialist expertise.
- Among EIARD members, relatively **few studies have been found that assess the impact of ARD**. In Europe the development agencies have some record in the field of impact assessment relating to the Millennium Development Goals, but there is less direct investment in impact assessment of ARD. Members' policies on impact assessment vary according to the relative importance of their bilateral or multilateral ARD programmes.
- The **guidance on good practice for ARD impact assessment** developed in 2000 by an EIARD taskforce continues to be relevant to reflections on impact assessment theory and methodology among the European scientific community. It highlights the continuing challenge of attributing changes observed to the results of scientific activity. It emphasises the need to examine the plausible linkages between research outputs and complex changes in agricultural innovation systems.
- Further **guidance on impact evaluation planning** would help European donors commissioning ARD impact evaluations to understand the different kinds of evaluation and impact assessment and to select appropriate evaluation approaches and tools which meet their specific objectives and expectations. The definition of the purposes of the impact assessment is crucial; the specified purpose and objectives should relate to the expected utilisation of the results and this will contribute to the choice of the most appropriate methodology.
- Assessing the impact of an ARD activity requires careful description of the **impact pathway**, from the inputs to the changes that are observed after this activity is achieved. The use of impact pathways showing these relationships should be further encouraged as a tool within evaluation. These should disaggregate impacts for different stakeholder groups and identify gender and poverty related impacts.
- **Multiple methods** in impact evaluation for ARD should be encouraged; there is scope to increase the rigour of evaluations while innovating in the use of complementary participatory, qualitative methods. A combination of methods in impact evaluations can help explain *why* innovation and its impacts are distributed in certain ways, as well as measuring the benefits.
- More collective commitment is needed (from donors and national governments) to better **coordination and joint funding of impact evaluations**.
- **Shared learning from** impact evaluations could be enhanced through wider dissemination of evaluation findings among EIARD members and their wider stakeholders, through improved data bases, web sites, evaluation forums etc.

## 2. Definitions

### 2.1 Terminology

The EIARD strategy 2009-13 defines Agricultural Research for Development (ARD) as '*multi-dimensional in addressing the agricultural development challenges of developing and emerging economy countries*'. The broad based character of ARD has important implications for impact evaluation since it suggests the need to examine the contribution of research within the wider 'innovation system'.

The terminology used in monitoring, evaluation and impact assessment is becoming increasingly complex as more importance is attached to these functions and their practice becomes specialised. There are different understandings of impact evaluation among research practitioners, evaluation specialists and also among EIARD members. European donor practice has generally tended to follow the definitions of monitoring, evaluation and impact presented by OECD-Development Assistance Committee (OECD-DAC)<sup>2</sup>.

- **Monitoring** - A continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing (development) intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds.
- **Evaluation** - the systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results.
- **Attribution** - the ascription of a causal link between observed (or expected to be observed) changes and a specific intervention.
- **Counterfactual** - the situation or condition which hypothetically may prevail for individuals, organizations, or groups were there no development intervention.
- **Effectiveness** - the extent to which the objectives of the development intervention were achieved, or are expected to be achieved, taking into account their relative importance.
- **Efficiency** - examines how resources - inputs, funds, expertise, time - have been converted to results and whether the results were achieved at a reasonable cost.
- **Impact** - the positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended

The main source of confusion in interpretation of these terms relates to differences in what is actually meant by impact evaluation. The term 'impact assessment' is also used in different ways among different agencies. The more recent usages of 'impact evaluation' are specifically concerned with **attribution** of change to a programme or intervention, focusing on the question of what would have been the situation if the intervention had not been undertaken (the *counterfactual*). This requires rigorous study designs in order to measure the net change in outcomes for particular groups of people that can be attributed to a specific program.

Impact evaluation can be considered as a specific approach within the larger 'toolkit' of monitoring and evaluation. In contrast, within the toolkit there are more actor-oriented and participatory approaches and techniques which can be used to map the logic of impact and to assess it. The challenge is to select the best methods and combinations of methods for the purpose and resources available.

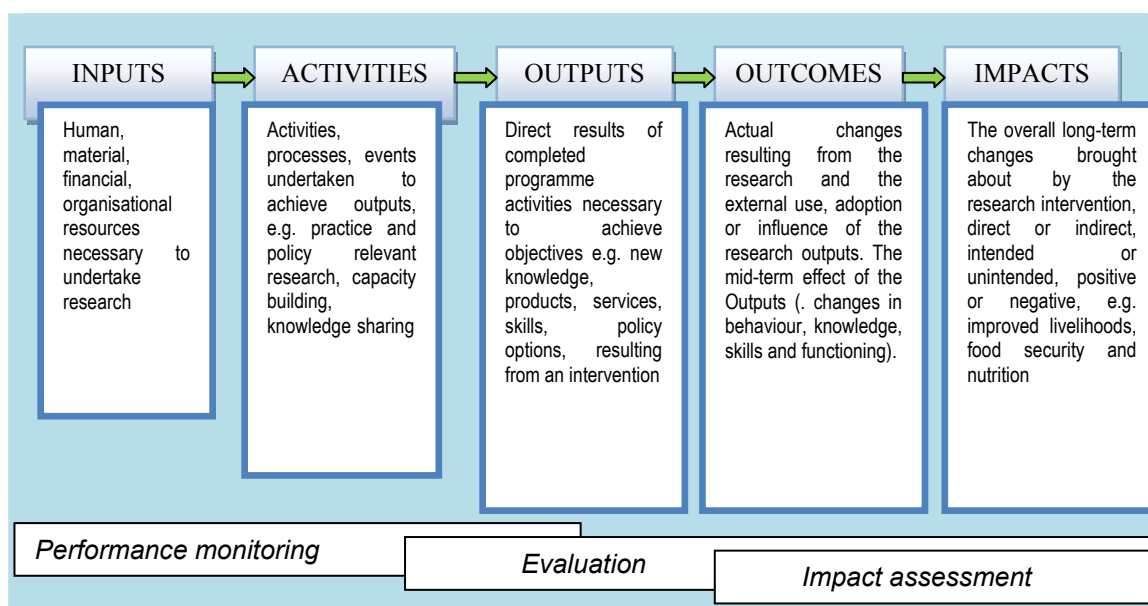
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<sup>2</sup> OECD-DAC, *Glossary of Key Terms in Evaluation and Results*, Paris, 2002  
<http://www.oecd.org/dataoecd/29/21/2754804.pdf>

## 2.2 Impact pathway

Figure 1 shows the 'impact pathway', the relationship in simplified linear form, between inputs of resources which facilitate research activities, leading to the delivery of outputs, and the realisation of outcomes and impacts. Some sources refer to 'results' rather than 'outcomes', but the latter term more clearly differentiates outcomes from the outputs that produce them. It is widely recognised that the 'impact pathway' is often neither simple nor linear.

**Figure 1: Diagram of an impact pathway.**



## 3. Lessons learnt from international impact assessment practice.

A number of major development agencies are supporting initiatives to develop approaches to assess the impact of their development projects or programmes. Those engaged in this work are networking to share their experience and methods<sup>3</sup>. The current trend is to increase the scientific credibility of these studies by a strict analysis of the **attribution**, establishing direct links between intervention and immediate impacts. Such approaches require the construction of a rigorous **counterfactual** (often through the use of comparison groups) and where possible, the use of quantitative measures of impact to exclude contextual influences and establish causality of programme effects. These approaches involve the random assignment of individuals or households either as beneficiaries, or as a control group which does not receive the service or good being provided by the project. However, such methods have also attracted criticism within the evaluation field, on grounds of cost, ethical dimensions, and their limited scale.

In applying evaluation methods to agricultural research, The Consultative Group on International Agricultural Research (CGIAR) is at the forefront of the trend toward increasing the rigour of impact studies. The CGIAR's Standing Panel on Impact Assessment (SPIA) has been working since 1995 to improve impact assessments and to encourage feedback into research planning. They have developed guidelines for impact assessment that are used by the Centres.

The main question for the policy makers is **how to use the results of these studies**? The CGIAR has been very efficient in using these studies to communicate the impact of research on the rural

<sup>3</sup> <http://www.3ieimpact.org> and <http://www.worldbank.org/ieg/nonie/index.html>

economy and on feeding the poor, mainly through increased agricultural productivity. It uses the results of the impact assessment studies to show the efficiency of its work to those who invest in the CGIAR. However, important questions are; What is the effect of the impact assessment studies on the scientific priorities and programming? What is the effect on the decisions of donors when they are choosing where to invest more of their funds? The trend since the 90s has been to increase the proportion of investment on natural resources compared to genetic improvement, but this is not based on an ex ante or ex post assessment showing that the impact of the CGIAR would be higher in that sector.

The recent reform process within the CGIAR has given an opportunity to pay more attention to the design and use of impact assessment approaches. The Consortium has proposed new arrangements for evaluation and impact assessment. It has recognised that a broader array of impact evaluation approaches is needed, with a focus on the contribution of research to poverty eradication, food security, gender equality and environmental sustainability. Furthermore, the ideal is that evaluations should be coordinated and that all CGIAR funders would rely on a common results-based monitoring and evaluation framework.

In addition, the impact pathway is now at the heart of the CGIAR scientific approach. Some of the CGIAR Consortium Research Programs (CRP), designed to implement the new Strategy and Results Framework (SRF), adopt a research portfolio “to produce measurable and significant outcomes and impacts”. They “embed core research activities in specific impact pathways, explaining how research outputs will lead to outcomes and ultimate impacts”<sup>4</sup>. This reform will contribute to building trust in the CGIAR from the earliest stage of its scientific planning.

In Europe, **research on IA methodology** is mainly conducted by teams involved in sociology of sciences and innovation. Their results have been more used for health research, industrial innovation or research policies than for agricultural research, with some exceptions like the IA of the John Innes Centre or the Dutch Agricultural research. The increasing mistrust of science or scientists within the European population leads the scientific community to be more accountable vis-à-vis the main challenges of the society and not only in term of scientific quality. Some countries like the UK have been using impact approaches for setting its research priorities for many years (see BBSRC *Bioscience for the future*, for example<sup>5</sup>). Some others where research evaluation remains mainly academic, like France, are predicting that in future, evaluations will take that dimension into consideration. Recently, an initiative has been taken by the National Institute of Agricultural Research (INRA), in France, to develop a set of impact assessment methods that could be applied to all types of agricultural research activities. Their approach gives priority to “contribution”, for quality assessment, rather than to “attribution”. The work is still in progress.

In the context of higher expectations vis-à-vis impact assessment and increasing complexity of the methods, the choice of the approach depends on the context and purpose of an evaluation, what kinds of questions are being asked and what type of analysis is required. It is important therefore to define the expectations of impact evaluation studies before engaging in their implementation. The choice and combination of methods depends on the questions and objectives of a particular impact evaluation.

### 3. The EIARD 2000 working paper re-visited

12 years ago, EIARD was already questioning itself about the best use of ARD impact assessment studies and the best way to achieve them. A Task Force on Impact Assessment and Evaluation was purposely set up. It came to the conclusion that **four main objectives** could be attached to impact evaluations. These are:

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<sup>4</sup> From CGIAR Research Program 6 - Forests, Trees and Agroforestry. Livelihoods, Landscapes and Governance

<sup>5</sup> See <http://www.bbsrc.ac.uk/research/impact/impact-index.aspx>

- a. To enhance the developmental impact of agricultural research investments for poor people;
- b. To provide information on the returns to investments in agricultural research for development;
- c. To derive strategic and programmatic lessons for future investments in agricultural research for development;
- d. To provide information for use in public awareness work.

While doing justice to the complexity of research-based innovation and encouraging well-grounded arguments and reasoned debate, the Task Force considered that searching for **plausibility** rather than proof of impact can help to produce useful information and insight at reasonable cost. The Task Force paper identified **elements of good practice in impact assessment** and evaluation which should be incorporated in design. These elements, together with additional points from the Nonie Guidance on Impact Evaluation, helped Agrinatura experts to identify the criteria for analysing the evaluation and impact assessment reports from member countries. The conceptual framework used consisted of a set of analytical criteria with sub questions, summarised as follows;

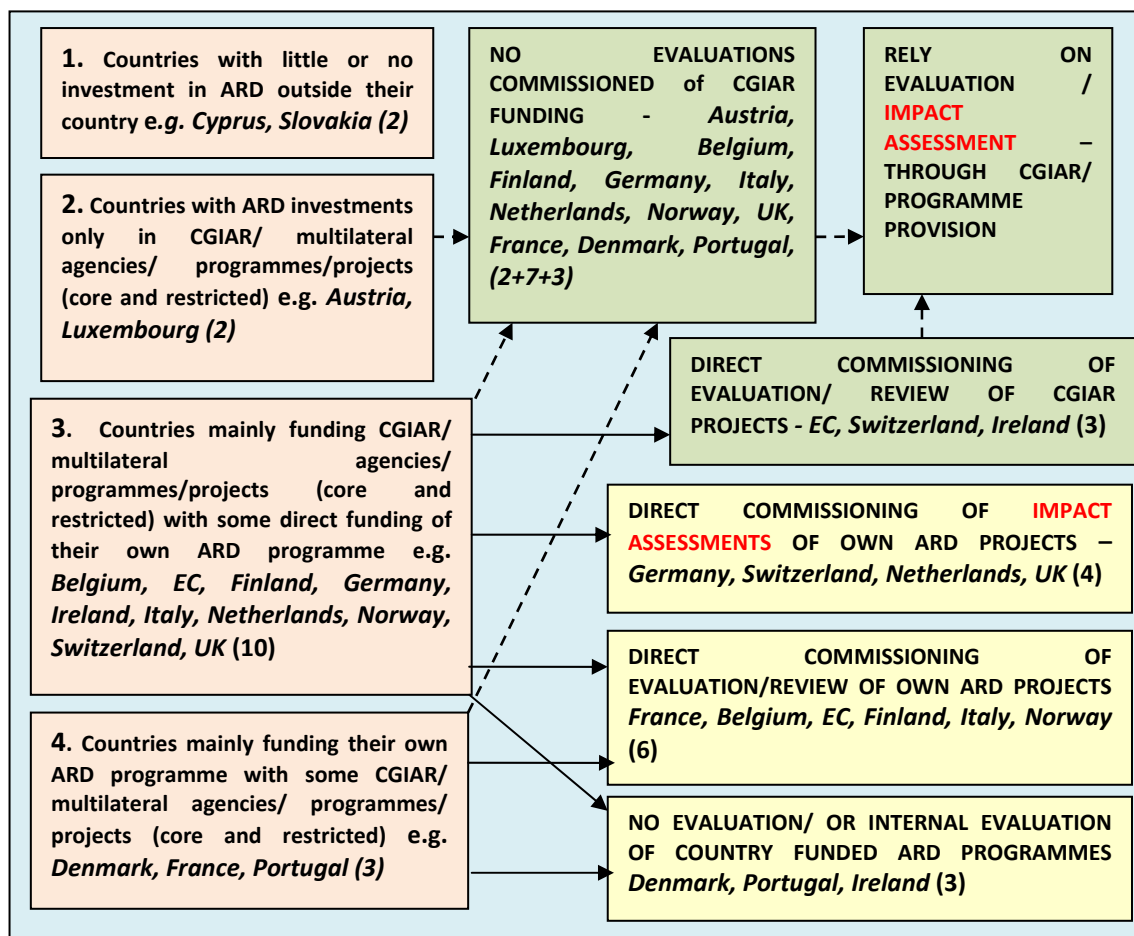
- **Location and context** - including the social, economic, policy and institutional context.
- **Scale and scope** – whether single technology, project or programme single or multi country; going beyond technical outputs to consider outcomes.
- **Funding and commissioning** relationship – internal or external commissioned; direct or indirect through CGIAR; joint funded?
- **Purpose, objectives and type of evaluation/impact assessment** – whether clearly defined.
- **Impact pathway**- whether an impact hypothesis or other logical pathway is included; is there a model or concept of innovation?
- **Design, methods and tools** – how impact is actually assessed or measured (counterfactual, randomised controls, indicators etc.) How is selection bias addressed? Data collection methods.
- **Communication and dissemination** – Are there specific targeted recommendations to influence ARD decision making or to inform the public? Have partners and beneficiaries commented?

## 5. Lessons learnt from Impact assessment by EIARD members

### 5.1 EIARD members' involvement in ARD evaluation and impact assessment

The EIARD member countries have different relationships to evaluation and impact assessments, depending on whether the majority of their ARD funding is provided through direct support to programmes and projects or through multilateral organisations, such as the CGIAR. The pattern of funding and their relation to evaluation is shown in fig. 2. Some, like Ireland, rely on SPIA for impact evaluation work, while others such as Switzerland or the EC commission their own studies.

**Figure 2 - Different EIARD member positions on funding ARD and evaluations/ impact assessments (information for 17 members)**



## 5.2 Analysis of selected studies of Impact assessment

The findings relating to evaluations commissioned by EIARD members, suggest that the description of the subject matter of the research, the objectives and scope of the evaluation and discussion of other influencing factors, are well covered in current practice. However, other important issues are less frequently addressed.

### – Methods

There were few impact assessments involving measurement of actual changes and attribution. The majority were actually *outcome evaluations*, taking a broad ‘plausible’ linkages approach to examine the case for attributing change to the research intervention. They did not attempt to measure or attribute *impact*. Generally few of the studies appear to draw on recent developments in debates on rigorous impact assessment or alternatively, on participatory or narrative methods exploring a theory of change. However, those few that used a more rigorous quasi experimental approach, with counterfactual and efforts to measure the extent of impact, can be considered as good examples on which to base discussion of future evaluation approaches and the potential for use of complementary qualitative methods.

Impact pathways were described by only 6 of the 44 projects or programmes selected for the analysis, indicating that impact pathway analysis has not been a widely used tool. The other approaches, based on indicators, make it more difficult to focus on **innovation as a multi stakeholder process**. The recommendation of the EIARD task force to include a model or concept of innovation in evaluations, appears to have far to go. There remain important requirements for understanding and learning about the institutional context of agricultural research and development processes.

The studies were grouped into three types: the first were simple outcome evaluations focussing on beneficiary groups; the second and largest group were outcome evaluations which made some comparisons such as 'before' and 'after', or compared project participants with a similar group of non participants. These studies paid more attention to the representativeness of the data collected, sometimes using randomized selection. Several analysed the economic impacts of the technology adoption, or conducted cost benefit analysis. The third and smallest group (of only 6 reports) were impact studies, characterised by their degree of rigour and emphasis on **measurement of change**. These incorporated counterfactuals and used sophisticated statistical techniques to overcome sampling biases (e.g. propensity score matching). Quasi experimental approaches are used to compare "intervention" and "control" group and to more confidently attribute effects to programme interventions. Randomised experimental designs are rarely used for evaluating developmental impacts of agricultural research, since 'treatments' cannot easily be randomly assigned.

#### – *Results*

The small number of rigorous impact assessments analysed generally assessed impact **at household level**. The EIARD task force recommendation to explore the complex social, economic, political and institutional dimensions of impact requires complementary approaches and evaluation plans with complementary skill sets.

Although not explicit in most documents, the recommendation that a **plan for impact assessment and evaluation** should be prepared before the project commences and be an integral part of project implementation does not appear to have been implemented. There is also scope for much wider inclusion of critical review and comment from different stakeholders, partners and beneficiaries.

The majority of the evaluations consulted made little reference to **innovation as a multi stakeholder process**. The recommendation of the EIARD task force to include a model or concept of innovation in evaluations, appears to have far to go and there remain important requirements for understanding and learning about the institutional context of agricultural research and development processes.

There was generally limited disaggregation of data in evaluations to indicate the impacts experienced by **particular social groups**. Around a third of the evaluations considered gave some indication of how different levels of benefits were experienced by different members of the community. In particular there was limited identification of gender aspects of impact.

There is a tendency for evaluations which are broad in scope and combine some quantitative methods with qualitative and participatory approaches to be less rigorous in measuring and attributing impact. Conversely, those which were more rigorous (a far smaller number) were generally not able to address holistically 'the complex social, economic and political dimensions of pro poor innovation'.

### 5.3 Utilisation of evaluation findings

Considering the high level of direct support to the CGIAR, there was relatively **little engagement in evaluation processes or utilisation of the CGIAR impact assessments**. Only the EC appears to have examined the impact of CGIAR outputs. It is not clear whether other countries funding CGIAR directly had used these reports to inform their own decision making.

Few of the studies indicate in their methodology sections **how they will seek to disseminate the findings to different audiences**. The users of the findings of impact evaluations and the channels through which they will be reached are not well defined. Similarly, there was little information available on the ways in which impact assessments have been used internally and externally. Further understanding of how the findings and recommendations actually shaped policy and practice would require in-depth country case studies and face to face meetings. It was difficult to find policy briefs and summaries associated with any of the impact studies. With the exception of knowledge sharing, the 'process' uses of evaluations were not mentioned.



## 6. Recommendations

Impact assessment in the sense of measuring attribution, utilising rigorous and statistically sophisticated methods is a specialised function. The systematic application of qualitative methods also requires specialist expertise. This could be encouraged through more collective commitment (donors and national governments) to better coordination and joint funding of impact evaluations and for governments and agencies to reinforce efforts to generate exchange and apply knowledge from impact evaluations. Better collection and utilisation of monitoring data would also be helpful, since an understanding of the processes of project delivery, changing relationships and stakeholders' perspectives is important in interpreting results from impact studies.

There are a number of recommendations which could enhance the efficiency and effectiveness of evaluation and impact assessment among EIARD members;

- Good evaluation and impact assessment begin with project design. It is important to develop impact oriented thinking, and to **encourage the inclusion of evaluation plans and IA design in the project design** and implementation plans. Focused baseline information collection can greatly enhance the capacity to assess outcomes and impacts.
- There is a need to **build understanding amongst those commissioning evaluations** of ARD of the different kinds of evaluation and impact assessment and to guide choices in design and methods to be appropriate for specific objectives and circumstances.
- In commissioning evaluations, the **expectations should be made clear**. Terms of reference need to clearly specify the purpose of the evaluation and what is actually required. This is the basis for determining choice of methods.
- There is a need for development and agreement on **procedures to encourage the sharing and dissemination of evaluation findings among EIARD members and their wider stakeholders**. To help harmonize consistency and quality of reporting for ARD evaluations a best practice guide on quality standards specifically for ARD could be developed for EIARD members.
- Apart from improvements to existing data bases, EIARD members should explore their joint willingness to establish a web site or web page for open sharing of evaluation reports.
- Greater interest and commitment to **develop joint studies** should be encouraged to enhance methodological rigour and shared learning.
- There is a need to **develop guidance for impact evaluation planning** which helps in the selection of evaluation approaches appropriate for complex situations. The specific tools and techniques used should be consistent with the principles underpinning the evaluation and its objectives and tailored to facilitate exploration of the evaluation questions within the time and resources available.
- **Multiple methods** are preferable, exploring both the meaning and the measurement of project impacts. There is scope to innovate and support participatory, qualitative and mixed-methods, combining and sequencing different approaches and tools in evaluation.
- The development and use of **flexible and non-linear programme theories of change** should be encouraged as a tool within evaluation. These take into consideration other actors and processes often neglected by logframes and linear impact pathways.
- The impact pathways should seek to **disaggregate impacts for different stakeholder groups** and in particular identify gender and poverty related impacts.

- Rigorous and **quasi experimental approaches** can be useful for assessing impact of specific sub-components of projects, particularly for technology components. They are less suitable for the complex, interactive, multi-stakeholder approaches of ARD.
- To benefit from the recent developments on impact assessment methodology, EIARD should maintain **awareness on the work done by the European scientific community** and participate in, or encourage their joint initiatives.

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## Acronyms

ARD	Agricultural Research for Development
BBSRC	Biotechnology and Biological Sciences Research Council
CRP	CGIAR research Programme
CGIAR	Consultative Group on International Agricultural Research
EIARD	European Initiative on Agricultural Research for Development
EC	European Commission
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IA	Impact Assessment
INRA	Institut National de la Recherche Agronomique (France)
OECD-DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
SPIA	Standing panel on impact assessment (CGIAR)
SRF	Strategy and Results Framework