LITERATURE REVIEW:

DEFINING SUSTAINABILITY IN INTERNATIONAL DEVELOPMENT

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DEFINING SUSTAINABILITY IN INTERNATIONAL DEVELOPMENT

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ACRONYMS AND ABBREVIATIONS

API	AIDS Program Effort Index
DAC	Development Assistance Committee
DFID	UK Department for International Development
dTS	Development and Training Services
EMB	Election Management Body
HANCI	Hunger and Nutrition Commitment Index
JBIC	Japan Bank for International Cooperation
MFIs	Microfinance Institutions
MSI	Management Systems International
NGO	Non-Governmental Organizations
OECD	Organization for Economic Cooperation and Development
PPL/LER	USAID Bureau for Policy, Planning and Learning, Office of Learning, Evaluation and Research
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization
WUA	Water User Association

EXECUTIVE SUMMARY

Introduction

USAID's Office of Learning, Evaluation and Research, in the Bureau for Policy, Planning and Learning (PPL/LER), is undertaking a series of ex-post evaluations (i.e., evaluations that take place several years after projects are completed) on 'sustainable outcomes' of USAID programs. The purpose of this evaluation series is to better understand what factors promote sustainable outcomes in development programs and projects.

This literature review is intended to inform the ex-post evaluation series by examining existing research, literature and evidence to develop a better understanding of the use and operationalization of the terms **sustainability** and **sustainable outcomes** and the connection between sustainability and **adaptability.**

Methodology

The objectives of the literature review are to address the questions:

- What is sustainability?
- How might sustainable outcomes be defined?
- What is the relationship between sustainability and adaptability?

This review is not intended to be comprehensive. It is based on a curated selection of documents drawn from the reviewer's familiarity with the subject matter, including academic articles, working papers, discussion papers, book chapters and publications from a variety of international development assistance organizations. The literature review also draws on two additional bodies of literature relevant to the topic:

- Materials from organization theory and strategic management, which emphasize the difficulty of coping with uncertainty and that actors involved in organizational systems pursue interests that may not correspond with their formal mandates; and

- Materials dealing with sustainable systems, which consider how systems learn from experience and adapt to their environment.

Findings

Definitions of Sustainability

Sustainability is a term widely used in international development that has multiple overlapping but subtly different connotations arising from two separate but related lines of research and thinking about development.

- One perspective on sustainability emphasizes productive long-term investments by donors. Sustainability from this angle especially involves continuation of benefits into the post-investment phase of a donor-financed project or program.

- The other leading perspective concentrates more on the natural, economic and social resources already present and available for development in a particular location. Sustainability concerns the continued enhanced and constructive use of these existing resources.

Donors have increasingly approached sustainability in a manner that brings together these perspectives on sustainability by focusing on the importance of political economy considerations and the capacity and willingness of aid recipients to assume full responsibility for country-led development change.

Sustainable Systems

These two perspectives of sustainability are woven back together conceptually by thinking in terms of systems and their environment. Systems consist of interrelated components or subsystems (such as specific local and international organizations or institutions), which make up parts of a larger whole.

Donors contribute to sustainability where their projects (which could also be seen as subsystems) strengthen the system's ability to produce valued results even in the face of changing circumstances (USAID 2014b, p. 5). This is more likely to occur where the natural or biophysical environment, the social environment, and the economic environment are aligned in mutually supporting ways. We can think of this as an enabling environment for sustainability.

However, external forces or trends may emerge in these three domains that are beyond the system's control and change the underlying natural, social and economic conditions. Systems are not sustainable if they are inflexible and uncreative in adapting to these changing conditions. They must evolve to continue to produce desired outcomes or move onto different outcomes preferred by the participants in the system.

Adaptable Systems

External events constantly test a system's adaptability—in the language of systems, adaptability is the capacity to cope with disturbances in the environment. A system's capabilities in the face of new contextual factors call attention to internal process—the ways that participants touched by the system respond to regular feedback and surprise shocks.

Sustainable outcomes thus depend on effective listening, learning, and adjusting to stakeholder demands and require participatory processes to find out what stakeholders want in order to deliver tangible benefits to them. While local buy-in or community ownership, grassroots involvement and support is widely regarded as the linchpin of sustainability, other influential stakeholders exist whose interests are unlikely all to be in alignment. Local elites, for example, may wish to divert a project from its stated goals and redirect it to protect or enhance their own power. Some government officials may back the activity more with words than action (the elusive question of "political will"). The need to serve multiple interests is an ongoing test of system sustainability and adaptability.

Adaptability is a perpetual challenge. Effective managers must walk a tightrope between overreacting to negative feedback from stakeholders and being proactive to take on threats and exploit opportunities that come along. Serious errors of omission or commission may mean the demise of the system.

Assessing Sustainability

Appraisal of the sustainable impact of development assistance interventions is conceptually challenging. It is difficult to attribute outcomes (the things that ensue as a consequence of a project or program) to any external action because of intervening variables and interaction effects. Sustainability adds another tier of complexity to assessment because it cannot be observed directly and must be estimated based on things that can be observed, but only retroactively. By definition, sustainable development outcomes are mainly verifiable in the medium to long term, which is typically after an aid project is ended.

However, across the perspectives on sustainability a critical component of long-term benefit flows is whether the aid recipient takes responsibility of the system and its activities. The hypothesis is that

serious dedication to a development outcome now, will convert into attainment and retention of the outcome later on. In this vein, the UNDP (2011) suggests the following points be explored when a project or program is completed to assess sustainability:

1. **Impact**—Were the project's achievements maintained and expanded over time?
2. **Learning**—What was learned from the project? Have any knowledge and lessons been used in it or elsewhere?
3. **Buy-in**—What is the degree of national or local ownership of the set of activities? How could national ownership be improved?
4. **Future value**—What are the indications that government or civil society entities will continue to support or scale up this or similar initiatives?

Another approach is to try to assess the system's recent capacity for adaptation. However, current assessments may not be good predictors of whether that capacity will remain. Systems (organizations) disappear, merge, or mutate beyond recognition with surprising speed. Still, a reasonable goal of post-completion project review is to encourage dialogue about adaptable, sustainable systems, and many indicators are available to offer managers a chance to look into a mirror. Engaging stakeholders in learning about and debating the prospects for long-term development outcomes seems a promising avenue for rounding out the evidence (Scerri & James 2010).

Implications for Ex-post Evaluation Series

Policymakers rightly have post-hoc questions regarding development aid and its influence on the adaptability and sustainability of targeted local systems. Unfortunately, rigorous satisfactory answers about sustainable outcomes are difficult due to the complexity along the links from input to outcome. This also can lead to causal misattribution and time inconsistency. However, involvement of stakeholders in mixed quantitative/qualitative examinations of sustainable outcomes through ex-post evaluation remains viable, while keeping in mind the impediments to precise answers.

Given the methodological issues of attribution and timing, evaluators must make do with somewhat imprecise, backward-looking estimates of multiplier effects of external contributions to sustainability. Participatory techniques in particular offer favorable pathways for assessing sustainable change and learning how to reproduce it in new settings.

INTRODUCTION

USAID's Office of Learning, Evaluation and Research, in the Bureau for Policy, Planning and Learning (PPL/LER), is undertaking a series of ex-post evaluations (i.e., evaluations that take place several years after projects are completed) on 'sustainable outcomes' of USAID programs. The purpose of this evaluation series is to better understand what factors promote sustainable outcomes in development programs and projects. The series will take a systematic approach to understanding a variety of perspectives, and intended and unanticipated outcomes. Basic education activities will be the focus for an initial round of evaluations and provide the context for site selection and determining which activities and outcomes to focus on as a starting point. The E3 Analytics and Evaluation Project, led by Management Systems International (MSI) along with partners Development & Training Services (dTS) and NORC at the University of Chicago, is supporting the design and implementation of this evaluation series.

This literature review is intended to inform the ex-post evaluation series by examining existing research, literature and evidence to develop a better understanding of the use and operationalization of the terms **sustainability** and **sustainable outcomes** and the connection between sustainability and **adaptability.**

Audience

The primary audience for this review is USAID staff involved in the design of this evaluation series, members of an Evaluation Advisory Group, the Analytics and Evaluation Project team supporting the evaluation design process, and the evaluation team(s) that will conduct the evaluation series. This literature review will inform future decisions about the scope and parameters of the ex-post evaluation series. It is also anticipated that this literature review will serve as an ongoing resource for the research process over the course of the evaluation series.

METHODOLOGY

The objectives of the literature review are to address the questions:

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- How might sustainable outcomes be defined?
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This review is not comprehensive, but is based on a curated selection of documents drawn from the reviewer's familiarity with the subject matter, including academic articles, working papers, discussion papers, book chapters and publications from a variety of international development assistance organizations. The literature review also draws on two bodies of literature relevant to the topic:

- Materials from organization theory and strategic management, which emphasize the difficulty of coping with uncertainty and that actors involved in organizational systems pursue interests that may not correspond with their formal mandates; and

- Materials dealing with sustainable systems, which consider how systems learn from experience and adapt to their environment. [1]

Key words used in searching the worldwide web included "sustainable development," "sustainability" and "adaptability" as well as "monitoring" and "evaluation." Special attention was paid to scholarly papers published over the past 25 years in peer reviewed journals and to policy documents issued by major international donors within that same time window. These texts have been thoroughly vetted and generally reflect consensus thinking at the time they were produced.

Annex A is a bibliography of the literature that was used in this review (in alphabetical order). All sources are publically available.

FINDINGS

Definitions of Sustainability

Sustainability is such a regularly used expression in the international development profession that its meaning can become lost.[2] One problem with the term is that it features prominently in two separate but related lines of research and thinking about development. As a consequence, in conversations about sustainability people may believe they are talking about the same subject when they are really referring to slightly different sides of a shared concern.

Donor-Centric Interpretations

One stream of thought grows out of the aid effectiveness conversation, or the debate about getting lasting results from aid that benefit those in need. These are largely donor-centric concerns. Detractors of development assistance regard aid as paternalistic and unvalued by supposed beneficiaries. Accordingly, the development profession has been concerned to demonstrate that aid recipients are in fact making headway and are not trapped as perpetual wards of the international community (e.g., Cassen 1986; OECD 2011). The Development Assistance Committee (2010, p. 36) gets to the crux of this perspective by calling sustainability "the continuation of benefits from a development intervention after major development assistance has been completed." The World Bank similarly interprets the potential for sustainability as the risk, at time of end-of project evaluation, that development outcomes will not be maintained or realized (Cashin 2012, p. 10).

The donor-centric connotation holds that development partners are the crucial transmission mechanism (OECD 2005/2008). Donor organizations team up with domestic public or private entities to share best practices and establish new capabilities. Projects and relationships are not supposed to be open-ended. The slogan is that aid agencies should aim to be "working ourselves out of business" (USAID 2013a, p.5)

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[1] A source of confusion in conversations about sustainability is that the term 'environment' has two meanings. It is frequently used synonymously with the natural habitat. In this context, lack of sustainability implies degradation of the ecology within which humans survive and hopefully prosper. Systems theory has a more general definition of the environment. It is all elements outside the boundary of the system. Lack of sustainability might therefore be due to socioeconomic decay or frailty, not only to overuse or neglect of biophysical resources. Going forward in this literature review, environment will only refer to the broader, systems usage.

[2] For example, the words sustainable or sustainability appear a total of 24 times in the *Paris Declaration on Aid Effectiveness* (OECD 2005/2008). They turn up 65 times in the *First Quadrennial Diplomacy and Development Review* (US State Department and USAID 2010) and 83 times in the 2014 *World Development Report* (World Bank 2013).

with the challenge being to identify and assist effective country partners who have the potential to manage development activities and reach development goals on their own.

Tripartite Interpretations

The other stream in sustainability conversation comes from triple bottom line thinking or, as the catchphrase has it, development that incorporates the three Ps: "people, planet and profit." A classic presentation of this three-pronged approach is the Brundtland report (World Commission on Environment and Development 1987), which focused the international community's attention on sustainable development—economic growth that reduces poverty today without compromising the Earth's carrying capacity tomorrow. Brundtland's emphasis on the interconnections among society, the biosphere and the economy continues to reverberate in official position papers and statements of principle about development (Drexhage & Murphy 2010, p. 6).

This does not imply that development professionals are indifferent to this more generalized understanding of sustainability. Twenty years ago USAID (1994, p. 4) picked up these threads and characterized sustainable development as "economic and social growth that … *safeguards the economic, cultural and natural environment* ... and that builds indigenous institutions that involve and empower the citizenry" [stress added]. Several years later the DAC Guidelines (2001, p. 16) defined strategies for sustainable development as comprising a coordinated "set of participatory and continuously improving processes ... which integrates the *economic, social and environmental objectives of society*" [stress added]. The tripartite view was reaffirmed at the Earth Summit in Johannesburg (United Nations 2002, p. 8), which specified "the integration of the three components of sustainable development—*economic development, social development and environmental protection*—as interdependent and mutually reinforcing pillars" [stress added].

While tripartite interpretations of sustainability may seem a construct with reasonably clear shared meaning, in practice this is not the case (Vallance 2011, p. 342). This is not surprising considering that policymakers and opinion leaders fall back on sustainability as a touchstone when addressing leading development issues—which at any given moment might be ecological, economic or social in character.

- In the 1990s concern rose that the debts incurred by poor countries were compromising their ability to generate sufficient income to repay their creditors while continuing to serve their citizens. The policy debate about sustainability thus turned more to the economic realm and ways of covering the recurrent costs of social programs and of improving their benefit-to-cost ratio. Particular attention was given to establishing enabling policy and macroeconomic environments for sustained progress in income generation (Stern et al. 2008, pp. 3-5).

- By the 2000s, the debate shifted somewhat and sustainability's societal dimension moved to the foreground. Poor governance became a top concern. Corruption was believed to be stifling implementation of well-intended policies and skewing the gains of economic advancement. The remedy was more inclusive and accountable institutions that would respond better to majority demands. The World Bank (2003) acknowledged that institutional development is a foundation for sustainability.

Congruence of Views

These perspectives on sustainability align where donors focus on aid recipients assuming full responsibility for donor-funded programs. For instance, contemporary United States foreign policy emphasizes sustainable effectiveness (US State Department & USAID 2010) implying the long-term delivery of human security and social welfare – a conceptual analogue to the tripartite focus on economic, social and environmental factors. Collaboration is sought with local partners who can take

over these crucial activities on their own. High priority is given to building durable capacity of partner governments, to encouraging those governments to take leadership over their development policies, and to leveraging local private sector economic resources (USAID 2013a).

Britain's aid agency, the Department for International Development (DFID) takes an analogous position about not smothering domestic resourcefulness in its description of its assistance strategy in the governance sector (DFID 2010 p. 33):

> "Where possible, alignment to national/local structures and systems is important for national ownership and sustainability. DPs [development partners] need to consider coordinating their support in such a way that national actors (for example, election commissions) are given a lead role and can drive the reform process where relevant. Based on local capacity and an assessment of the political economy, support needs to be designed to build capacity and to empower local actors."

The World Bank Institute (2010, p. 1) writes similarly about helping "leaders, organizations, coalitions and society at large to catalyze institutional change to achieve development goals." Capacity building is therefore viewed "as fundamentally a country-led and country-owned process of change." The OECD agrees that capacity development "is necessarily an endogenous process, and must therefore be owned and led by partner countries themselves" (DAC 2013, p. 33).

Sustainable Systems

The two perspectives of sustainability are woven back together conceptually by thinking in terms of systems and their environment. USAID's (2014b) Local Systems Framework provides a contemporary example. In this model, external donors seek to strengthen local (i.e., host country national, regional and community) systems, meaning connected sets of entities (i.e., public, profit-seeking and nonprofit) that jointly produce particular development outcomes (ibid. p. 4). To be sustainable, local systems must be capable of producing the intended outcomes over time. Distinct projects (which could also be seen as subsystems) play a part in sustainability when they strengthen the system's ability to produce valued results even in the face of changing circumstances (ibid. p. 5).[3] A local or indigenous system is:

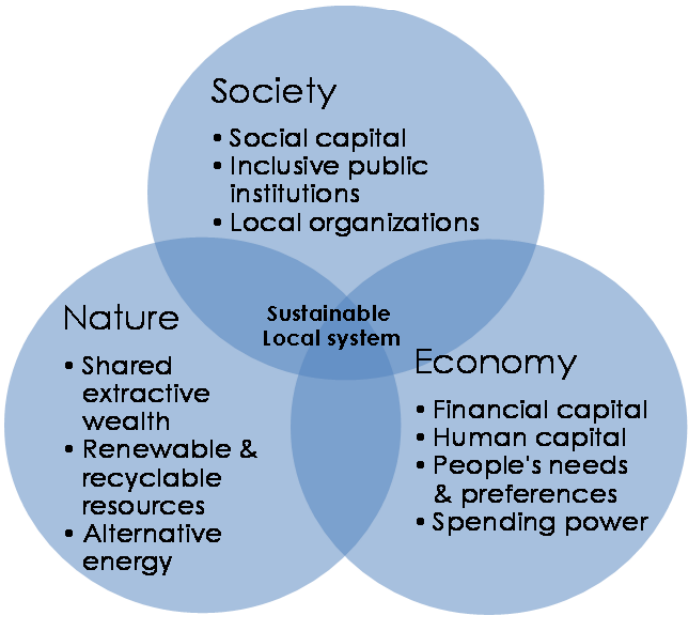
- Ecologically sustainable if the natural resources used up by the system's activities are minimized and any waste is absorbed or neutralized.
- Socially sustainable if the social structures needed to maintain the system are present and adequate to the task.
- Economically sustainable if the cost of pursuing the system's goals does not exceed the associated benefits.

The interface among the three components of sustainability is deemed particularly important for high-quality, impactful development. These relationships are often portrayed in simple Venn diagrams (see Figure 1).

[3] For a toolkit and checklists to apply systems thinking to international development, see DFID (2003). Also see USAID (2014a).

Figure 1 pictures the three generic sets of resources that support balanced long-term development: the natural or biophysical environment, the social environment, and the economic environment.[4]

FIGURE 1: CONTEXT FOR SUSTAINABLE DEVELOPMENT



When lined up in a mutually supporting way, these spheres of resources create a "sweet spot" of systemic sustainability, represented at the center of the figure. The system in question might be a particular organization such as a village government or rural clinic, or it might refer to a network of such organizations such as a regional or national local government or healthcare system.

By definition, any system is apt to be sustained provided it can draw on sufficient natural, economic and societal resources. However, external forces or trends may emerge in the three domains that are beyond the system's control. Sustainability is in jeopardy if these domains diverge or become inadequate in some way, as broadly illustrated in Figure 2. In this scenario, resources are insufficient, the "sweet spot" disappears, and the system faces entropy and collapse.

FIGURE 2: EXTERNAL THREATS TO SUSTAINABLE DEVELOPMENT

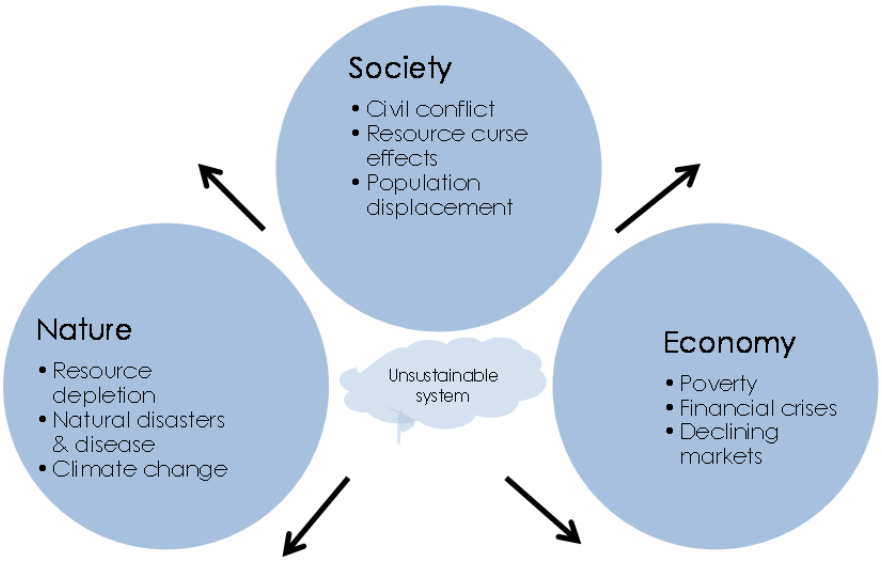
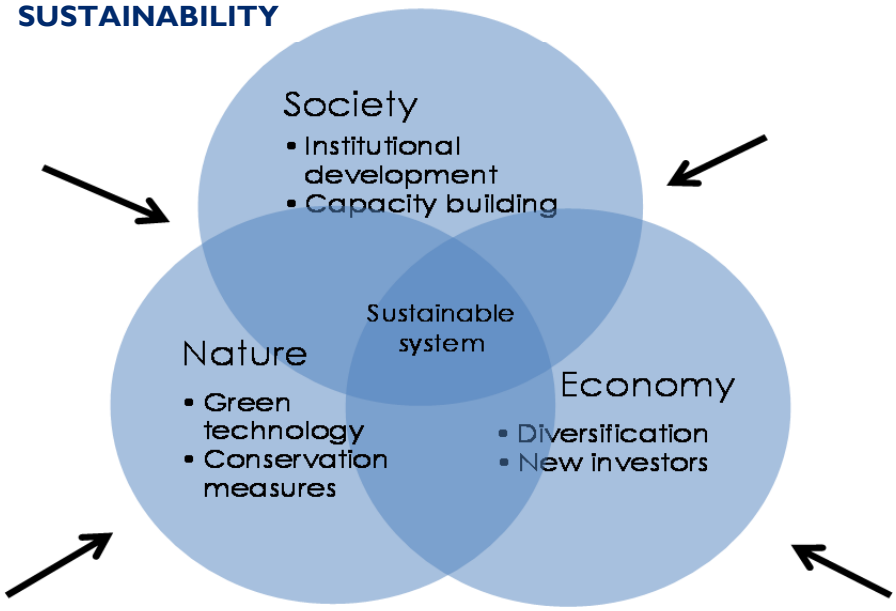


Figure 2 is indicative, not exhaustive, and the relative weight of natural, social and economic resources varies in every system. But Figure 2 does reinforce the notion that the three spheres of sustainability are each important and should not be considered in isolation. For example, resource depletion in the natural realm may provoke civil conflict and create poverty in the social and economic realms, which in

[4] The bullet points listed in each circle are meant to be illustrative, not comprehensive.

turn put more pressure on the natural resource base. A real world case is Sudan, where water and land shortages have fueled the multi-layered civil violence in Darfur, which has led to more overgrazing and deforestation in that area, thereby reinforcing the economic insecurity and poverty that were at the heart of the conflict in the first place (UNEP 2010).

FIGURE 3: OPPORTUNITIES FOR INCREASING SUSTAINABILITY



The positive scenario is illustrated in Figure 3, where new technologies, economic opportunities, and innovative social institutions come together to make it easier for local systems to persist and thrive over the long term.

We can think of this as an enabling environment for sustainability. There are enough resources available for the system to use as inputs and turn into outputs.

The Example of Coffee

An example of this constructive set of circumstances is the smallholder coffee industry. Coffee is an evergreen shrub that is effective in stabilizing soils. If shade-grown, it also permits the preservation of much of the original biodiversity in planted areas. Increased global demand for specialty and ecologically-friendly coffee has produced economic incentives for more production of coffee that meets these criteria. One of the main problems for some coffee growing regions is water pollution arising from wet processing, and higher incomes of farmers permit them to adopt water-saving technology. Mountain-grown coffee, which commands superior prices and is not amenable to large-scale production, also makes a positive contribution on the social side by providing livelihoods to smallholders and maintaining rural employment. New international verification institutions have arisen to certify the ecologically and socially sustainable production of coffee from particular locations. In short, natural, social and economic trends have shifted in recent years to create a more favorable milieu for systems of sustainable, pro-poor, coffee production.

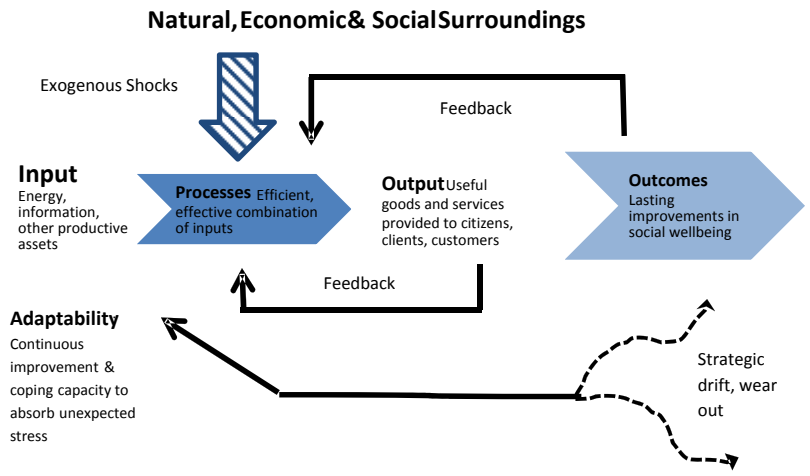
A specific project is Starbucks Coffee's alliance with the nonprofit Conservation International in Chiapas, Mexico. They have a joint venture that works with several farmer cooperatives in the area (the local systems or development partners) to guarantee purchase of coffee at a premium price. The two basic conditions members must follow to participate are not to cut trees on their farms and not to throw coffee pulp into nearby rivers. Specific work plans with additional conditions are tailored to each farm and signed with the farmer. Conservation International employs a team of extension agents to monitor these agreements and provide technical assistance on coffee cultivation. An outside consultant doing a review of the conservation project concluded that farmers' ecological awareness had increased and they were practicing more organic farming (Austin & Reavis 2002). The project remains controversial, nonetheless, and there is evidence of a top-down approach that bypasses the local cooperatives (Renard 2010).

Taking Advantage of the System's Environment

Figures 1, 2 and 3 draw attention to exosystem or environmental influences on sustainability. Those contextual factors are given, at least in the near term. Development practitioners are most interested in how systems perform within the constraints imposed by their natural, economic and social circumstances.

Figure 4 opens such a system for inspection of its generic components. Again, systems are simply interdependent functions that allow an activity to take place or an organization to work. Open systems interact with forces outside their boundary. What a system does (its behavior) depends on the system itself and how it matches with exosystemic factors impinging it. In a sustainable system, sufficient resources are exchanged with the environment to allow the system to continue operation. This way of looking at development brings into relief the importance of linkages and how actions in the geophysical, economic and societal spheres affect each other.

FIGURE 4: SUSTAINABLE SYSTEMS



Knowledge acquisition and incremental behavioral changes in response to feedback from the environment are essential to sustainability, as illustrated by the feedback arrows in figure 4. One additional set of factors in figure 4 is a random exogenous shock to the system (portrayed as the large striped arrow pointing from outside the system boundary). Systems are not sustainable if they are inflexible and uncreative in adapting to rapidly, or substantially changing, natural, social and economic conditions. They must evolve to continue to produce desired outcomes or move onto different outcomes preferred by the participants in the system.[5]

Exogenous shocks are an ever-present threat to development activities, as for example the 2007 financial crisis that cut funding for microfinance (Di Bella 2011) or extreme weather events or political conflicts that limit access to water supplies (Allouche 2011). But some exogenous shocks could also provide unexpected chances to expand sustainable outcomes. In the case of coffee systems, the 2012 outbreak of leaf fungus in Central America may be encouraging a return to shade-grown coffee farming. This traditional method provides some protection against the disease in addition to fostering

[5] A paradox is that as a system adapts, its structure and behavior change. Successive incremental adaptations to the environment can lead to a radically different system, even if continues under the same name.

biodiversity. Since shade-grown coffee is amenable to small-scale production, low-income people might reap many of the economic benefits, as well, especially with rising world coffee prices due to shortages. It remains to be seen, however, if relevant cooperatives and coffee growers' associations will be able to take advantage of this possibility.

Over the longer term, development professionals would hope to see the "sweet spot" of sustainability expand through more favorable natural, economic and social conditions. Of course, even governments and large international organizations have limited influence in these realms. They may try to stimulate technological innovation or create institutional capacity and meet with indifferent success. A sustainable local system, however, need not simply react to stimuli from its environment. It may also exert influence on the parameters within which it works through the positive demonstration effect of its outcomes. The most effective systems look for inventive technology, improved means of organizing and untapped economic resources that open up new possibilities for development. They may serve as models for other local systems to reproduce, modify or scale up.

Finding New Opportunities in Microfinance

Figure 4 is an abstraction but the details can be filled with real world examples. Consider the microfinance industry: conventional wisdom until recently was that very poor people are not suitable credit risks, but this industry found a hidden niche in its environment that it could move to by reimagining financial services. Many impoverished people are victimized by extortionate moneylending and are eager for alternatives. Microfinance thus took what looked like objectively unfavorable socioeconomic conditions of destitution and marginalization, and leveraged those into development opportunities.

For microfinance institutions (MFIs) sustainability would be measured by the ability to continue serving the financial needs of the socially oppressed without, at a minimum, harming their geophysical habitat. Seen in systems terms, the primary inputs taken from the social and economic environment are financial capital and banking skills, which are often provided as subsidies to MFIs by international donors or private charities. Another important input is social capital in the form of pre-existing trust within communities, which may make grassroots organizing less demanding.

The system's processes (represented by the first chevron in Figure 4) are often based on solidarity groups of individuals who come together to borrow small amounts of money and use peer pressure and mutual support to prevent loan default. Other processes concern loan approvals, supervision and collection. The output in this example is the loans themselves, which the borrowers use for a variety of purposes. Feedback occurs mainly through repayment of principal and interest, which become inputs for the MFI to recycle by issuing new loans. A critical, if intangible, reprocessed input is client goodwill, which cuts the transaction cost of the business dramatically.

Outcomes (the second chevron, Figure 4) are more controversial with respect to MFIs (Hermes & Lensink 2011). These institutions are expected to meet a "double bottom line" of profitability (or at least breaking even) plus social improvement. The first set of outcomes depends on the loans being paid back following investments in productive enterprise. Given the high repayment rates often observed, MFIs frequently obtain this economic objective. The second set of outcomes entails poverty reduction and the empowerment of disadvantaged people, especially women, to take more control over their lives. It is less clear that MFIs regularly produce these social outcomes. Greater attention to profits and losses may mean that funds do not reach the "base of the pyramid" (Casselman & Sama 2013) or are not used to empower marginalized groups (Rankin 2002). Some borrowers have become overburdened by their debts (Bateman 2011).

Many MFIs are now taking more explicit interest in the "third bottom line," which specifically includes the geophysical dimension of sustainable development (Schuite & Pater 2008). Micro entrepreneurs

working in the agriculture sector, for example, may use loans to buy but then improperly use pesticides or chemical fertilizers. Lenders may therefore take steps to teach their clients about integrated pest management and fertilizers derived from animal matter or vegetable matter. Such moves may have positive impact on the "first bottom line," as well, by giving clients access to new (organic certified) markets, with higher profit margins.

Microfinance has demonstrated sufficient success with the "first bottom line" to stimulate significant commercial interest. More and more MFIs have become independent from donor funds and turned to capital from the private marketplace. The industry has grown many times over. Economic sustainability is thus less of a concern than it once was. Paradoxically, however, putting MFIs on firmer economic ground may have come at the expense of some social outcomes (Hermes et al. 2011), as commercial lenders seldom place as high a priority as nonprofit MFIs do on outreach and empowerment—although they seem as a rule to take "third bottom line" geophysical outcomes more seriously (Allet 2014).

To assess the sustainability of the "second bottom line" of social betterment, observers have championed the use of participatory monitoring and evaluation methods. The idea is to involve the clients themselves in the conversation about measuring MFI impact and judging long-term outcomes (Hulme 2000; Alok 2005).

Lost Opportunities in Water Supply

Another example from international development of potentially sustainable systems concerns water supply. Water is a natural resource critical for human wellbeing. It is also finite, sometimes scarce and may be polluted if poorly managed. International donors logically look to fund water and sanitation projects, but sustainability of these programs has been seen as disappointing in many cases. The International Institute for Environment and Development (2009), for example, says hundreds of millions of dollars have been spent on drilling boreholes and wells in Africa that became useless because they were not maintained. As a result, 50,000 water supply points are not functioning across rural Africa.

The inputs, processes, outputs and outcomes in an archetypical water system are straightforward. An external agency provides funds and technology to help produce a viable water source; management responsibility is assumed by a water user association (WUA), composed of community members who collect water usage fees and maintain infrastructure with the funds collected; and users benefit from the output of accessible safe drinking water or more abundant irrigation supplies, which should lead to the outcomes of improved health and food security.

On the surface, such systems would seem relatively easy to sustain because water is so valuable to people. However, the problem comes from the feedback loop. Some community members will want to free ride or stick with traditional water supplies to avoid the fees. If the physical mechanism for raising water stops working, the WUA may lack funds or the skills to fix it. Local elites may capture the WUA for their benefit (Rusca et al. 2014). Low-income residents may become disaffected. Hence, the cycle of continuous improvement is broken and the system melts away (as displayed in the lower right-hand corner of Figure 4).

This is obviously not to suggest that water projects never prove sustainable in developing countries. Many counter-examples exist that are worth looking at for positive lessons (Parry-Jones et al. 2001; Harvey 2007). Key components of success reported include community cohesion (Ghazouani et al. 2012) and the sense of local ownership (Martiny 2008; Marks & Davis 2012). Engaging stakeholders at various levels in monitoring or evaluating water projects seems to be of benefit (Aubel 2004).

Adaptable Systems

External events constantly test a system's adaptability—in the language of systems, adaptability is the capacity to cope with disturbances in the environment.[6] In other words, adaptability is a system's ability to snap back and recover and/or shift direction. A system's capabilities in the face of new contextual factors call attention to internal process (the first chevron in Figure 4)—the ways that participants touched by the system respond to regular feedback and surprise shocks. Sustainable processes are disaggregated generically in Figure 5 as a cycle or series of steps that facilitate learning and doing, although in reality the activities listed might take place in different order or occur simultaneously. The system's critical adaptive practices are displayed separately to make them easier to visualize.

FIGURE 5: SYSTEM PROCESSES FOR SUSTAINABLE SOLUTIONS

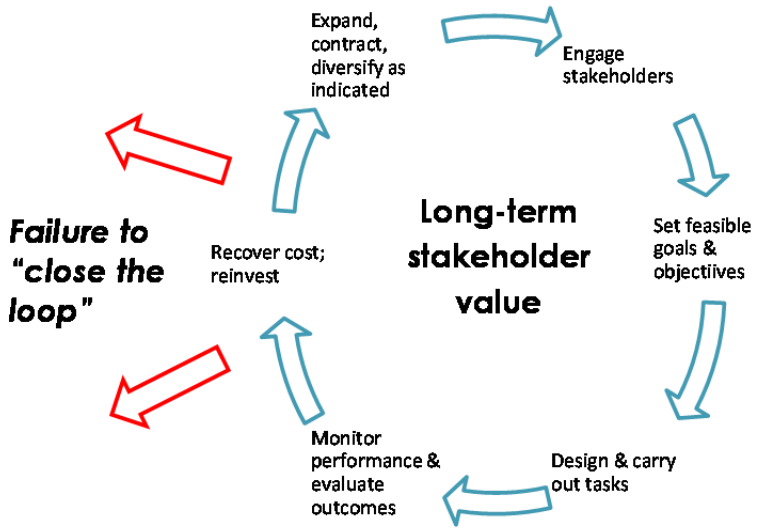


Figure 5 represents the key actionable proposition of systemic sustainability, which is that it depends on voluntary reciprocal exchange of resources among affected parties. Every system has capabilities, vulnerabilities and things to accomplish. Borrowing from the stakeholder perspective in strategic management thought, stakeholders are groups without whose support a system will cease to exist (Freeman 1984, 2010).

For a local development-oriented system to sustain itself, it must offer long-term value to its clients and also to benefactors, members, employees, neighbors and other categories of people affected by its actions. Sustainability entails participatory processes to find out what these stakeholders want and then delivering tangible benefits to them so enough stakeholders will continue to give back to the system to keep it going (Hörisch et al. 2014). Sustainable outcomes thus depend on effective listening, learning and adjusting to stakeholder demands. As figure 5 suggests, these are often the weak links in this chain. If the system does not "close the loop" and adapt its behavior in accordance with the reactions of its stakeholders, the system will cease to deliver value and possibly dissolve.

[6] Note that sustainability and adaptability are defined in terms of each other. This circularity means the two concepts cannot technically be considered cause or effect in a theory of how sustainable development outcomes are produced.

The official message is typically that excluded or marginalized people (the target group or beneficiaries) are the most important stakeholders. Hence special effort is made to reach them. Sometimes termed local buy-in or community ownership, grassroots involvement and support is widely regarded as the linchpin of sustainability (Amazigo et al. 2007).[7]

Other influential stakeholders exist whose interests are unlikely to all be in alignment. Local elites, for example, may wish to divert a project from its stated goals and redirect it to protect or enhance their own power. Some government officials may back the activity more with words than action (the question of "political will"). The need to serve multiple interests is an ongoing test of system sustainability.

Sustainable systems provide for themselves, but self-reliance does not necessarily mean clients must sooner or later pay the full price of running every local system. That is an illusory goal for some public and social services (Kremer & Miguel 2007). Sustainability in these cases might mean to shift the source of the subvention from an international body to a reliable domestic charity or government. The key is stakeholder support. Whether it is through user fees, assessments or donations, finding revenue is difficult if a dominant coalition of key stakeholders discount the system's outcomes.

Those responsible for running the system must design efficient work routines and implement actions to reach the mutually agreed-on goals and objectives. Performance needs to be checked and appraised, especially in light of the broader outcomes being sought. Established routines and specialization are an important element of sustainability as they are cost-effective ways to handle predictable elements of the operating environment.

Except in the unrealistic situation of completely static external conditions, however, sustainability always entails adaptability (Taylor 2014) or what the business literature has redubbed organizational agility (Worley 2014). Attentive to what they ascertain through practice, managers must look beyond conventions and habits. In many development assistance projects, quantified summaries of stakeholders' views can be collected, which can improve impact and sustainability (Jacobs 2010). It may be best to stay the course with a focused strategy. On the other hand, there may be advantages to be gained by cutting back in some areas, expanding elsewhere, or entering new lines of activity. Operations may need to be altered to make them more efficient. Adaptability is a perpetual challenge. Effective managers must walk a tightrope between overreacting to negative feedback from stakeholders and being proactive to take on threats and exploit opportunities that come along. Serious errors of omission or commission may mean the demise of the system.

Two concrete examples giving context to these adaptive system processes are:

Grameen Bank: An Example of Systemic Adaptation

Among the oldest and best known MFIs is the Grameen ("of the village") Bank in Bangladesh. Simply by virtue of its longevity, this largely autonomous organization has demonstrated sustainability but more importantly it has apparently done so without compromising the output of greater financial inclusion. To borrow terminology from the field of strategic management, Grameen Bank has attained sustainable competitive advantage in the sense of a long-term lead in the industry that is difficult to replicate. Although the environment is economically impoverished, it is favorable in one sense—the cost of financial capital is less in Bangladesh than in some other low-income countries (Gobezie 2009). Grameen

[7] Buy-in and community ownership, like adaptability (fn 5), are endogenous to the definition of sustainability. Sustainable local systems must have enough community ownership or they would be non-sustained; if the system is non-sustainable then the level of ownership is necessarily too low. This circular definition makes it impossible to falsify the reasonable proposition that involving beneficiaries in planning, implementation and review activities is indispensable to securing long-term development outcomes.

has a special talent ("core competency") for grassroots organizing of its clientele, and just as importantly, at marketing itself to constituencies such as the media, international organizations, and foundations. This latter set of skills culminated in a Nobel Peace Prize in 2006 for the organization and its founder, Mohammed Yunus.

Perhaps less well known is how much Grameen experiments with its output to offer greater value for its stakeholders. In fact it has grown from a bank into a movement with multiple activities, introducing new products and services but also new business models, processes, and strategies. Grameen was first incorporated under a grant from the Ford Foundation and in the initial years, donor agencies provided the bulk of its funds. They did not dictate to the organization and probably learned more from it than the other way around. Today, the movement has diversified into the energy sector through Grameen Shakti, which has brought solar energy to hundreds of thousands of households in rural Bangladesh (Wimmer 2012). There are other business ventures in telecommunications, computer software, and information technology. Grameen also provides consulting services to development organizations around the world. While Grameen Bank is nonprofit and owned by its borrowers, one of its sister organizations[8] has a joint venture with Groupe Danone to produce nutritional and affordable yoghurt for the poorest individuals. This venture reinvests profits into other programs and identifies itself as a "social business enterprise."

Diversification may have helped it ride out exogenous shocks, but the irony is that the Grameen's growing presence appears also to have made it a target for political and economic rivals—who are also stakeholders in the sense that they potentially can stop the organization in its tracks. There was a scandal in the 1990s over the misuse of donor funding, although the bank was cleared of wrongdoing. Yunus has become a polarizing figure in his home country. The Bangladeshi government removed Yunus from his position as Managing Director in 2011, has tried to prosecute him for tax fraud, and has proposed breaking up Grameen Bank. Time will tell if Grameen will continue to adjust to these pressures from its environment or if leadership succession will make it less adaptable and ultimately less sustainable than it has been.

Playpump: An Example of Failure to Adapt

If Grameen is generally regarded as a paradigmatic example of adaptability and sustainability in development, inflexibility and non-sustainability are probably more common occurrences—although more difficult to describe in detail because such systems characteristically leave less of a record. A revealing recent counter example from the water and sanitation sector is PlayPumps International.

The PlayPump is a water pump driven by a children's merry-go-round, intended for use in rural areas of the developing world. The merry-go-round is actually a disguised water wheel. It is designed so that children at play simultaneously pump groundwater to an elevated tank from which water can be drawn. The water tank carries billboards that are rented out for both commercial and public service advertising—producing income that pays the company that manufactures the PlayPump to maintain the pumps. This sounds almost too good to be true—potable water produced by clean human energy at no net cost while simultaneously providing children with exercise and healthy recreation. And the fact is that the system is too good to be true.

The first PlayPump was installed in South Africa in 1993. The parent organization was comparable to Grameen in satisfying donors and the media. It won a prize for innovative technology from the World Bank. Favorable stories appeared in the New York Times and on public television in the United States. In 2006, First Lady Laura Bush and former President Bill Clinton appeared together to announce a

[8] Grameen Danone Foods

multimillion-dollar grant to build more PlayPumps. The goal was 4,000 installations by 2010, meaning clean drinking water for 10 million people in 10 African countries.

Regrettably the users were never as enthusiastic as the donors and the enterprise soon began to founder. Children became bored with the merry-go-rounds and women who tried to spin the pumps themselves found the task too demanding physically. PlayPumps cost four times as much to install as an equivalent hand pump. Advertising space was often unsold. Maintenance was deferred. UNICEF produced a critical report. Public television did an exposé. As of 2009, PlayPumps International ceased operations. This is hardly an exemplary case of adaptability in development, but it does show that systems cannot avoid reckoning with massive negative feedback. Rather than try to fix a flawed technology and overambitious expansion plan, this organization opted to close and donate its assets in 2010 to the nonprofit Water for People (Zenios et al. 2012).

Learning from Experience

The overarching theme in figure 5 is systemic or organizational learning—something Grameen has done so far and PlayPumps International did not do. All systems must adjust to changing social, natural and economic conditions to survive, which usually occurs by a combination of purposeful and accidental adaptation to environmental threats and opportunities, both large and small.

It is important to be clear about the unit of analysis. As discussed earlier, systems theory can capture most aspects of development. Development can be conceptualized as a process that occurs through vast, somewhat amorphous systems, such as the educational system (Riddell 2012) or the healthcare system (WHO 2007). As a practical matter, the systems development practitioners actually work with are embedded in tangible organizations that are meshed to these larger systems. These specific local systems may be encouraged to use self-evaluation and environmental scanning to facilitate purposeful adaptation, although they may inevitably be forced to gain impromptu knowledge through adversity. With any luck, synergies can be found with other local systems to share new information and reproduce innovative practices.

Taking concrete organizations as the unit of analysis, however, creates a methodological problem in external evaluation. The system is a means to an end. What should be central in sustainable development is the perpetuation of positive outcomes, with the preservation of any particular system of secondary value. But since donors engage particular organizations for finite tasks, donors' understandable bias is to see those systems improved or transformed so they go on working, thereby justifying the original decision to invest. This is a form of what sociologists call goal displacement, whereby the major ends publicly sought by an organization are substituted by the means.

A related issue about planned organizational learning is that evaluators have a tendency to track less important activities because they are immediately measurable, while they may pay reduced attention to high-value considerations because those are harder to grasp. This phenomenon is known as measurement inversion. In post-completion evaluation of development assistance it is relatively easy to answer questions about inputs, processes and outputs: "What did we provide? "How did our counterparts use it?" "Whom did we reach?"

A more important question is "What did we accomplish?" This is a question about outcomes—the things that ensued as a consequence of what the system provided. They are difficult to pin down because of intervening variables. If a community became richer or healthier or better off in some other way can the local development partner be given credit? Did the delivery of technical advice or seed funding have a ripple effect in precipitating these changes? If a community did not make measurable improvements perhaps there was an unforeseen disconnect or clash with other formal or informal local systems. Does that mean the project failed or that random external factors swamped the positive outcomes making the project appear to have fallen short?

Sustainability inserts an additional layer of complexity to assessment. As suggested by the caption at the center of figure 5, the relevant question here is "Will we provide long-term stakeholder value?" It is impossible to give an objective answer because the long term is indeterminate. Unknown variables can affect stakeholder values in the time to come. It is much easier to know if an organized entity is unsustainable, which is verifiable in the present, than it is to predict future outcomes. The hope is that an organization proven adaptive up to now will carry on iterative learning and adjusting indefinitely. But past performance does necessarily indicate upcoming performance.

And how far back should we look back for evidence? The average life expectancy of a Fortune 500 corporation is between 40 and 50 years. The average national constitution is replaced every 19 years (Atkins et al. 2009). What portion of these time spans would be needed to demonstrate credible proof of sustainability or adaptability?

The practical and theoretical challenges of separating large, ill-defined local systems from specific development partners, and trying to predict either's capacity for knowledge acquisition and sustained beneficial outcomes are illustrated well in the democracy and governance sector. The example shows that systems may learn from receiving a combination of intended and unintended feedback signals, with ambiguous results.

Example: Elections and regime change around the world

Since the end of the cold war, the international community has encouraged competitive elections and political system democratization. The organization Freedom House reports there were 69 "electoral democracies" worldwide in 1989-90 compared to 120 10-years later. Electoral democracies are defined as states with multiple political parties and universal adult suffrage, which hold regular credible elections with generally open political campaigning. Such political systems are meant to be self-renewing and to provide broad-based benefits through majority rule—that is, to be sustainable systems across the definitions looked at in this literature review.

But the international spread of democracy has stalled and policymakers have grown unquiet about democratic backsliding. For USAID this is a matter of principle. According to the *Democracy, Human Rights and Governance Strategy* (USAID 2013b, p. 2), a "core belief" of the agency is that sustainable development depends on democracy, human rights protection and good governance.

While competitive elections are an essential element in reaching the above holistic outcomes, political scientists have begun to take note of the fact that competitive elections do not necessarily lead to a transition from dictatorship to stable democracy. Many countries that hold elections instead settle into steady patterns of competitive authoritarianism (Schedler 2006; Levitsky & Way 2010). Formal opposition and some open political debate occur, but the partisan playing field is tilted in favor of the governing elites.

Competitive authoritarian systems have proven surprisingly resilient. While the election process is far from free or fair, it does provide feedback to those in power and allow the regime to adjust public policies accordingly (Hafner-Burton et al. 2014). Very recent research shows that electoral upsets to ruling parties in this type of regime predict increases in education and social welfare spending and decreases in military spending following elections (Miller 2014). Democracy aid to these systems seems to be correlated with less civil conflict (Savun & Tirone 2011).

For the most part, these are definitely not the legitimate, inclusive, representative governments sought by donors but in some cases they could be second-best solutions for sustainable quasi-developmental outcomes (Goldsmith 2007). One statistical model, for example, shows that corruption in competitive authoritarian regimes encourages political stability. Clientele-ism serves as an informal institution that allows leaders to build political support (Fjelde & Hegre 2014). In other words, many political systems

have adapted to their environment (or perhaps fallen back on well-worn practices) in ways donors did not mean to happen, while still allowing some beneficial results though mutual exchange of resources inside patron-client networks.

Example: Local partners for democratization

The received practical wisdom among donors is to cooperate with acceptable local partners to clean up election processes and create more transparency and accountability than can ever be found in a patron-client network. Regrettably, few recipients of democracy aid to date report much progress for financial independence (Barkan 2012, p. 132), which calls their sustainability into question.

The local partners might be civil society groups. For example USAID, along with many other local, regional and international funding organizations, supports the Electoral Institute for Sustainable Democracy in Africa—an NGO meant to promote citizen participation and credible elections. Or the partner might be a government unit such as an Election Management Body (EMB)—the national organization responsible for maintaining voter registration lists, counting the votes, and certifying the results of elections. USAID (2013b, p. 20) has explicitly committed itself to help strengthen independent election bodies to administer elections more effectively.

Competitive authoritarian elections are sometimes marked by the unintended outcome of electoral violence. Pressure for reform may follow. After the bloodshed of Kenya's election in 2007, that country established a special government commission to investigate how to avoid a repetition at the next election. Among its recommendations were to overhaul Kenya's discredited EMB. Important technical improvements to protect against vote rigging were introduced, such as biometric voter registration and verification using fingerprints and immediate transmission of election results directly from the polling station using a specially designed mobile phone application. The replacement Independent Electoral and Boundaries Commission garnered unprecedented confidence according to public opinion surveys (Cheeseman et al. 2014). The unit was incorporated in the new national constitution by referendum in 2011.

Bilateral financial and technical assistance was significant. The United Kingdom, for example, programmed £8.3 million[9] for electoral and security reforms in Kenya. USAID has an ongoing $23 million[10] project to train and give technical assistance to Kenya's EMB. Canada sponsors an $8 million[11] project to improve voter registration. Perhaps these outside resources provided the differential of success for implementing EMB reforms. Kenya seems a textbook example of donors supporting local stakeholders as they move down a path of reform, as opposed to donors leading them down that path.

The initial outcome of this collaboration is promising. The 2013 general election was much less violent despite a razor thin margin of victory that could easily have prompted protest and killing. But is the outcome sustainable? Many area specialists are skeptical and see 2013 as an aberration. Shifting over permanently to a peaceful national electoral trajectory will be difficult because it threatens current leaders and their followers (Mueller 2011).

Support for a cautious perspective on long-term outcomes of EMB technical assistance is provided by the example of Nigeria, where the history of electoral reform parallels Kenya's in many ways but with worse outcomes. Nigeria set up an Electoral Reform Committee charged with recommending reforms following that country's 2007 election. Many of the proposals resembled those made by the parallel Kenyan panel, such as steps to secure the financial and operational autonomy of Nigeria's Independent

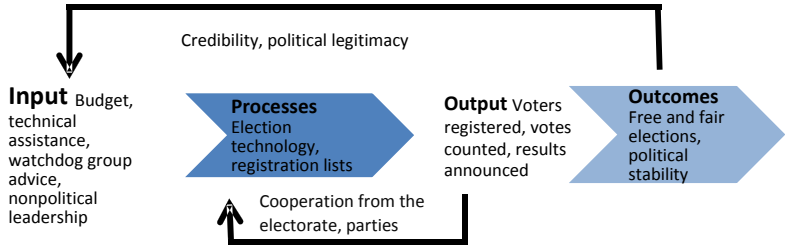
[9] http://devtracker.dfid.gov.uk/projects/GB-1-202527/documents/
[10] http://www.usaid.gov/kenya/fact-sheets/kenya-election-and-political-process-strengthening
[11] http://www.acdi-cida.gc.ca/cidaweb/cpo.nsf/vWebCSAZEn/BA63722C5BF6581C85257CA70035AD63

National Election Commission. The National Assembly incorporated several of the committee's recommendations into the constitution. Yet the next election in 2011 proved no less violent than the previous one (Lewis 2011) and the 2015 election is shaping up to be even bloodier (International Crisis Group 2014). It is ambiguous to compare the level of domestic political will in these two cases, but some observers are skeptical about Nigeria's commitment to EMB reform (Domingo & Nwankwo 2010).

Catalyzing Sustainable System-Wide Change

The conventional wisdom in development theory would be that local "buy-in" is probably the critical differentiating factor in these two cases. Put in the input/output framework, a sustainable EMB (hopefully Kenya's Independent Electoral and Boundaries Commission is one) might look like Figure 6. Some critical extra input (technical advice and funds) comes from donors, but the bulk of the input (leadership, staff, budget support, legislative parameters, and the like) is generated by the host country. The system's processes and outputs involve registering voters, maintaining registration lists, and so forth. The creation of an inclusive and collaborative forum in which political actors can negotiate electoral issues seems important to avoiding electoral violence (Opitz et al. 2013). A decisive variable is popular confidence in the EMB, which in turn affects perceptions of election quality (Kerr 2009).

FIGURE 6: SUSTAINABLE ELECTION MANAGEMENT BODY



Done credibly, the immediate outcome of this administrative work is a fairly peaceful and legitimate election encouraging a stable socioeconomic climate. Impact on the geophysical environment is relatively minor in this example, although information technology may reduce the paperwork and travel associated with voting and election monitoring. The circuit is closed as the election's accomplishments and failures generate constructive criticism and compliance from the citizenry, watchdog groups, the media, politicians and donors themselves. From a donor's perspective, sustainability is achieved if a continuous path for carrying these flows among stakeholders emerges using primarily domestic resources.

Statistical evidence suggests that a positive relationship exists between specific democracy aid packages and progress toward democracy (Scott & Steele 2011). But the data also show many additional social and economic factors affect the quality of democratic governance in a country (Clague et al 2001; Hadenius & Teorell 2005), of which an effective EMB is probably only one small part. It is important to keep in mind that any discrete political or administrative entity, such as an EMB, is set in a larger complex of organizations, in this example the national and international political systems. Looking at these higher level systems, we can see that it takes the combined effect among various component systems to produce sought-after sustainable outcomes, and, conversely, that one or two discordant elements might lead to unwanted or reversible outcomes.

Particularly germane to monitoring and evaluation of democracy and governance aid, ingrained democratic results are only revealed over time (Finkel et al. 2007). A rule of thumb among some political scientists is that it takes two election turnovers to say with confidence that a democratic system

has been institutionalized in a country. That is, power must change hands twice peacefully through elections to consider a new democracy satisfactorily consolidated (Huntington 1993, p. 267). National election cycles are typically four or five years long and incumbents are often re-elected so this benchmark could take years to see. And even a supposedly consolidated democracy can suffer a coup or other irregular transfer of power. Under the circumstances, just a very rough prognosis of the sustainable impact on democratic stability of any given EMB project is realistic.

Assessing Sustainability

Since the adoption of the Millennium Development Goals (United Nations 2000), development agencies have been especially attentive to metrics for measuring progress in development. Sustainability is what methodologists call a latent variable. It cannot be observed directly. It must be estimated based on things that can be observed. We can aggregate observable variables to represent sustainability. Input, processes and outputs are usually the easiest system variables to operationalize, although soft resources such as local buy-in or country ownership must be measured with proxies.

Starting with the tripartite concept of sustainability, typical indicators of (un/)sustainability would show (1) natural resource depletion and pollution damage; (2) changes in the quantity and quality of social and institutional capital; and (3) growth of human capital and other economic and financial assets (UN System Task Team 2013). Sustainable outcomes are the steady return expected from investing these resources efficiently and effectively. Local partners serve a largely instrumental function as means to direct such investments in this view.

Turning to the donor-centric perspective, we have seen that an unspoken assumption may be that survival of a local partner itself has some intrinsic worth. Not only are these systems the foundation to deliver lasting development benefits, but donors may unconsciously want to validate their choice of development partners. The sunk cost of abandoning an established relationship may be difficult for donors to acknowledge.

The JBIC (2008) proposes four generic questions to be answered related to partners' sustainability during ex-post evaluation:

1. **Technical**—Are there adequate trained staff to operate and maintain the project facilities?
2. **Managerial**—To what degree are the decision-making and organizational control systems ready to assure proper operations and maintenance?
3. **Financial**—Do the implementing agencies have the capacity to bear recurrent costs, including stable subsidization from the national government?
4. **Physical**—Are the project facilities in satisfactory condition at the time of evaluation, and are spare parts, fuel or other resources available?

These are valid points of inquiry, but they sidestep the deeper issue of whether desired development outcomes are likely to be sustained.

Across the perspectives on sustainability, a critical component of long-term benefit flows is whether the aid recipient takes responsibility of the system and its activities. The hypothesis is that serious dedication to a development outcome now, will convert into attainment and retention of the outcome later on. Moving closer to this side of the sustainability problem, the UNDP (2011) suggests the following points be explored when a project or program is completed.

1. **Impact**—Were the project's achievements maintained and expanded over time?

2. **Learning**—What was learned from the project? Have any knowledge and lessons been used in it or elsewhere?
3. **Buy-in**—What is the degree of national or local ownership of the set of activities? How could national ownership be improved?
4. **Future value**—What are the indications that government or civil society entities will continue to support or scale up this or similar initiatives?

To measure the degree of ownership, a common approach is to create a composite indicator meant to measure how committed various stakeholders are to a particular program or development outcome.[12] These indexes, tend to have similar component measures (e.g., of political will, financial stability and so forth), so those components may be thought of as generally accepted conditions of sustainability.

Sometimes the composite indicator is qualitative, based on the judgments provided by a panel of experts. One example is the United Nations, USAID, and POLICY Project's AIDS Program Effort Index[13] (API). It surveys practitioners to get their sense of the government's seriousness about combatting AIDS in their country. API tries to track the level of effort different countries have made against the disease. Participatory monitoring and evaluation methods pull in the opinions of lay people touched by such programs.

A contrasting approach is to use existing quantitative data to create a summary indicator of political commitment. An example is the Hunger and Nutrition Commitment Index[14] (HANCI), developed by the Institute of Development Studies. HANCI uses several sub-indicators to measure the devotion level of individual developing countries to reducing hunger and under-nutrition. By analyzing these multiple factors, the index attempts to identify how governments prioritize action on the two challenges to national health. Also see the numerous instruments on family planning service outcomes proposed by USAID's MEASURE Evaluation Population and Reproductive Health[15] (PRH) project for an idea of the range of measures that can be used as proxies for aspects of sustainability.[16] It is possible to imagine similar subjective and objective scorecards for estimating the degree of local buy-in to any development sector initiative, not just to hunger and nutrition.

What about measuring system adaptability, which, as we have considered, refers to a host country organization's renewal capacity. An adaptable development partner or sustainable institution learns from its environment (Brinkerhoff & Goldsmith 1992). It can modify the way it produces and delivers goods and services. It can rethink its underlying business model and move into new activities. Tools exist to help private sector organizations assess their adaptability (e.g., Blueprint Research & Design, Inc. 2001; Management Performance International, Inc. 2012).

The measurement challenge here is that adaptability, similar to other facets of sustainability, is a characteristic of a system's potential while assessment has to be based on retrospective data. Numerous indicators can be conceived to show a system's recent capacity for adaptation. However, they may not

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[12] Composite indexes of development outcomes are popular with policymakers and the media because they lend themselves to ranking of national or project performance on complex tasks. They are controversial among social scientists because the aggregation of data is subject to many possible biases (Goldsmith 2011). In particular the selection, scaling and weighting of the subindicators influence the results found. Nonetheless, composite indexes are useful starting points for deeper probing of trends and issues in sustainable development.
[13] http://www.policyproject.com/abstract.cfm/1677
[14] http://www.hancindex.org/
[15] http://www.hancindex.org/
[16] Additional recent guidance about measuring the sustainability of results of development investments can be found in UNDG (2011), CIDA (2013) and OECD/UNDP (2014).

be good predictors of whether that capacity will remain vibrant. Systems (organizations) disappear, merge, or mutate beyond recognition with surprising speed. Still, a reasonable goal of post-completion project review is to encourage dialogue about adaptable, sustainable systems, and many indicators are available to offer managers a chance to look into a mirror. Engaging stakeholders in learning about and debating the prospects for long-term development outcomes seems a promising avenue for rounding out the evidence (Scerri & James 2010).

CONCLUSIONS

Sustainability is a conceptual abstraction of dimensions to development that cannot be directly observed. We can think about sustainability, but since it has become a catchphrase, sustainability lacks what is known in philosophy of science as construct clarity. It fails to provide sharp distinctions that are readily comprehensible to a community of experts. Clear and accurate vocabulary is fundamental to construct clarity. This literature review has attempted to reduce some of the noise in sustainability and related concepts by going over the explicit and implicit meanings as they have emerged through usage.

As discussed, sustainability tends to be seen through two lenses. The more restricted view wants to assure the implementation, and eventual handoff to local bodies, of impactful development activities. The wide angle view emphasizes the connection among poverty, constrained social institutions and ecological destruction in holding back development. The zone of optical overlap is the local system(s) that can deliver development benefits over the long run.

Systems transform inputs into outputs and outcomes. In describing sustainability, the open systems model includes the expectations of various stakeholder groups about those processes and results. Every host-country partner organization has foreign and domestic constituencies. They compete or collaborate to set development goals and choose strategies to reach them. Some coalition of these interested parties must be kept satisfied to assure the continued relevance of the system for development. For development policymakers and practitioners the specific reference point is typically a local organization or set of organizations which they expect will have positive multiplier effects in the host country. Sustainability involves the system being able to find ongoing endogenous solutions to meet recurrent and evolving stakeholder demands.

Adaptability is the system's capacity to react appropriately when factors change, whether in small steps or quantum leaps without warning. It is one thing to produce worthwhile outputs under predictable conditions. Sustainable systems survive by producing value when the unexpected happens. They are adept at discovering new ways to gain stakeholder loyalty and limit discontent without losing track of the system's function or purpose.

Implications for Ex-Post Evaluation Series

Policymakers rightly have post-hoc questions regarding development aid and its influence on the adaptability and sustainability of targeted local systems. Unfortunately, rigorous satisfactory answers about sustainable outcomes are difficult due to the complexity along the links from input to outcome. This also can lead to causal misattribution and time inconsistency. However, involvement of stakeholders in mixed quantitative/qualitative examinations of sustainable outcomes through ex-post evaluation remains viable, while keeping in mind the impediments to precise answers.

Given the methodological issues of attribution and timing, evaluators must make do with somewhat imprecise, backward-looking, estimates of multiplier effects of external contributions to sustainability.

Participatory techniques in particular offer favorable pathways for assessing sustainable change and learning how to reproduce it in new settings.

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ANNEX B: STATEMENT OF WORK

Literature Review for the Sustainable Outcomes Ex-Post Evaluation Series on Basic Education

1. Task Description

This Statement of Work (SOW) outlines the requirements for a review of literature addressing the evidence or evidence gaps on the factors that contribute to the sustainability of outcomes in basic education programming. This literature review will inform a series of ex-post evaluations on sustainable outcomes in the basic education sector currently being designed.

2. Background

USAID's Office of Learning, Evaluation, and Research, in the Bureau for Policy, Planning, and Learning (PPL/LER), is undertaking a series of ex-post evaluations of USAID programs concerning "sustainable outcomes." This purpose of the evaluation series is to better understand what USAID and its implementing partners can do to promote sustainable outcomes. The series will take a systemic approach to understand a variety of perspectives and intended and unanticipated outcomes. Basic education activities will be the evaluand for an initial round of evaluations under the sustainable outcomes rubric, and provide the context for site selection and determining which activities and outcomes to focus on as a starting point. The E3 Analytics and Evaluation Project, led by Management Systems International (MSI) along with team members Development & Training Services (dTS) and NORC at the University of Chicago, is supporting the design and implementation of this evaluation series.

This evaluation is taking place in the context of a paradigm shift in the donor community that is placing greater emphasis on the sustainability of development outcomes in all contexts, but particularly in fast-moving and dynamic contexts such as those found in conflict-affected and post-conflict areas. This shift is represented by the White House's Fact Sheet "Fact Sheet: U.S. Global Development Policy" (September 22, 2010) and USAID Policy Paper "Local Systems: A Framework for Supporting Sustained Development" (April 2014).

3. Objectives of the Literature Review

The objectives of the literature review are to identify existing research, literature and evidence or evidence gaps on the factors that contribute to the sustainability of outcomes in basic education programming through a better understanding of: the use and operationalization of the terms "sustainability" and "sustainable outcomes" (Objective 1); and the relationship between sustainability and adaptability (Objective 2).

Objective 1

The first objective of the literature review will be to address the questions:

- What is sustainability?
- How might the term "sustainable outcomes" be defined?

The literature review will address definitional issues and identify, through existing literature, the commonly accepted definition(s) of "sustainability" and "sustainable outcomes" in the context of international development assistance programs, including specifically how the terms are operationalized

through indicators and metrics. The review should not focus on any individual thematic area (education, health, environment, etc.) but instead examine understanding of the term "sustainability" across the spectrum of international development assistance.

A non-exclusive list of the subsidiary topics that should be addressed by the review would include:

- Evolution of understandings of the term(s);
- The extent to which the term is understood in relation to international development programs themselves or in relation to the regional, national, sub-national and local contexts or systems in which programs take place; and
- The extent to which the term is understood differently with respect to various target beneficiary groups for international development assistance, including government officials, the general populace, or marginalized groups such as the rural poor, indigenous groups or women.

Objective 2

The second objective of the literature review will be to address the question "What is the relationship between sustainability and adaptability?"

The literature review will identify existing research, literature and evidence or evidence gaps on the relationship between sustainable development outcomes and adaptability of interventions and systems that produce these outcomes over time and to changing circumstances. While the literature on this topic is significant in the context of climate change and environmental programming, the literature review should focus on understandings of the relationship between sustainability and adaptability across the spectrum of international development assistance.

4. Data Sources

The review will draw on a range of documents, including academic articles, working papers, discussion papers, book chapters and books, case studies and relevant grey literature.

The reviewer should document all search criteria/terms and databases used to identify relevant literature so that the review can be duplicated.

<u>This literature review will be based upon a curated selection of documents that will be most helpful for designing this evaluation within the boundaries of sustainability and systems. This review is not intended to be based on a comprehensive search of all materials relating to the topics.</u>

5. Audience, and Intended Use

The primary audience for this task will be PPL/LER staff involved in the design of this evaluation series, members of a Methods Working Group, to be identified, the E3 Analytics and Evaluation Project team supporting the evaluation design process, and the eventual evaluation team(s) that conduct the evaluation series.

The literature review will inform future decisions about the scope and parameters of the ex-post evaluation series. It is also anticipated that the literature review will serve as an ongoing resource for the research process over the course of the evaluation series. It could be used multiple times, adapting to different analytical routes.

6. Deliverables

The following deliverables are anticipated under this task, pending further discussion with USAID:

Deliverable	Estimated Due Date
Literature Review Methods Summary outlining the selection criteria for inclusion of relevant literature, including the search criteria/terms and databases that will be used to conduct the literature review.	o/a November 14, 2014
Final Literature Review Submission	o/a December 5, 2015

The Draft and Final Literature Review should include the following sections:

- Executive Summary
- Methodology
- Findings
- Conclusions
- Bibliography

The Final Literature Review should not exceed 20 pages (excluding footnotes).

Unless an exception is made by USAID in writing, all documents and deliverables under this SOW are expected to be kept internal to USAID and the Project team working on the Sustainable Outcomes series.

7. Team Composition

The literature review will be conducted by one subject matter expert, although support from research assistants may also be appropriate. Additional home office support, oversight, and expertise will provided by the MSI team.

Subject Matter Expert

The subject matter expert will have extensive experience in (a) developing and implementing international development assistance programs in a variety of contexts and (b) conducting research or assessments on the sustainability of international development assistance programs. Specifically, the expert will have contributed to the body of knowledge on strategies to promote sustainable outcomes in these contexts. The expert should hold at least a master's degree with at least 10 years of experience in the area of international development assistance in developing countries.