SEED Research and Learning Programme 2007-8:

Scale-up and replication for social and environmental enterprises

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SEED Initiative

The SEED Initiative identifies, profiles and supports promising, locally-led start-up enterprises working in partnership to improve livelihoods, tackle poverty and marginalisation, and manage natural resources sustainably in developing countries. SEED develops learning tools for the broad community of social and environmental entrepreneurs, informs policy- and decision-makers, and aims to inspire innovative entrepreneurial approaches to sustainable development.

SEED is a global network founded in 2002 by IUCN, UNDP and UNEP to contribute towards the goals in the UN's Millennium Declaration and the commitments made at the Johannesburg World Summit on Sustainable Development.

Partners in the SEED Initiative are **IUCN** (the International Union for Conservation of Nature), the United Nations Development Programme (**UNDP**) and the United Nations Environment Programme (**UNEP**). Major Supporting Partners are the governments of **Germany**, the **Netherlands**, **South Africa**, **Spain**, the **United Kingdom** and the **United States of America**.

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Table of Contents

1.   Introduction

1.1   Background

The SEED Initiative -- Supporting Entrepreneurs for Sustainable Development -- inspires, supports and researches **exceptional, entrepreneurial, start-up, multi-stakeholder partnerships** for **locally-led sustainable** development**.** It was founded by **IUCN, UNEP and UNDP in 2002** to deliver concrete progress towards the internationally-agreed, aspirational goals in the UN's Millennium Declaration and the commitments made at the World Summit on Sustainable Development in Johannesburg. SEED does this by offering an integrated package of awards, technical support, research and learning. These activities are delivered by specialist service providers, and managed by a central Secretariat.

SEED's Research and Learning programme, delivered by the International Institute for Sustainable Development (IISD), studies the Award Winners, the SEED support activities, and other partnerships to draw out lessons and to develop generic management and assessment tools and relevant knowledge to inform and inspire the SEED and other social and environmental entrepreneurs.

The following is one of a series of published reports prepared by the Research and Learning programme that covers the following issues of interest to the international partnerships and sustainable development community:

1. Typologies for partnerships and for social and environmental enterprises: Exploring SEED winners through two lenses

2. Recognition and reward programs that support sustainable development entrepreneurship

3. Critical success factors and performance measures for start-up social and environmental enterprises

4. Scale-up and replication for social and environmental enterprises

1.2   Purpose of the research on scale up and replication

As part of the SEED research agenda, the Research and Learning programme was asked to consider one of the more common questions posed by the international development community: how can successful ideas be grown and adapted to other regions, countries and sectors, in order to fast track progress towards development goals? Within this question are a number of related challenges for SEED:

- How can start-up enterprises be taken to higher levels, in terms of increasing economic benefit as well as social and environmental gains?

- What are the enabling environments necessary for growth of an enterprise and its replication elsewhere?

- For SEED in particular, how does one pick "a winner": what are the characteristics and elements of an enterprise that will lead to success for the startup enterprise?

This last point was addressed in the SEED report, "*Critical success factors and performance measures for start-up social and environmental enterprises*". Eight factors were identified,

the presence of which may assist SEED and others in determining levels of investment and support for start-up enterprises in developing countries.

The following paper presents a number of issues arising from a preliminary investigation into how start-up social and environmental enterprises can expand both their business and their impact, and how broader social and environmental benefits can be realized beyond the impacts of the individual enterprises.

1.3   Definitions

The terms replication and scale up tend to be used in tandem but the concepts are somewhat different, and have different risks attached. Replication (sometimes called "scale out") refers to the transfer to a different location of a tested concept, a pilot project, a small enterprise, and so forth, in order to repeat success elsewhere. Scale up usually refers to taking a tested concept, pilot project, initiative, enterprise and expanding it, in terms of people served, revenues generated, or other targets.

1.4   Methodology

Scale up and replication can be particularly difficult areas to research due to the multiplicity of types of scale up and replication efforts and the widely varying conditions precedent that include geographic and sector-based determinants for success. The following examples serve simply to illustrate the considerable diversity of contexts and approaches to scale up and replication of development activities:

- UNESCO's approach to "scale-up" its Community Multimedia Centres initiative, by piloting 39 centres in 19 countries, and then replicating the model in 20 different locations in each of three countries in Africa;

- The International Fund for Agricultural Development's approach to replication of good practice in rural development projects: these projects start with large scale, long term commitments but then invest in knowledge-sharing across projects to encourage replication of good practice and innovation;

- The Grameen Bank, which piloted the microcredit concept, and then slowly advanced its availability to the poor and marginalized across Bangladesh. Combining the demonstrated success of that effort with good communications has led to an almost "viral" take-up by many other institutions;

- The Thailand 100-percent use condom campaign, which, when scaled up nationally, led to a 50% reduction in HIV Aids infections in that country.

Methodologies for investigating scale up and replication also vary:.

- Practitioner reports and workshops: Sector-based reports and meetings in which practitioners present their experiences with scaling up or replicating programmes (cf Gonzles et al, 1998, on Save the Children's Warmi project for mobilizing Bolivian communities around reproductive health; and also, the UK Consortium on AIDS & International Development Symposium on Sharing of Best Practice on Orphans and Vulnerable Children Programming).

5

- Case studies by independent researchers: Primarily focused on community development practices, with between three and ten examples reviewed per study. While umbrella studies of scale-up of community-driven development exist (cf Gillespie, 2004), many researchers ensure that their cases have at least one or two elements in common – either geographic (examples taken from one country or region (cf Basu, Srivastava, 2005 on microfinance in India); or sectoral (examples of NGOs or government programs or social enterprises – cf Alvord, Brown 2002 on entrepreneurship) or a specific development challenge (eg, health, environment – cf Yousuf, Ali 2007 on community composting).

- Longitudinal studies, in which an initiative is revisited over an extended period of time to see whether and how the initiative has grown (cf Ashoka Foundation, which conducts a "Measuring Effectiveness" study each year on Ashoka fellows nominated five and ten years earlier.)

In order to provide some insight to SEED on the challenge of scale up and replication for SEED enterprises, the researchers chose to focus their investigation on three data sources:

- Review of recent literature on replication and scale up in the international development context;

- Interviews with 10 awards programs similar to SEED on how they address scale up and replication (practitioner information);

- Review of 2005 and 2007 award recipients with respect to their stability and growth, and to learn from them whether they have ambitions to expand their projects, and what they see to be the barriers and incentives to growth and replication (case study information)

2.   Literature Review

The debate on replication and scale up is driven in large part by the donor community seeking to secure even greater returns on their initial investments by seeing successful projects increased in size and scope and/or repeated elsewhere. There is a legitimate desire, where success has been observed with a demonstrable development dividend, to advance that success on a larger scale. But the literature tends to focus on programmes developed, piloted and often delivered by the donor community and/or the public sector. How start-up social and environmental enterprises approach scaling up their own activities and their impacts for a greater good is less well understood.

Analysts of donor and public sector driven scale up and replication efforts have focused on a number of important considerations:

- clarity on types of processes that underpin scale up and replication efforts;
- "how-to" steps to initiate scale up and replication;
- enabling environments necessary for success; and finally, achieving step changes or transformations towards broad societal goals.

2.1   Taxonomy of processes

Gillespie provides one of the more comprehensive taxonomies of scaling up processes to achieve significant development at the local/community level.

- **Quantitative,** where a program expands in size, geographical base, or budget;
- **Functional,** involving increases in the types of activities and integration with other programs;
- **Political,** involving increases in political power and engagement with wider political processes;
- **Organizational,** involving increases in organizational strength. (Gillespie, 2004, p7)

Table 1: Scaling up processes (Gillespie, 2004, p8)

Quantitative scaling up (or scaling out)	
Spread	Increasing numbers of people spontaneously adhere to the organization and its programs, perceiving them to serve their interest/preferences
Replication	A successful programme (methodology and organizational mode) is repeated elsewhere.
Nurture	A well-staffed and well-funded outside agency, using a specific incentive-based methodology, nurtures local initiatives on an increasingly large scale.
Integration	A programme is integrated into existing structures and systems and, in particular, government structures after it has demonstrated its potential.

Functional scaling up	
Horizontal	Unrelated new activities are added to existing programmes, or new programmes are undertaken by the same organization.
Vertical	Other activities related to the same chain of activities as the original one are added to an existing programme (i.e., upward or downward linkages are made).
Political scaling up	
First generation	Essentially service delivery.
Second generation	Community capacity development for self-reliant action. Through better information and mobilization, an organization's members or local communities are stimulated to participate in the body politic.
Third	Beyond the community, influence policy reform to foster an enabling environment. This may involve networking and aggregation of organizations into federative structures designed to influence policy.
Fourth	Beyond specific policies, catalyze social movements, and/or direct entry of grassroots organizations (or their leaders) into politics (either through creating or joining a political party).
Organizational scaling up	
Internal management	Increasing organizational capacity and improved management processes (links to effectiveness and efficiency).
Financial viability	Increasing financial viability/autonomy, including self-financing, through subcontracting, consultancy or fees for service.
Institutional diversification	Both internally and externally (including diversification of donors) and linkages with other actors/organizations.

The underlying assumption in this taxonomy is that there are external drivers, and support, for scaling up development at the local level, with the core recommendation that this development be anchored within existing contextual systems (government), frameworks (eg, PRSP), and processes (decentralization) (Gillespie, ii). Start-up small, micro and medium sized enterprises that have strong local involvement may recognize that they would benefit from these processes, but it could be well beyond their capacity to initiate and sustain these processes in order to secure their own growth and impact.

2.2   Steps necessary to scale up or replicate a successful initiative

The following table, "Eight Steps to 'Scaling-Up'" presents a summary of the major steps that the Warmi Project followed in mobilizing Bolivian communities to strengthen reproductive health practices (Gonzales et al, 1998). While the specific context was scaling up a successful health program, the steps are generic and could be applied to a wide range of development initiatives.

Table 2: Steps for Scaling up successful initiatives

1. Establish that the technical intervention, methodology or approach that is being considered for scaling up leads to desired results through carefully evaluated and documented research.

2. Assess possibilities for scaling up (need, available resources, political will, potential partners, etc. and potential barriers to scaling up (opponents and their arguments, policies, etc.).

3. Build consensus for scaling up among decision makers, implementers and leaders of those who participate in the programme/use the intervention through meetings, presentations, field visits, etc. with key individuals and groups.

4. Ensure that policies are supportive and that resources will be available.

5. Develop plans/proposals with decision-makers and implementers on the organizational structure and relationships of the scale-up, activities, management, monitoring and evaluation, training and technical assistance, etc. Programme designs or interventions should be simplified as much as possible and should be accessible in "user friendly" language.

6. Be prepared to solicit many donors and negotiate many hours in order to put all pieces into place. The amount of funding needed for large scale programs is often not available through only one donor. Negotiate contracts, budgets, work plans.

7. Prepare training and technical assistance teams and materials to work at regional or other level depending on organizational structure. Be flexible and adapt to meet local conditions whenever possible without losing essential elements of quality.

8. Programme implementers meet regularly on local, regional and national levels to monitor progress, detect problems, develop innovative solutions/approaches, strengthen skills and build team. Ensure that representatives from those who are participating in the programme (community men and women, etc.) participate in monitoring and evaluation at a minimum at the local level.

The scaling-up process requires a tremendous amount of negotiation, diplomacy, patience, flexibility, time and resources to be successful.

The emphasis here is on "large scale" efforts, driven by stakeholders outside of the local level context. While SMMEs may have developed a successful product or service at a local level, the type of scaling-up actions outlined here can be well beyond their capacity to initiate and drive.

2.3   Enabling environment for scale-up and replication

The more recent literature suggests an expanded view of scale-up that moves beyond the functional perspective (processes and action steps) towards "a perspective that encompasses the political and institutional conditions" (Desai, 2007 p29). Practitioners and independent analysts now advocate that an enabling environment must be in place to support scale-up and replication. What constitutes an "enabling environment" will vary, depending on the type of initiative being proposed for expansion. But in general, researchers identify access to financial, technical and political support (Alvord et al, 2002); supportive policy, legal and regulatory frameworks and better policy coordination (Basu and Srivastava, 2005) and a range of capacities within different levels of government, including documented procedures, detailed planning, good systems for sharing, spreading knowledge, incentives for stakeholders, and building on experience and existing institutions (Binswanger and Aiyar, 2003; Mansuri and Rao, 2004).

For SMMES, access to investment or a regulatory environment supportive of small business development are part of a necessary enabling environment for their growth. But

advocating for, or creating this enabling environment is often well beyond their capacity and scope of influence.

2.4   *Step changes and transformational goals*

Throughout the literature, it is clear that development practitioners and analysts are looking for a significant "step change" in development – achieving measurable poverty reduction at national levels; improved performance on indicators for health and education; preservation of biodiversity and natural resources managed sustainably. Small scale interventions, while they can provide valuable local benefits, may "remain little more than islands of excellence in a wider economic and institutional environment which is detrimental to the poor" (Uvin et al, 2000, p1409). What the literature does not address so clearly are the roles and responsibilities, in particular for those initiatives that originate locally through SMMEs, for creating the enabling environment and for helping a local SMME to scale-up its impact. If a social /environmental entrepreneur has a good, viable enterprise, is it their responsibility to work towards a larger step change in development, and transform institutions and achieve societal goals along the way? And if it is not their role, then who must work with the entrepreneurs to expand their impact?

10

3. 0 Experience of other recognition and reward programmes

Ten awards programmes comparable to SEED were interviewed as part of the SEED report on recognition and reward programmes (Paas, Creech 2008). These programmes all share with SEED a commitment to reward the combination of innovation, entrepreneurship and small/medium sized enterprise creation which is commonly considered to be an important engine for economic growth and development. In most cases, while the winning enterprises may have their roots in earlier projects initiated through development assistance, they are now independent and are working to commercialize their project, product or service in order to generate a revenue stream, either for themselves or for another group of stakeholders, and, in so doing, provide environmental or social benefits at the local level.

These programmes were asked how they approached scale-up and replication with the entrepreneurs they were rewarding with recognition and support. All said that scale-up and replication were important and many stipulated as selection criteria the degree to which the project proposed might be scalable in and of itself (increases in revenues or social or environmental benefits provided), or replicable by others elsewhere. However, although most programmes could easily cite examples of the successful growth of winning projects, or good ideas picked up and used elsewhere, there was little evidence of specific concerted or established strategies for identifying and reporting on the success of scale-up, or strategies for both promoting and reporting on where the project might have been replicated elsewhere. Some programmes stated that scale-up was measured simply by the growth of the project. Others said that evidence of scale-up and replication usually emerged from general surveys of winners. Only the Ashoka Foundation and Echoing Green indicated that they were conducting more formal effectiveness and impact studies that included specific measures for S&R. Some programmes indicated data on S&R were captured in the winners´ performance reports, because winners´ objectives were required to include S&R as part of the eligibility requirements for the award. However, it does not appear that this data has been systematically mined to report more broadly on the S&R outcomes of the award program.

It would appear from these interviews that the onus is placed on the winning enterprise itself to demonstrate its own growth and broader impact – and to define for itself what it regards as appropriate scale-up. Hence there will be widely different perceptions between entrepreneurs of what is expected of them within the framework of any reward and recognition programme. Few of the lessons identified in the literature appear to have influenced the recognition and reward programmes to support more proactively the scale-up and replication of success, at a level that might lead to the desired step changes or transformations towards broader societal goals.

This raises an important question: what if the winning enterprise chooses, in order to ensure basic economic viability and modest benefits to its stakeholders, not to pursue significant growth and to keep its benefits and impacts focused at a very local level? Should the international development community, and more specifically, recognition and reward programmes, expect these enterprises to deliver on the transformational agendas of others? Or should recognition and reward programmes take a more proactive approach, and work with the enterprises on creating the enabling environments necessary for those enterprises, and others, to expand their impact?

4.0   Experience of SEED 2005 and 2007 award winners

As part of the empirical research into critical success factors and performance measures for SEED winners, the Research and Learning programme deployed a survey instrument that included questions relevant to scale up and replication. The ten winners were asked whether their product or service had secured a niche in the marketplace; what the potential was for expansion; what would be needed to expand, and could their enterprise/product/service be replicated in different regions?

As with the research with other recognition and reward programmes, the responses raised a number of larger questions about roles and responsibilities for the scale-up and replication of start-up enterprises, beyond what the enterprises themselves could reasonably be expected to achieve.

Without exception, the SEED winners believe that they have identified a good niche for their product or service, and that while others might be offering something similar there are unique attributes to the SEED enterprises that the entrepreneurs believe will help in securing investors and markets. All believe that they have the potential for success and growth, and the potential for achieving social and environmental benefits.

What was noticeable, however, was that for 60% of SEED winners (Nepal, Sierra Leone, Ecuador, Vietnam, Madagascar, Brazil), the concept of "scale" was fairly narrowly envisioned to modest growth in their own business sufficient to provide (or, in the case of Madagascar, protect) a livelihood for the enterprise manager, and modest diversification of income for local community beneficiaries. Scale-up in the order of magnitude desired by the international development literature is simply not on their radar screen.

Two winners, Bolivia and Peru, began their enterprises with primarily a local market in mind, but for different reasons are actively pursuing growth for their business by expanding their markets.

- Bolivia: Based on the successful introduction of their water system into underserved areas through shared financing arrangements with the local users and local government, "Agua para Todos" is now investigating a similar partnership approach in Santa Cruz. They are also exploring whether and how to expand their business to include integrated water management solutions that will include sanitation as well as water supply.

- Peru: The partners in the T'ikapapa initiative found that promotion of native potatoes as a luxury item in urban markets was not leading to significant sales; the lead partner is now marketing the product in Venezula and investigating European markets for high end products, and continuing to expand relationships with NGOs and others to help expand the promotion of native crops.

Two winners did have a "bigger picture" in mind with respect to their potential for more significant and widespread economic, social and environmental impact from their ventures:

- Nigeria's Cows to Kilowatts now has a government commitment to expand their biogas technology into six cities in Nigeria, with UNDP support. Interest has also been expressed by slaughterhouses in Kenya, Zimbabwe and Egypt, with other UN

agencies now exploring how to support an expansion into other countries. But this level of expansion cannot be achieved solely on a for-profit business model: the informants noted that government support (and the related international development assistance through UN agencies) would be an essential requirement for scale-up and replication of the approach.

- SRI Cambodia/Madagascar focused on a larger scale from the beginning, recognizing the need to attract significant export contracts for local farmers, to be managed by an intermediary organization, as local partners lacked the skills and infrastructure to link with foreign buyers. However, while the Cambodian organization is stable enough now to grow and market SRI as a for-profit enterprise, the venture is at risk in Madagascar, with the ending of USAID project funding that has supported export market development.

In many cases with SEED winners, the ambitions for growth are sensible, modest, and planned in keeping with the needs of the stakeholders and market potential. While they may become more ambitious over time, their more immediate considerations are to ensure basic economic viability and modest benefits to their stakeholders.

This begs the question once again: who drives the larger scale up and replication agenda, if these social and environmental enterprises do not, and probably for the most part should not, and who should take ownership and responsibility for step change towards sustainable development?

5.0   Observations and suggestions for further work

Although the scale-up and replication literature suggests a strong, direct involvement of the development assistance community and the public sector, recognition and reward programmes tend to function as catalysts rather than as change agents proactively involved for a significant period of time in leveraging the success of the enterprises they have rewarded (with the exception of the Ashoka Foundation, which provides support for up to three years for each of its entrepreneurs together with longer term monitoring and engagement). This suggests that recognition and reward programmes such as SEED need to explore more carefully what their expectations are with respect to scale-up and replication of the enterprises they are championing. These programmes are only one of many variables affecting the success of the enterprise and the degree to which that enterprise might contribute to step change and transformation for social, economic and environmental goals.

First and foremost, these programmes should consider the questions "scale-up for what purpose and by whom?"   For the SEED enterprises, and for most other R&R program winners, the enterprise views scale up in terms of the growth of their own business – they are scaling up for the sustainability of their business and the benefit of their immediate stakeholders, not for major social transformation.

For at least four of the SEED winners (Vietnam, Ecuador, Nepal, Sierra Leone), these small scale entrepreneurial projects may be close to functioning at exactly the right scale for the local owners. By encouraging a greater scale-up, there is the risk of an enterprise over-extending its activities beyond its capacity. Scale- up must be carefully phased, guided by a proper business plan with realistic targets and timelines.

In particular, with enterprises grounded in activities such as harvesting of traditional herbs and other crops, the push for scale-up may have the unintended consequence of endangering a resource or an ecosystem. Nepal has already encountered risks of overharvesting wild seabuckthorn while cultivated stocks come to maturity. At the very least, prior to significant business expansion, an integrated environmental and social assessment should be carried out.

SEED, and other similar programmes, also want to consider how the good ideas they are championing in one enterprise might be replicated and implemented elsewhere. But, as with scale-up, due consideration may not have been given to the interests of the enterprise itself. A small scale entrepreneur with a good idea may not want that idea replicated by others: issues of intellectual property and trademarks arise, especially if replication removes business opportunities from the original entrepreneur.

Even with the agreement of the enterprise, replication is not straightforward. Improving the communications of good ideas, even providing seed funding to attract potential entrepreneurs to replicate an idea, will not be enough. Success factors for an initiative will be grounded in the local context: a favourable business environment; receptivity among the local beneficiaries; the experience and commitment of the individuals involved. An exact replication is therefore never possible; but without similar favourable circumstances in place, successful replication cannot be easily assumed. Leadership and ownership of the initiative in other jurisdictions may be problematic, especially if the replication is underwritten by significant donor dollars rather than being fostered from the grass roots.

There may not be sufficient resilience in the new community in the way of technical support, access to micro credit and other factors that could help to mitigate set backs in implementation. Legal and regulatory frameworks may well be different. All factors contributing to the success of the original enterprise must be examined in order to assess the feasibility of replication. Even with this effort, the risk of failure may be high.

SEED, and other similar programmes, should revisit their stated intentions to support scale-up and replication of social and environmental enterprises, with the following points in mind.

1. **Clarify programme expectations for scale up and replication.** Consider what, realistically, can be achieved, especially if the onus remains on the entrepreneurs to scale-up their enterprises and impacts. It may be more appropriate to focus primarily on helping to improve the chances for success of the enterprise, by providing business and related planning support.

2. **Offer tailored support.** It may be more appropriate to focus primarily on helping to improve the chances for success of the enterprise by providing tailored services such as business and related planning support. Feasibility studies will also need to be supported, together with social and environmental impact assessments.

3. **Provide longer term, proactive engagement.** If recognition and reward programmes do want to assume a role in scale up and replication for greater sustainable development outcomes, then these programmes must take a more proactive, longer term engagement with enterprises, that will help promising enterprises significantly increase their scale and impact, sufficient to lead to a step change towards sustainability in a country or sector. Feasibility studies will need to be supported, together with social and environmental impact assessments. Programmes will need to establish credible performance monitoring to assess whether the step changes are in fact being achieved.

4. **Assess project context and seek to create an enabling environment.** A key role for programmes as promoters of larger scaling up efforts will be the identification and resolution of challenges and barriers to an enabling environment that are beyond the scope of influence of the enterprises themselves. But again, this requires a more engaged approach, requiring a thorough assessment of the context in which an enterprise is functioning, in order to determine what the challenges are and how they might be resolved.

5. **For replication, foster peer learning.** With respect to replication: incentives will be needed to encourage winning enterprises to transfer their ideas, approaches and lessons learned to others. If they are in agreement to having their idea tested and developed by others, then key to this effort will be the active fostering of peer learning, by linking replicated enterprises to the original enterprise. Building the community of practice around the initiative being replicated will help to mitigate differences encountered in implementation; and might transfer valuable lessons back to the original enterprise as well.

6. **Improve monitoring and reporting.** Programmes will need to establish credible performance monitoring to assess whether step changes are in fact being achieved.

15

Appendix 1:   SEED Winners

2005 Winners

1. Cambodia, Madagascar and Sir Lanka: Environmentally-Friendly Rice (aka A Global Marketing Partnerships for SRI Indigenous Rice)

Farmers in Asia and East Africa are partners in an initiative to boost rural incomes through the marketing of indigenous and environmentally-friendly grown rice varieties. Commercial rice cultivation in the developing world is becoming increasingly questionable as a result of low market prices and the financial and environmental costs of using chemicals and fertilizers. Conventional methods of rice production are also extremely water intensive.

Some farmers in Cambodia, Madagascar and Sir Lanka have turned to a production method known as the 'System of Rice Intensification' or SRI. It involves an a la carte menu of actions including when to plant out Seedlings, weeding regimes and the spacing of plants, which can be adapted to local conditions and indigenous rice varieties.

Small rural producers who are taking part are achieving water savings of up to 50 per cent and increased yields of up to 100 per cent. This is because SRI, a collaborative effort between Cornell University, several non-governmental organizations (NGOs) and local communities, works without flooding rice paddies and results in stronger plants that need less chemical fertilizers and pesticides.

Rice produced in this way commands higher prices. The trick is to empower and assist producers to exploit and benefit from these premium prices in local and international markets. This new project, which has brought together research institutes from the United States and Cambodia and farmers organizations, is pooling experiences and skills to develop strong marketing programmes. Export markets in Europe and North America are also being explored using, in some cases, certification schemes like Fair Trade.

The Seed Award for this winning partnership was generously sponsored by Swiss Re, Switzerland.

2. Himalayas Harvesting Seabuckthorn at the top of the world

Seabuckthorn is a deciduous shrub that is common in the Himalayas. It has a highly developed root system that binds soils on fragile slopes. The presence of a natural seabuckthorn 'forest' can decrease monsoon-related loss of topsoil by 30 percent. The plant also has a wide range of commercial applications which are beginning to be exploited by commercial companies in countries like India.

The berries are highly nutritious and yield juice, as well as oils for cosmetics and traditional medicines. The leaves are also used in traditional medicines, as well as for livestock fodder, and the branches can be used for firewood.

The international HimalAsia Foundation together with local Tibetan cooperatives and a family of traditional medical practitioners are developing a sustainable programme for cultivating and marketing seabuckthorn and other medicinal plants for the local and international market. In doing so, they are not only developing sustainable livelihoods for

local people, but playing an important role in conserving biodiversity in this Himalayan mountain area.

Plans for the future include expanding on three existing seabuckthorn nurseries, training locals in the extraction and preparation of juice and helping to broker fair business relationships between international companies and local communities.

3. Madagascar's first experimental community-run marine protected area

An estimated 11.5 per cent of the Earth's land surface is now held in protected areas but only about one half per cent of the world's seas and oceans enjoy the same rights.

The 2002 World Summit on Sustainable Development's Plan of Implementation called for the establishment of representative network of Marine Protected Areas (MPAs). An experimental, community-led, scheme in Madagascar aims to be one of these light-houses by illuminating how partnerships between local people, research institutes and NGOs can deliver marine conservation and sustainable livelihoods.

The project, focused around the 1200-strong community of Andavadoaka, is balancing the needs of local fishermen and protection of the area's important coral reefs. Eco-tourism is being promoted as a way of generating income for conservation work, diversifying the local economy and to reduce the pressure on fish stocks.

It is hoped that the experiences from this project will act as a blueprint for similar projects in other regions.

4. Bolivia: Water for All

Relevant websites: http://www.aguatuya.com

Access to clean water is an emotive issue in developing countries and sometimes leads to civil unrest and major social problems. The Millennium Development Goals call for a halving of the level of people without access to fresh water and sanitation and this project directly addresses this aim.

The 'Agua Para Todos' initiative in Bolivia has found a way of solving the seemingly intractable problem of who pays for secondary water networks, i.e. delivering water from the municipal supplier's main pipe to the consumer.

Under the project, a consortium of local communities, an NGO and a pipe manufacturer is building water distribution systems in coordination with the municipal water company in Cochabamba, each connecting between 100 and 500 poor households. The costs are being met by the communities concerned through a micro credit scheme, repayable within a year.

Five pilot projects are under way, already halving the cost of water for 3,000 people in Cochabamba. Ambitious plans currently under development in partnership with the municipal government would provide 17,000 connections serving 85,000 people over the next five years.

5. Nigeria: Cows to Kilowatts

http://www.seedinit.org/mainpages2/awards/cows/index.php

Effluents and waste products from abattoirs are a problem for human health and the environment across the developing world. A project being piloted in Ibadan, Nigeria, is

turning these wastes into energy to generate income for poor urban communities and reduce the gases linked with climate change.

The project treats the abattoir wastes and turns them into a 'bio-gas' suitable for cooking and other uses. A further by-product is agricultural-grade fertilizer.

The partnership behind the project claims their bio-gas is significantly cheaper than current, commercially available, liquefied gases. The scheme will cover its costs and become profitable in three years and has a fifteen year life expectancy.

2007 Winners

1. Vietnam

In Vietnam, Bridging the Gap uses sustainable cultivation of traditional medicinal plants to develop high value-added products, the manufacturing and proceeds of which improve the livelihoods of ethnic minority communities.

2, Peru

In Peru, T'ikapapa links small-operation potato farmers in the Andes with high-value niche markets in urban centers. T'ikapapa promotes biodiversity conservation and environmentally friendly potato production techniques while giving farmers open access to technological assistance and innovation, encouraging local farmer's associations and propagating the flow of market information.

3. Ecuador

In Ecuador, a partnership also operating in the Andes has reintroduced native cereal and tuber crops that diversify food production, improve local food security and reduce soil degradation. The partnership then sells surplus yield through a women's organization it has created in three communities resulting in new economic, financial and marketing engines for the area.

4. Brazil

In Brazil, Projeto Bagagem creates unique travel packages that give visitors a first-hand look at local development initiatives and nature reserves in a novel approach to community-based ecotourism.

5. Sierra Leone

In Sierra Leone, a unique partnership between a traditional healers' association, an academic research institute and local communities will help to protect biodiversity and provide sustainable livelihoods for local communities through the establishment of the Tiwai Island Health and Fitness Center—a facility to provide health services based on principles of West African ethno-medicine.

Appendix 2: References

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