CHAPTER 2. BUILDING ACCOUNTABILITY STRUCTURES INTO AGRI-ENVIRONMENTAL POLICY DEVELOPMENT

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Abstract

Policy evaluation is difficult because the words have become "plastic" and the dilemma of public sector accountability. Despite these problems, evaluations should be undertaken because they help build up the collective knowledge of what works and why. The establishment of a cause and effect logic, illustrated for example by Bennett's Hierarchy, greatly assists the development of effective evaluations by determining specific outcomes or targets at various points in the chain of events. It also identifies the various "communities", such as the target community (e.g. farmers), partners with an interest in the success of the programme (e.g. community groups) that need to be considered. The involvement of such communities is not only vital to the evaluation process, but crucially important to the successful implementation of the policy. Evaluations must be seen as part of a learning process that leads to the development of better agri-environmental policies.

Introduction

This paper sets the context for agri-environmental policy evaluation by first identifying the complexity and uncertainty associated with these "plastic" terms. Case examples, such as Canada's Walkerton contaminated water crisis, are used to identify the inherent accountability problems which emerge in agri-environmental policy – especially when conventional public enquiry methods are used to address them. The paper goes on to identify the reasons why, despite these difficulties, evaluations should be undertaken. The following sections then discusses evaluative techniques which use a structured, results logic; broader systems thinking; and scheduled empirical measurement in policy decision-making, and the benefits they bring. Case examples are provided to demonstrate these concepts. The paper concludes that policy evaluation and its legacy of evaluative thinking can help to improve public accountability as well as helping to improve policy making – and most importantly – collective learning.

What is policy evaluation in an agri-environmental context and what does accountability mean?

***Policy**:*

> "A course or principle of action adopted or proposed by a government, party, business or individual" – *Oxford English Dictionary*.

1. Performance Management Network Inc. and Agriculture and Agri-Food Canada.

Policy instrument:

> The method or mechanism used by government, political parties, business or individuals to achieve a desired effect, through legal or economic means – *European Environmental Information and Observation Network.*

Evaluation*:*

> There is no single definition. The term generally involves systematically assessing the achievements or effects of an initiative. It differs from other feedback mechanisms in that it is generally considered to be more practically focussed than scientific research, of wider viewpoint than audit and more "explanatory" than performance measurement (OECD, 1999).

Accountable*:*

> Bound to give account, responsible – *Oxford English Dictionary.*

Plastic word*:*

> A plastic word has the following essential characteristics: a) it originates from science and resembles a building block. It is a stereotype; b) it has an inclusive function and is a "key for everything"; c) it is a reductive concept, impoverished in content – Uwe Poerksen, *Plastic Words*, The Pennsylvania State University Press, English Translation, 1995.

When one combines the two rather "plastic" concepts of "policy" and "evaluation" with the often abstract discussions in the agri-environmental field, (*e.g.* concepts like "sustainable development" and "stewardship") one creates a lot of uncertainty, and hence a good deal of anxiety about the subject of agri-environmental policy and policy instrument evaluation. When asked to "account" for policy achievements in this abstract area using an ambiguous method called evaluation – the task can seem to all concerned – as Churchill might have put it – like a riddle filled with mystery, wrapped in an enigma.

Unfortunately, to add to the difficulties, what was once a fairly straight forward term "accountability" has also become somewhat plasticised over time – especially when it comes to public enterprise. Mayne summarises it this way:

> In the past, accountability for the processes followed, the inputs used, and perhaps the outputs produced, was most likely to be the arena in which public servants worked. This focus was consistent with the more traditional view of accountability: emphasizing what could be controlled and assigning blame when things go wrong. If the expected process was not followed, improper inputs were used, or outputs were not delivered, then the responsible person could be identified and appropriate action taken, as one ought to be in control of the processes, the inputs, and the outputs. Given this paradigm, public servants often were reluctant to accept accountability for results beyond outputs, that is, outcomes over which one does not have full control. Being accountable for outputs has been much more acceptable to public servants than being accountable for outcomes.
>
> (Mayne, 2001)

In the case of policy instrument results, and in particular agri-environmental outcomes, the degree of administrative control and scope for influence a manager has will vary considerably in different situations. In some cases, a manager in question is the main player and has a quite significant degree of control over the results. In most cases however, a manager is only one of several actors trying, with

the resources and authorities available, to influence the achievement of the intended outcomes. A recent conference summary examining policy instrument choice put it this way "… there is a complex relationship between the perceived policy problem, the appropriate instrument and the intended effects. Or, put differently, there is a complex relationship between *causation*, *instrumentation* and *evaluation*."[2] Effective *accountability* in this context implies that managers understand these considerations and have the means to deal with these complex situations.

The dilemma of accountability in the agri-environmental (and in this case health) arena, is illustrated by a situation recently confronted by the rural community of Walkerton, Ontario. The community became infamous in Canada at the turn of this century when several hundred people became ill and several died from drinking contaminated water. The water consumed was from the community's officially sanctioned and provincially certified water supply. This water contained unhealthy levels of Escherichia coli (E. coli 0157:H7), eventually linked back to the manure run-off from a local farm – after an exceptionally rainy spring season.

There were several groups involved in this situation, and at first there was a great deal of finger-pointing in terms of who was accountable. Critics of the provincial government suggested that funding cuts had reduced inspections to an unsafe level. Additionally, the contracting out of water testing to private sector suppliers was blamed by some – since the supplier in question, upon finding deadly e-coli in the water, chose to limit his reporting to a discrete fax to one town official. The Local Medical Officer was quoted as saying that he had believed that this was a disaster waiting to happen for the last four years. The provincial government's Ministry of the Environment announced, within days of the incident, increased certification and regulatory procedures – and launched what turned out to be a two-year enquiry (Figure 1).

The people of Walkerton and the province of Ontario wanted accountability. The premier of the Province equivocated right from the beginning of the crisis, neither accepting provincial accountability nor denying it. In the end, a couple of corrupt and incompetent town officials bore most of the blame. Four years after the crisis, certain water regulatory activities have been tightened up and some additional procedures and costs have been incurred. Restrictive policies and regulations on *all* well-water management (note that this problem occurred in a *publicly run* municipal system) have been implemented in Ontario and across Canada which have drastically increased the costs of running small, private well-based water systems. In some extreme cases, risk-adverse provincial governments have both required expensive testing *and* transferred essentially all legal liability to private well owners. One might say that the innocent have gone well punished.

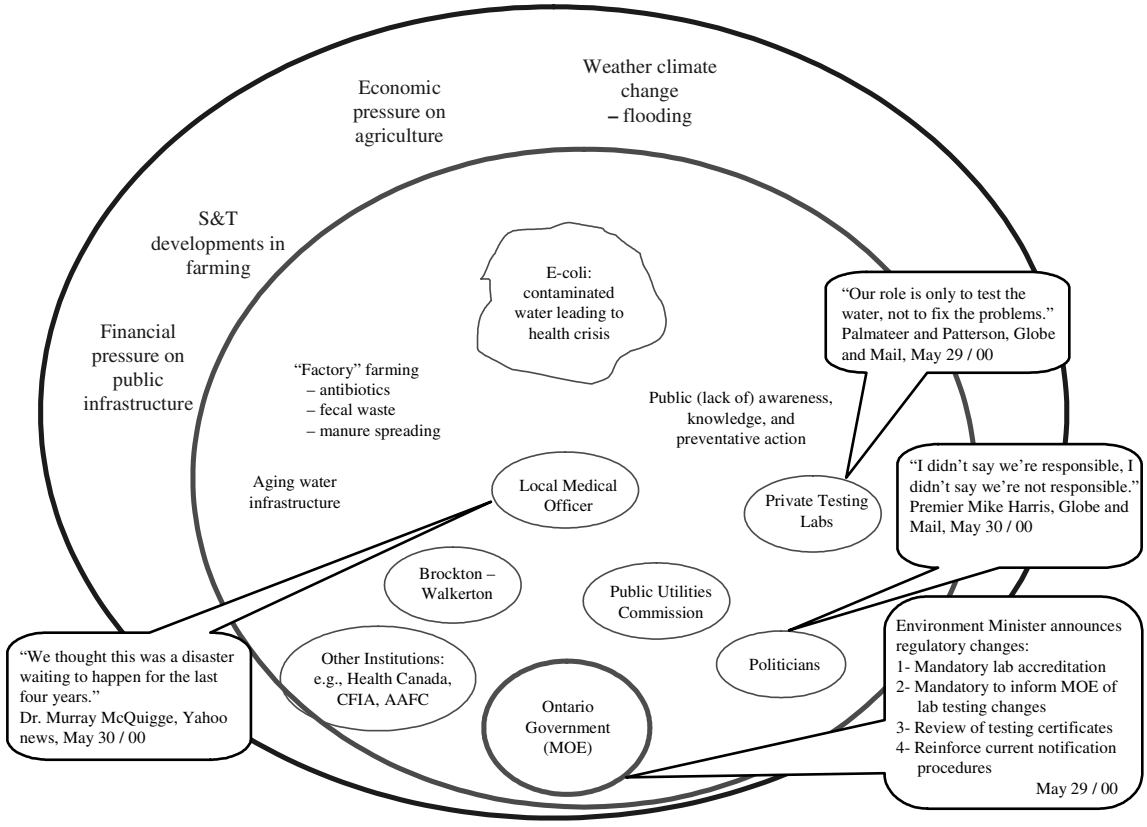
Sadly, the economic, chemical, biological and water engineering factors which contributed to the disaster have been treated in a rather low key fashion. Justice Denis O'Connor, who headed the two-year, multimillion dollar official enquiry into the Walkerton water crisis, put it this way, "The primary, if not the only, source of contamination was manure that had been spread on a farm near [contaminated] Well 5. The owner of this farm followed proper practices and should not be faulted".[3] So the farm which proved to be the source of the e-coli contamination was actually *in compliance* with the relevant regulations. The deeper system of agri-food enterprise and implicit agri-environmental policy which created the risks (*e.g.* Federal and provincial ministries have featured programmes

2. Excerpt from the Conference summary, *Instrument Choice in Global Democracies*, Policy Research Institute, Government of Canada, http://policyresearch.gc.ca/page.asp?pagenm=law-droit_cr.

3. See *Walkerton Report Highlights,* CBC News Online, January 2002, www.cbc.ca/news/background/walkerton.

encouraging and assisting manure spreading for years.) – has not borne a fulsome public evaluation. This leaves accountability – and *learning* for public policy purposes – incomplete.

Figure 1. A case study in agri-environmental accountability – the Walkerton water situation



Learning, from a policy instrument perspective, is also incomplete in this situation. In focusing blame on a couple of officials, the Walkerton enquiry failed to really address questions relating to public policy and the effectiveness of policy instruments. Was this a failure in terms of reduced public ownership?, a lack of regulatory certification/inspection/enforcement?, poor public information programming?, a lack of direct financial assistance?, gaps in funding for science and technology?, or were there deeper economic (dis)incentives at play? The blame-oriented Walkerton enquiry was ill-suited to address these questions.

The reality for most agri-environmental policy initiatives is that if expected outcomes have not been accomplished or if unexpected negative impacts occur, there may be several contributing factors. Only one of the reasons may be that a "responsible" manager has not done a good job. The manager might indeed have done all that could be expected within his or her mandate, but the results were not achieved due to circumstances – and broad systems dynamics – beyond his or her influence.

On top of these concerns relating to the ambiguous, abstract nature of agri-environmental policy, evaluation and accountability, there are according to some analysts in the policy field several other reasons why policy evaluation *of any kind* should not be attempted.[4]

Policy is intangible. A "course or principle of action" (as per the Oxford definition above) is difficult to quantify and observe, and therefore one cannot measure its performance in any useful or meaningful way. However, this varies across policy measures, with perhaps the activities, outputs and effects of public programmes more easily observable than other policy actions.

Policy-making is subjective. Good policy-making demands large inputs of human intellect and analytical power. In addition, while policy-making is almost always informed by data, it is also (and unavoidably) built upon a framework of opinion and judgement. Critics argue that the inherent subjectivity of policy-making means that the performance of policies cannot be measured in any systematic way.

Understanding the impact of policies is a complicated and messy business. The path from formal approval of a policy to the realisation of the policy's objectives will often be long, indirect and uncertain. Most policies involve a mix of instruments, so there is not a clear and unambiguous connection between, for example, a regulatory change and an outcome. Many regulatory changes are accompanied by a host of other initiatives such as information outreach, financial incentives or other actions. Many factors – some known and predictable, others unknown and unpredictable – will affect the attainment of targeted objectives. Years may pass before policy makers get a sense of whether the results they had hoped for are materialising. Even after several years it may be difficult to say whether the results were caused by the policy itself, or by other unrelated factors (*e.g.* note the Walkerton case). Under such circumstances, it is argued that one would have to be either exceptionally brave or uncommonly foolish to attempt to measure the performance of policies.

Why do evaluation in this field?

While these issues suggest that policy is difficult to evaluate, in some senses they underline the very reasons why policy in the agri-environmental area definitely *should* be evaluated.

Policy is intangible. Indeed if something is difficult to see, yet known to exists, all the more reason to use a systematic approach to try to describe it. One of the key ways that the evaluation community can render any policy or policy instrument more tangible is by describing the desired or expected chain of results involved in the initiative. Canadian experience shows that in fact, by constructing a results logic early in the development process, a policy can be rendered far clearer than when originally proposed using conventional verbal descriptions (see next section).

Policy-making is subjective. The inherently subjective nature of policy in some respects makes it even more important to review it rationally. Systematic enquiry and assessment – the practical application of neutrally gathered and analysed data – applied to help understand the cause and effect of an intervention, can usefully enlighten a subjective dialogue. Clear information about what has been working and what has not been working can help decision makers to cut through pre-disposed biases "for" or "against" various policy instruments.

4. These arguments are summarised from Schacter, M. (2002), *What Will Be, Will Be: The Challenge of Applying Results-based Thinking to Policy,* Institute on Governance, Canada, www.iog.ca/publications/resultsandpolicy.pdf.

Another Canadian example relating to innovation assistance can help to illustrate the value of systematic evaluation to debunk a "subjective" policy myth relating to the relative strengths of two policy instruments. During the late 1980s and the early 1990s, the prevailing wisdom in many Western economies, including Canada, was that the "state" (public sector) should largely stay out of direct financial assistance for private sector innovation. The exception to this rule was the provision of tax incentives, which were thought to be good because they could be easily applied and limited the public sector "meddling" into firm decision-making.[5]

This kind of thinking spelt trouble for the Canadian Industrial Research Assistance Program (IRAP). IRAP had been quietly working away for almost half a century providing advice and small amounts of federal money to help mostly small and medium-sized enterprises (SMEs) to adapt, adopt, and develop technology. IRAP was flying in the face of conventional wisdom that said that a programme such as the Investment Tax Credit (ITC) for research and development would better serve innovation policy.

After an extensive evaluation in 1989-90, it became clear that in fact the use of a policy instrument like IRAP compared favourably with the tax system as an innovation assistance policy. In a nutshell, IRAP cost one-tenth the resources, had four times the reach, and showed significant results as compared to the ITC. The evaluation revealed a comparatively wide IRAP user base. This dispelled the myth that the way to cost-effectively reach a broad section of any target group was to provide tax incentives. In this case, IRAP's cost per small business user was a fraction of the tax incentive cost and it produced demonstrable results.

Further analysis suggested that the incremental behavioural effects of IRAP assistance – the level of attributable influence and therefore benefits – were also much greater for IRAP than for the ITC tax incentive. This was due to the personal knowledge transfer exercised by IRAP officers, almost all of whom acted as technical advisors, as compared to the tax incentive delivery which was handled between accountants. The former group influenced innovation investment *before the fact*, while the latter often appeared to rationalise an investment *after the fact*. The Government of Canada went on to preserve and in some respects expand the IRAP form of contribution assistance support for innovation – even while most other forms of such assistance were reduced or eliminated during the 1990s.

Understanding the Impacts of Policies is a Complicated and Messy Business. The use of an approach which establishes a clear results logic, and then systematically establishes evidence (sometimes by "proxy") to validate the results logic, would seem to be of important value to the messy business of agri-environmental policy. The fact is that difficult "cause-effect" attribution and long timeframes mean that the risk of ill informed policy decisions and actions due to gaps in the feedback process is increased. In the world of environmental policy change can occur in exponential patterns, showing few, if any, warning signals. A good evaluation plan and implementation will set out a theory of cause-effect and then test the theory at sufficiently early junctures to be able to allow for course corrections before it is too late.

The value of at least a medium-term "evaluative" warning was illustrated in a mid-1990s formative evaluation of an environmental technologies assistance programme. The programme had

5. The argument was, and still is, that while private innovation should be subsidized in cases where broad economic benefits justified it, public sector intervention largely failed due to the state's inability to properly pick winners and to disinvest in losers. Tax incentives were seen as a non-meddling way to achieve the policy goal of subsidizing industrial innovation (see the work of Canadian economists McFettridge, Tarasofsky and others, during the 1970s and 1980s).

been established to assist private companies to reduce emissions by providing them with a financial contribution. Limited early take-up rates, combined with feedback from a select number of target recipients, established that the contribution amounts offered by the Federal Government were too limited to influence anything more than "end of pipe" solutions. Without complementary regulatory or other instrument changes requiring changed practice, very little progress was being made towards the reduction of emissions. Not long after the evaluation, the programme was eliminated in favour of a broader approach, employing multiple policy instruments.

Good evaluations build up our collective knowledge and lessons learned regarding the application and implementation of policy instruments in differing circumstances. This allows us to learn from history. In Canada, positive evaluations of early agriculture assistance initiatives which relied on a decentralised, "advisory council" approach to implementation have partially contributed to similar recent initiatives in all areas of Canada's Agricultural Policy Framework (see following section).

In summary, agri-environmental policy evaluation should represent the systematic assessment of the cause and effect of policy instruments. Such evaluation will be successful if it can clearly yet comprehensively address a broad range of important performance questions, with regard to agri-environmental policy.

A basic framework for policy evaluation – describing "cause-effect" results logic

"Success" in terms of agri-environmental policy can be viewed in several differing ways. The thought leader Joseph Wholey noted that performance (success) is not an objective reality out there waiting to be measured and evaluated. He suggests that it is a socially constructed reality – possibly including concepts relating to resource usage, the products or outputs of activities, the satisfaction of various stakeholders and clients, changes or actions (for example, changes to reduce waste or control pollution) in specific groups or communities and finally changes to "end outcomes" such as objective data on environmental outcomes.

As noted earlier in this paper, one fundamental approach to evaluating policy is to identify at least a basic cause-effect logic for an initiative before proceeding to evaluate. Cause-effect logic can take many forms and be constructed at many levels.

In the environmental area, a results "hierarchy" has sometimes been established to focus on high level outcomes. A US Environmental Protection Agency (EPA) model from 2002 illustrates this (Figure 2). It links a broad hierarchy of results to the pressure-state-response model – familiar to most in the field of agri-environmental policy.[6] This is an important linkage because it recognises the fact that dynamic outside pressures fundamentally set the context for the end results of any policy. By the same token, this also sets the context for accountability, *i.e.* policy makers should be largely accountable for their choice and management of the chain of responses they instigate and influence.

While high level models such as this one can be useful to summarise the broad situation, they tend to give limited attention to the specific behavioural elements of people and groups. Note that most of the system "behaviour" is contained in level "2" of this hierarchy.

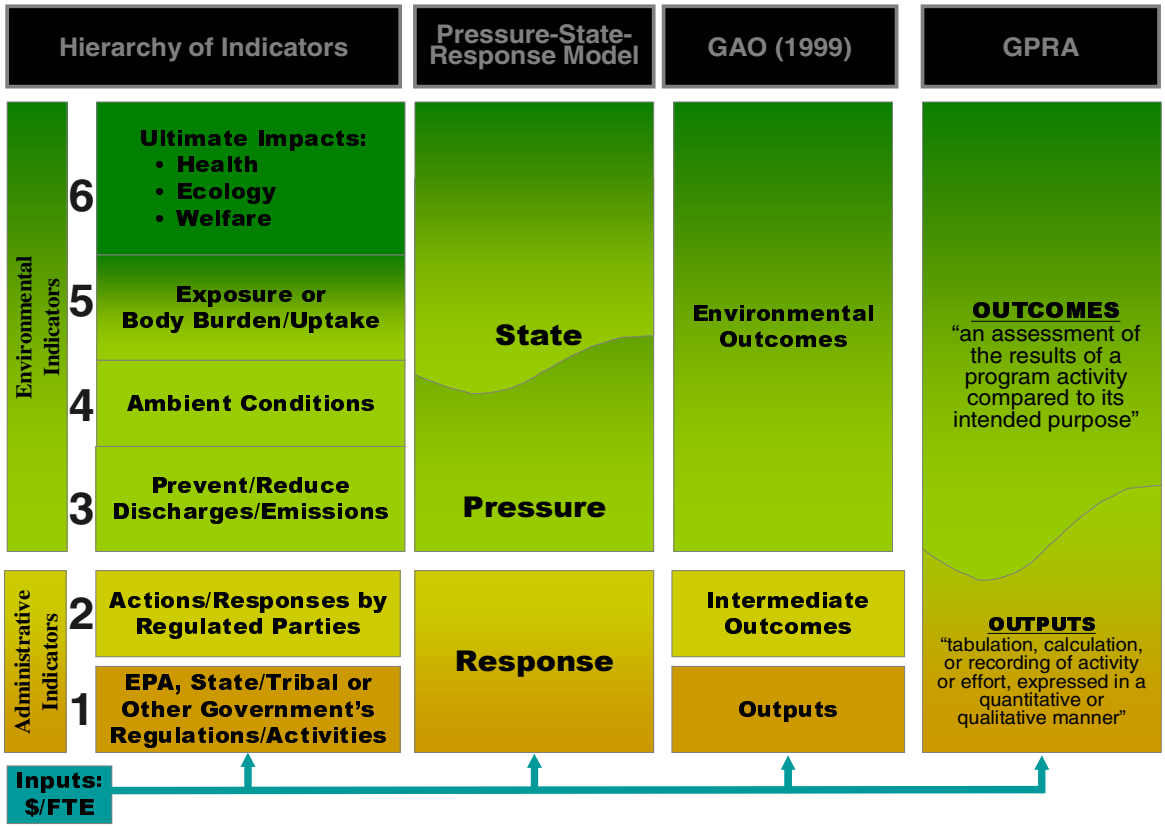
Another model or results hierarchy pioneered by rural sociologist Claude Bennett – and applied in a multitude of agri-environmental "programme" areas – focuses on human and community

6. See, for example, the work of Agriculture and Agri-Food Canada's *National Agri-Environmental Health Analysis and Reporting Program*, www.agr.gc.ca:8081/env/naharp-pnarsa/index_e.php.

behaviour. These are seen as precursors to end outcomes. An early version of this model is shown in Figure 3.

What we are learning is that the so called "administrative indicators" in levels one and two of the high level EPA model are in fact some of the *keys* to understanding how and why a policy intervention works. Analysis shows that in order to be successful a policy typically needs to involve people and communities appropriately, garner positive reactions to that involvement, and then influence knowledge, abilities, understanding, skills, aspirations, motivations and commitments leading to actions or adoptions. These behaviour changes in turn lead to desired outcomes such as reduced emissions, wastage or resource consumption.

Figure 2. USEPA results hierarchy

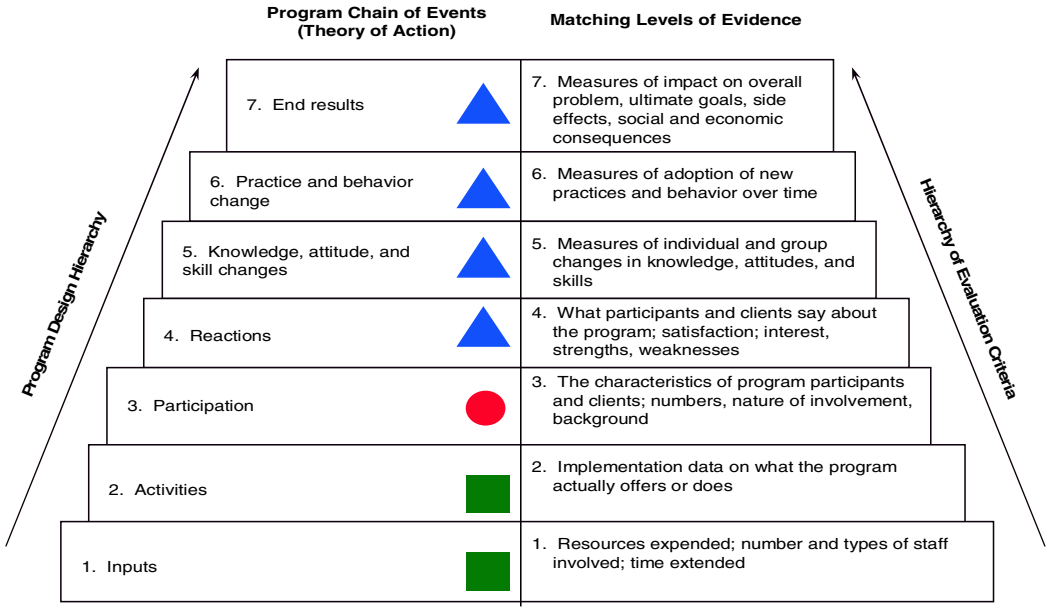


Source: Adams, Steve, *Accountability and Reporting: Information for Management and Public Confidence*, 2002.

Along with a results hierarchy that emphasises behaviour, it can be useful to include a description of the key communities within which change needs to take place. Communities can be described in several ways.[7] For our purposes we would suggest that they include categories of people who engage in a particular task or function or who have some form of identity in common – though not necessarily located in the same physical space.

7. For an excellent description of a results hierarchy incorporating communities see Environment Australia's *Evaluation of the NHT Phase 1 Facilitator, Coordinator and Community Support Networks*, February 2003, sections 4 and 5, www.nht.gov.au/publications/network-evaluation/index.html.

Figure 3. A behaviourally focused results hierarchy



Source: Adapted from Claude Bennett (1979). Taken from Michael Quinn Patton (1997), *Utilization-Focused Evaluation: The New Century Text*, (3rd edition) (Exhibit 10.5) Thousand Oaks, California, p. 235.

An approach which combines elements of the Bennett hierarchy with the notion of different communities is shown in Figure 4. Four broad "communities" are shown. They include the following:

- ***policy / rule makers / governors*** – These are groups, often institutional actors, which regulate, oversee and manage marketplaces and communities. Examples of this might include the World Trade Organization and national and provincial governments which set policies, rules and/or who govern agri-environmental practices.

- ***partners, intermediaries and (key) stakeholders*** – These are groups which have an interest in and are needed to support given initiatives in order to reach target community goals. Examples of this for agri-environmental initiatives include associations and groups offering support services and assistance from various levels of government, inspection, certifying and enforcement agencies, including groups in the non-profit and private sectors.

- ***target communities – key recipients, representatives*** – This is the portion of the target (client) community who is directly touched by initiatives, their services, regulatory actions, information and/or financial assistance. Typically, this is a subset or representative group of the community. This would include members of the food supply "value chain", assistance applicants and persons who are inspected or who directly use information and financial assistance.

- ***target communities – users / beneficiaries*** – This is the portion of the target communities which use and enjoy the benefits of an initiative. This community of interest is typically

larger than, and in fact contains the key recipients / representative groups. For example in any given sector, there may be supplier and/or other communities within the delivery/value chain who might benefit from the results of a given policy initiative. The classic case of a broad community of interest outside of direct policy maker influence is the notion of future generations. This group presumably inherits the environment from the current generation and enjoys or suffers the consequences of its actions.

Note that the various criteria for evaluating environmental policies established by the OECD in 1997 (*e.g.* environmental effectiveness, economic efficiency etc.) can be situated within a basic framework such as this. In this way it is easy to recognise that the cost of compliance, economic efficiency, "soft" effects and dynamic effects on innovation are all closely related – while environmental effectiveness and wider economic effects analyses imply a connected, but distinctly different, scope of review.

Indeed one of the most important contributions which can be made by an evaluation approach is to identify the interconnection of all aspects of performance. This can lead to a discussion of tensions or trade-offs between different performance aspects, as well as to an understanding of complementarities. For example, the use of "advisory councils" and other multi-stakeholder organisational forms to deliver policy instruments can appear costly when evaluated in terms of administrative costs and short term efficiencies, however these may be overcome by improved soft or dynamic effects, and reduced compliance costs.

The power of policy evaluation[8]

There is significant potential power in an approach which: recognises that a range of policy instruments may be applied to different, interconnected communities; models the desired behavioural cause-effect logic of these approaches; and then tests them – while staying mindful of the bigger system. While there is always a risk that such an approach which displays a breadth of perspectives will provide ambiguous answers to the question "Was this successful?" it at least provides an understanding of the possible variances.

One recent agri-environmental policy initiative on the Canadian prairie illustrates the importance of including all communities and stakeholders in evaluative analysis. The case involved eliminating the use of methyl bromide as an agricultural grain silo fumigant. Analysis of the actions of all communities of influence revealed that while rule makers and governors were supportive, and producers and distributors were willing and able to switch practices to eliminate the use of the fumigant, financial community stakeholders (*i.e.* local bankers) who made loans to the producers were not willing to risk the loss of their "investment" by switching approaches. Their lack of participation, knowledge and understanding of the issue lead to their lack of support for the adoption of an environmentally beneficial practice, and hindered the success of the policy. Once this was realised, outreach and involvement initiatives addressed the problem.

In terms of project planning, an approach involving the laying out of a logical sequence of results is equally powerful. Figure 5 shows an actual evaluation summary chart for a policy initiative relating to reducing greenhouse gas emissions from agricultural activity. Note the display, on a single page, of the theory of cause-effect, expected results, scope, measures of progress and even data sources to track the progress of an information outreach policy instrument.

8. Power is defined here as the increase in ability to provide insights to individuals or groups supporting or taking policy decisions. It is used here to mean enhanced capacity, not enhanced control.

Figure 4. Policy actions and cause-effect in different "communities"

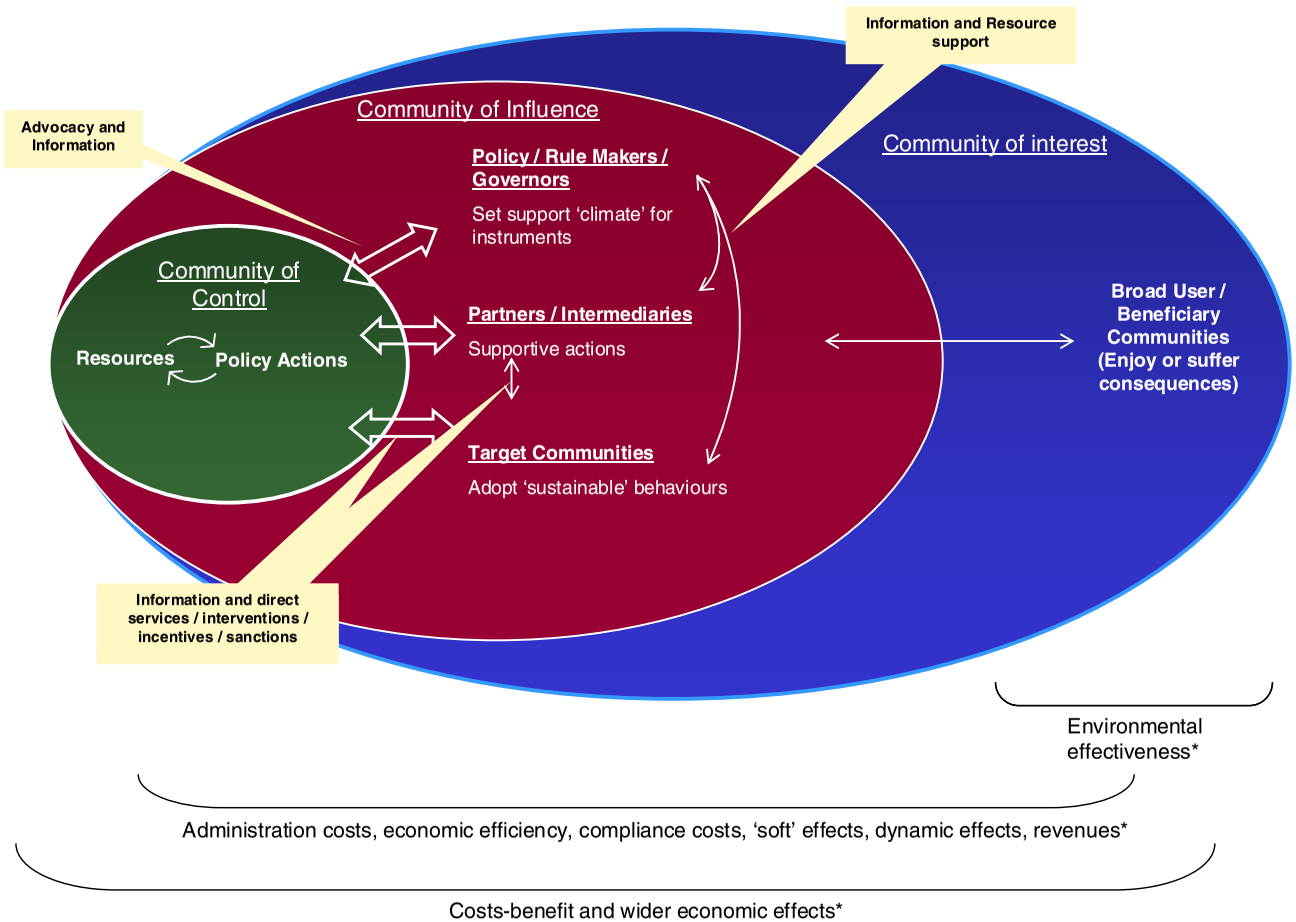


FIGURE 5 -POLICY EVALUATION SUMMARY

Project Name:CCAF Agricultural Awareness Partnership

Goals: 1. To develop awareness strategies and materials relative to ag. sources of Greenhouse Gases (GHGs) and mgt. practices that are, and can be used to mitigate GHG effects.
2. To deliver awareness materials through meetings, demonstrations and other venues, to specific audiences, in collaboration with producers and the agri-business sector.
3. To build and strengthen the national network of organizations, agencies and instituitions that can contribute to agricultural solutions to GHG issues.

Reach: Primary Clients - [Innovator/ Early Adopter??] Livestock (i.e., 50,000+) and Crop Producers (i.e., 50,000+) and General Public (i.e., 500,000+)
Partners - Soil Conservation Council of Canada, Eastern Canada Soil and Water Conservation Centre, Canadian Cattlemen's Association, PFRA, & Canadian Federation of Agriculture.

Measures: 1.2 # of relevant extension materials/ documents chosen for GHG information,
2.1/3.1 # of new awareness materials developed and distributed by the project partners,
3.2-3.4 # of producer workshops, field demonstrations, farm meeting presentations delivered and articles published,
4.1/4.2 # of conferences and inter -regional exchanges supported by the partnership project.

Instruments: 1.2/2.1/3.1 Program file/ data base review,
3.2-3.4 Attendance numbers, event evaluations, Producer focus groups,
4.1/4.2 Post-event participant evaluations.

Improved Knowledge Base

Outputs (1-3 years) :
(Direct Control)

1. Analysis and summarization of existing scientific and extension materials for sustainable production practices that are relevant in providing evidence towards GHG emission reduction and carbon sequestration by the Agriculture and Agri-food Sector.

2. Identification and development of new awareness materials about new and existing sustainable production materials that generate economic benefits as well as net GHG reductions.

Measures:

1.1 Completion of summary report,
1.2 # of relevant extension materials/ documents chosen for GHG information.

2.1 # of new awareness materials developed by the project partners,
2.2 # of success stories and/or case studies written for publication.

Increased Awareness / Understanding

Short Term Outcomes (3 -5 yrs) :
(Direct Influence)

3. Increased awareness by both agricultural producers and the General Public about GHGs and agriculture and management practices that are and can be utilized to reduce net emmissions.

4. Improved capacity of agricultural commodity groups, agri-business and resource conservation organizations and agencies to collaborate in finding agricultural solutions to GHG issues.

Measures:

3.1 # of new/existing awareness materials distributed to ag. producers and the General Public,
3.2 # of producer workshops, field demonstrations and farm meeting presentations,
3.3 # of venues where display and awareness materials are presented to producers and the General Public,
3.4 # of articles prepared and published/ aired in farm/ commodity group media.
4.1 # of and narrative description of conferences supported,
4.2 # and narrative of inter-regional exchanges supported.

Increased Level of Adoption

Intermediate Outcome (5-10 yrs) :
(Direct Influence)

5. Increased adoption by agricultural producers in Canada of sustainable production practices that are economically viable while reducing many types of GHG emissions.

6. Increased understanding by the General Public of ag. sources of Greenhouse Gases (GHGs) and increased support for government and Ag. sector policies and actions that encourage the adoption of sustainable production practices that are, and can be used to mitigate GHG effects.

Measures:

5.1 Change in level of adoption by agricultural producers in Canada of sustainable production practices that are economically viable while reducing many types of GHG emissions.

6.1 Change in public opinion and support for policies and programs that encourage the adoption of sustainable production practices that are and can be used to mitigate GHG effects.

Sector/ Societal Benefit

End Outcomes (11-15 yrs) :
(Indirect Influence)

7. Reduced GHG emissions & increased contributions of sequestered carbon by the Agriculture and Agri-food sector.

8. Improved adaptation by the Agriculture and Agri-Food sector to Canada's changing climate.

Measures:

7.1 Change in the level of GHG emissions & Carbon sequestered by the Agriculture and Agi-Food Sector.

8.1 Change in the level of international competitiveness and overall economic viability of the Agriculture industry with Canada's changing climate.

✓ Project should be responsible for monitoring these measures over the duration of project

In terms of policy, the Canadian Agriculture Policy Framework (APF), a set of policies and agreements between the Canadian Federal and Provincial/Territorial governments, has recently taken steps to base accountability on a results hierarchy. The overall goals of the APF, with components that have specific outcomes, are defined in the framework agreements in each province. High level outcome performance targets at an "end outcome" level within the framework agreements in each province cascade down through intermediate and immediate outcomes for specific environment programmes. Annual outputs (*i.e.* deliverables) for each programme within each province are clarified in provincial work plans developed by federal/provincial leads in charge of managing the implementation process for the programme delivery agreements. Within the departmental scenario, these outputs are defined as deliverables and specific milestones within "outcome projects". Three levels of planning, management and reporting occur (see Table 1) within the APF structure. A dual structure of both results-based accountability and risk management define the current approach.

Whereas Figure 5 shows the descriptive power of evaluative thinking to outline the key elements of policy instrument strategy, Table 1 provides an example chart demonstrating accountability at a higher level – that of the APF framework. While it is premature to pronounce on success, and several of its elements are subject to negotiation, (Table 1 represents an idealised template – not an actual agreement) early indications suggest that this type of framework is helping to establish an accountability structure, based on an evaluation approach, which all stakeholders can live with.

Conclusion

In summary, policies in the agri-environmental field strongly benefit from evaluation techniques. The results hierarchy and "cause-effect" focus of modern evaluation provides a basic framework for accountability. A systematic, results-logic driven and behaviour focussed approach which recognises the interplay of different key communities, as well as establishing high level goals and delivery costs:

1. Addresses a full spectrum of evaluation (economic, social and environmental) criteria.

2. Provides an opportunity to establish the level of early progress, by examining the participation early reactions and support of differing key communities. This in turn allows for timely corrective actions.

3. Establishes a solid basis for future planning due to the "concretisation" of expected results.

4. Offers an opportunity to garner the buy-in of various stakeholder groups and factions who otherwise might remain at odds – due to the provision of an opportunity to collectively construct and agree on the results logic and to obtain neutrally gathered evidence.

5. Allows for at least a reasonable level of appropriate attribution to be established.

6. Encourages broader systems thinking and deeper analysis of situations such that strategic planning is improved.

Assuming all of the above – good evaluation promotes learning, which may be the most important aspect of an "accountability structure" – since it is only through learning that communities of all types can adjust and improve.

Table 1. An example planning, management and reporting structure

Strategic, Tactical and Operational Planning/ Priority Setting				Decision-Making/ Resource Allocation		Corporate Communication/ Results Reporting			
Level of Influence	**Terminology**	**Definitions**	**Effective Time Frame**	**Results Account-ability**	**Manage ment Level (Financial Authority)**	**Measure-ment Level (and Frequency)**	**Who's Responsible for Reporting?**	**Communica-tion Vehicle (Planned/ Actual)**	**Who wants this Infor-mation? (*i.e.* Target Audience)**
Indirect Influence	Vision Mission Legislative Authority Agricultural Policy Framework	Where we want Canada and the AAF sector to be? What we do for whom and why do we exist? Legislative scope & legal responsibilities of the Department Consensus with Industry and Gov't leaders about the Canadian AAF Sector's overall strategic directions in the future.	7-10 years	Minister/ Provincial Agricultural Ministers	Minister	Sectoral Impacts (every 3-5 years)	Minister's Office	AAFC Strategic Framework/ APF Report to Canadians	***Primary:*** - Canadian citizens; - AAF Sector; - Parliament. ***Secondary:*** - Gov't/ NGO Partners
	Strategic Outcomes	AAFC (core) commitments to Canadians that have a direct influence on achieving the Vision for the Agriculture Sector.	10-15 years	Deputy Minister/ Management Council	Level 1-2		DMO/ Communica-tion Branch/ SMD	Report on Plans and Priorities/ Departmental Performance Report	***Primary:*** -Treasury Board; - Minister. ***Secondary:*** - AAF Sector; - Gov't/NGO Partners.
Direct Influence	End Outcomes/ Intermediate Outcomes	Key priority areas identified by the Minister which will have a significant impact on building a strong foundation for the future of the Sector/ Key Agricultural Partnership commitments that directly contribute to overcoming the most critical barriers for the Sector.	7-10 years/ 5-7 years	Horizontal Priority Board of Directors	Level 1-2	End Outcomes (every 3-5 years)	Team Secretariat	Team Accountability Plans; Branch Head Accountability Accords/ Annual Team Outcome Reports	***Primary:*** - Deputy Minister ***Secondary:*** - Treasury Board - Minister

	Immediate Outcomes	Short term Agriculture Industry partners' responses that directly contributes to achieving the Agriculture Sector's commitment.	3-5 years	Team Leaders/ APF Program Leaders	Level 2-3	Intermediate Outcomes (every 2-3 years) Immediate Outcomes (every 1-2 years)	Team Secretariat	Team Accountability Plans; EX Performance Agreements/ Annual Team Outcome Reports	***Primary:*** - Board of Directors ***Secondary:*** - Middle Managers (Management Level 3-4); - All AAFC staff
Direct Control	Outcome Project Activity Deliverables	AAFC deliverables for key Department-wide Horizontal/ Enabling Team Outcome Project Deliverables	1-3 years	Outcome Project Leaders	Level 3-4	Outputs (Annually)	Outcome Project Leaders	Outcome Project Plans/ Quarterly Performance Measurement Updates	***Primary:*** -Team Leaders ***Secondary:*** - Middle Managers (Management Level 3-4); - All AAFC staff
	Outcome Project Activity Milestones		0-1 year	OP Activity Leaders	Level 5-6	Milestones (Quarterly)	Op Activity Leads	Activity Work Plans/ Quarterly Milestone Updates	***Primary:*** -Project Leaders ***Secondary:*** - Team Leaders (Management Level 5-6)

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