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SANKALPA WHITE PAPER

Livelihoods Training & Education Center (LTEC)

To showcase village-based sustainable livelihoods programs

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1 Introduction

The **Livelihoods Training & Education Center (LTEC)** at SRC-N is committed to the charter of the SRC-N, which states that: *"The SRC-N shall promote alternative development models and strategies for the development of appropriate technologies and promotion of products, processes and services in programs relating to environmental management; livelihoods generation through asset-based and market-creation approaches; renewable energy technologies; shelter technologies; information and communications technologies."*

2 What is Sustainable Livelihood?

Sustainable Livelihood is a job that gives a decent income, gives some status in society and some dignity and meaning in life. It also conserves and, if possible, regenerates the environment. It provides opportunities for people to work right in their own community instead of having to migrate to the slums of a big city. And the purchasing power and lifestyle provided by such a livelihood would be at least comparable to that of a factory worker in an urban area, where the wages have to be much higher than in the village to compensate workers for higher costs of living.

- *Adapted from a lecture by Dr Ashok Khosla at the UN, New York, 30th April 2001.*

In the context of developing economies like India, the concept of 'Sustainable Livelihood' is perhaps at variance with the term 'Sustainable Development', which became fashionable in western intellectual circles following the 1992 United Nations Conference on Environment and Development (UNCED) and the subsequent emergence of Agenda 21 and the Rio Declaration. In the context of Maslow's hierarchical theories of motivation, it is unlikely that the poor and starving communities in the villages of India and nations like her can be motivated to contemplate such luxurious thoughts of 'Sustainable Development', when what they need more is their daily bread, first. And hence the motivation of Sankalpa cMFS to focus on 'Sustainable Livelihoods' as the most important change needed for the empowerment of rural people.

3 Objective of the LTEC

Our study of the literature and our own experiences at the grass-root level leads us to believe that there are at least seven factors that determine the vulnerability of villagers to succumb to the endogenous and exogenous pressures when they are released from the relative safety and confines of past 'boxes' to the new regime promising 'total' empowerment, including:

1. **Human capital**: The skills, knowledge, ability to labor and good health;
2. **Natural capital**: The natural resource stocks from which resource flows that are useful for livelihoods are derived (e.g. land, forests, water)
3. **Physical capital**: The basic infrastructure (transport, shelter, water, energy and communications) and the production equipment;
4. **Financial capital**: The financial resources which are available to people (whether savings, supplies of credit or regular remittances or pensions);
5. **Social capital**: The socio-technical resources (networks, membership of groups, relationships of trust, access to wider institutions of society);
6. **Socio-cultural factors**: Which is concerned with socio-cultural anthropology and relates to the problem of difference and similarity within and between human populations, which plays a crucial role in the exploitation of natural resources, and the shaping of the environment.
7. **Socio-technical factors**: Which stresses the reciprocal interrelationship between humans and machines and shapes both the technical and the social conditions of work, in such a way that efficiency and humanity would not contradict each other any longer.

The objective of the LTEC is therefore to promote rural creativity based on the principles of the Sankalpa Pyramid Model and determine the appropriate transformation processes that should be adopted, by evaluating the multidimensional relationships between the past historical constraints and those of modern 'sustainable' livelihood strategies.

4 Problem Definition

In an attempt to analyze the intrinsic problems faced by the 'global villager'[1] in our 'Total Rural Development' (TRD) Project, we mapped the factors that impede sustainable development in the villages. The ten most frequently quoted intrinsic problem areas for the 'global villager' are illustrated in Figure 2. This pictorial depiction—graphically identified in a gear train—emphasizes the inter-relatedness and the problems of meshing, in each problem area. It also suggests the reason(s) why many rural development programs are not sustainable, as the gear train inevitably grinds to a halt when this intricate web of meshes becomes dislocated. In order for the whole to be moving forward, every 'gear' has to mesh properly and contribute to sustainable rural development.

The figure also underscores the need for a holistic[2], multi-sector approach, and why single-sector development programs have failed in the past; it also suggests that (a) 'Education'—and more specifically 'primary education'—or the lack of it, is the central problem; and (b) The socio-economic status of villagers—stemming from the lack of 'Sustainable Livelihoods'—is universal: a super ordinate problem in any rural development program.

4.1 Education—the central problem

'Education'—and more specifically 'primary education'—or the lack of it, is the central problem. Illiteracy is an indicator of human insecurity. According to Professor Amartya Sen[3], primary education advances human security by enhancing political participation, economic opportunity and human capabilities. Education also generates self-confidence, reduces fear, enables risk-taking and supports an orientation towards the future.

Professor Sen believes that no economic development is possible without compulsory universal education. He writes: *"The remarkable neglect of elementary education in India is all the more striking given the widespread recognition, in the contemporary world, of the importance of basic education for economic development. Somehow the educational aspects of economic development have continued to be out of the main focus in our country"*. [10]

Good education endows people with better coping capabilities to grapple with crises. There are multiple linkages between education and human security: (a) education provides greater employment security; (b) education enables people to exercise their rights; (c) education empowers the underdog, especially women; and finally, (d) education can socialize children towards tolerance and respect among diverse communities of people. **Hence, education and training is intricately linked with any discussion on livelihoods**.

4.2 Lack of sustainable livelihoods

The endemic causes of rural poverty—such as poor nutrition, lack of energy security and shelter security as well as the general inability of rural communities to build knowledgeable and productive small-scale rural households—primarily stem from a lack of sustainable livelihoods. As a corollary, the absence of these societal necessities also impinges directly on the creation of sustainable livelihoods [1].

Rural communities therefore need a new sense of direction that could lead towards meaningful "revitalization" of rural households.

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[1] The term 'global villager' is not limited or provincial in scope; it has attributes that can be applied to all villagers on this Earth, in general. It is at variance with Marshall McLuhan's characterization of the 'Global Village', which describes how electronic mass media collapses space and time barriers in human communication, enabling people to interact and live on a global scale.

[2] Holistic (from *holon*, a Greek word meaning entity)—sometimes spelt 'wholistic'—relates to or is concerned with wholes or with complete systems rather than with the analysis of, treatment of, or dissection into parts. According to the Oxford English Dictionary, Jan Smuts who coined the term in the early 1920s defined holism as 'The tendency in nature to form wholes that are greater than the sum of the parts through creative evolution,' because the 'system' adds something in addition. Another term is 'systems thinking', which emphasizes the organic or functional relation between parts and the whole.

[3] 'You cannot evaluate what's happening without looking at the people who are on the downside'

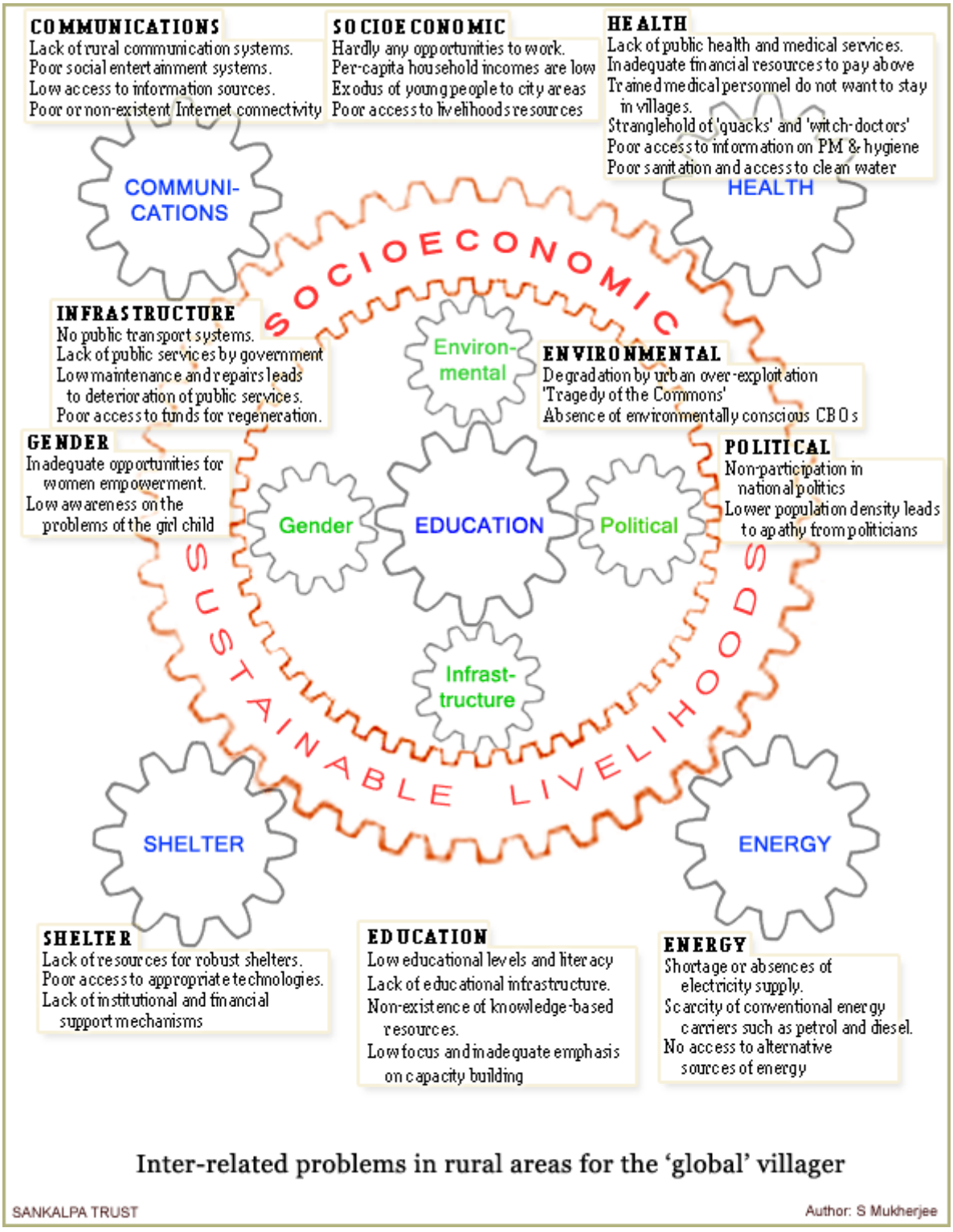


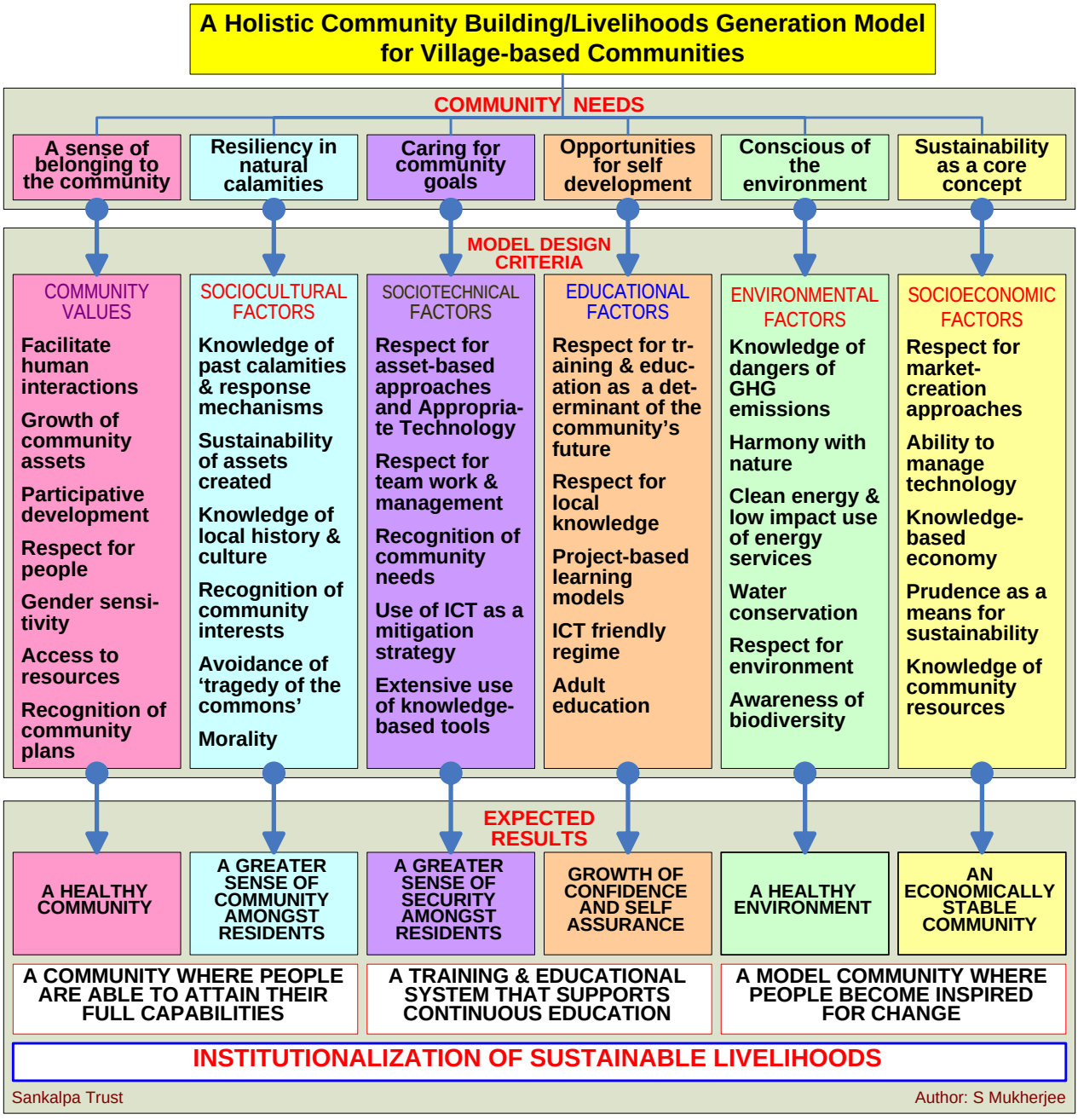
Figure 1: **Problems in rural areas**: The figure dramatizes the impact of 'Sustainable Livelihoods' (SL) on the inter-related problems in rural areas for the 'global villager'. The internal and external gear teeth on the SL contraption exemplify its impact on the major problem areas of 'Communications', 'Shelter' and 'Energy' – with its concomitant impact on 'Health'. On the other hand, 'Education'—more specifically 'primary education'—or the lack of it, is at the center of all problems for the global villager. The attributes comprising 'Environmental', 'Gender Issues', 'Political' and 'Infrastructure' problems result form the inability of the rural people to sue for change, as a result of poor education and knowledge.

It is with this approach that we have attempted to develop the **Livelihoods Training & Education Center (LTEC)** at the Sankalpa Research center—Nadia.

5 Holistic Community Development/Livelihoods Generation Model

The Sankalpa Research Center promotes an awareness of environmental protection, particularly the village-based target beneficiaries impact on global warming and reduction of 'Green House Gas' (GHG) emissions, as climate change impacts tropical countries more negatively than temperate zones [2].

On the basis of these needs and baseline studies, we have developed a conceptual "Holistic Community Development/Livelihoods Generation Model", as a framework for designing the LTEC, as shown below in the generic figure for village-based communities everywhere:



The above conceptual model explains how the interventions being proposed by building an LTEC in a village would synthesize the desired socioeconomic, sociotechnical and sociocultural changes needed for improving the quality of life of villagers. It clarifies the inter-relationships between the needs, intervention strategies, the expected results and the goal of our project by demonstrating the linkages between them.

With this preparation, we shall explore in the following pages the grassroots livelihoods projects that have been initiated at the Sankalpa Research Center—Nadia…admittedly, in various states of development, from concept generation to actual fruition.

6 Art & Handicrafts

A major objective of the **Art & Handicrafts Center** is to provide a platform for the rural entrepreneur to develop the technical management skills that will be needed to be successful in the uncompromising global market place. Currently our strategy is to develop the following handicraft products.

6.1 Handmade Paper Products

Handmade paper is a layer of entwined fibers and held together by the natural bonding properties of cellulose fibers. These fibers are obtained from variety of plant species. Each fiber has its own physical properties and lends a peculiar characteristic to the paper. Handmade paper can be classified primarily by the sheet making process. More details are available under the 'ARTS' webpage.

Handmade paper products (HMPP) were first made by the Sankalpa Group at its **Shantiniketan SDC**, beginning late 2002. Samples of products that were made at Shantiniketan and sold at public exhibitions can be viewed at [http://www.sankalpacmfs.org//bazaar/bus/hmpp.html]. The production line at Shantiniketan was discontinued in 2004, but the equipments were re-installed at SRC Nadia in 2006. The attempt to restart the manufacture of HMPP is under review.

6.2 Bamboo and Jute Handicrafts

The facilities for bamboo and jute handicrafts are being constructed. Please watch this section for new additions in the near future. More details are available under the 'ARTS' webpage.

7 Livelihoods Technical Services

A major objective of the LTEC is to provide rural entrepreneurs who may be interested to develop and bring to market their entrepreneurial ideas and translate their projects into reality. One effective way to do this—considering the Sankalpa Pyramidal Model—would be to develop model projects in shelter and energy technologies that can contribute to the generation of sustainable livelihoods.

The **LTEC** therefore works in close cooperation with the Renewable Energy Training Center [http://www.sankalpacmfs.org/src/02ene/02ene.html#menu] and the Building Center [http://www.sankalpacmfs.org/src/03she/03she.html#menu]. We are actively pursuing two proposals being submitted to funding agencies, with active participation of our coalition partners, for construction of Training Centers, as follows:

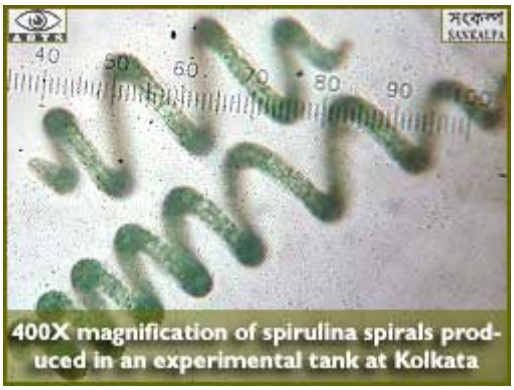
#	Project Proposal Title	Training and education objective
1	Training and Technology Transfer Workshops for disseminating Eco Kiln and Sustainable Shelter Technologies in West Bengal and North East India.	To build a "**Shelter Technologies Training Center**", which will generate livelihood options in the field of shelter products and services.
2	Conjoint biomethanation and gasifier operation program at Baidyapur Village, District Nadia, WB, India as a demonstrative model for rural energy security and training programs, based on ISO 9000 Standards.	To build a "**Renewable Energy Training Center**", which will generate livelihood options in the field of energy products and services.

The Sankalpa Research Center has built a number of models that serve to generate sustainable livelihoods, while demonstrating sustainable solutions for shelter and energy related products and services, by establishing various 'Public-Private Partnerships' (PPPs), as summarized below:

#	Project reference	Partner	Type	Nature of partnership
1	Eco Kiln, a.k.a. Vertical Shaft Brick Kiln (VSBK)	Funded by DST; Technology partner: Development Alternatives, New Delhi	Govt. of India/NGO	Develop a model for energy and shelter security; Signed MOU for collaboration on livelihoods projects.

#	Project reference	Partner	Type	Nature of partnership
		GOAL INDIA, Kolkata	NGO	Socially relevant projects
2	60 Nm^3 Plug Flow Biogas Digester (PFBD)	Funded by USAID, in technical collaboration with IISc Bangalore	US Govt. Agency/ Govt. Academic Inst.	Develop a model for village-based energy security and GHG emission reduction
3	1 Nm^3 Floating Type Biogas Digester	Vivekananda Kendra, Kanyakumari.	NGO	Equipment and Technology provider
4	20 kWe biomass gasification based power plant (BGBPP);	GP Green Energy Systems, Calcutta	Private company	Provide a source of renewable energy; Signed MOU for collaboration on energy projects.
5	Improved *chulha* for domestic cooking	Indian Institute of Science, Bangalore	Government Academic Inst.	Technology source for production in Nadia
6	Hybrid solar drier for vegetables and fruits	Aurobindo Ashram, New Delhi & Pondicherry Ashram	NGO	Applications development for use in Uttarakhand
7	Domestic home lighting systems and	TATA BP Solar	Private company	Technology source on commercial terms
8	Supplying arsenic-free potable water to the rural community.	Central Glass & Ceramic Research Institute, Calcutta	Government Research Institute	Equipment and Technology provider
9	Measurements system	Engineer's Associates, Calcutta	Private company	Equipment development
10	Biogas cleaning system	Engineer's Associates, Calcutta	Private company	Equipment development
11	Ferroconcrete Doors and Windows (FCDW);	Council for Scientific Research, Auroville	NGO	Technology source for production in Nadia
12	Micro-concrete Roofing Tile (MCRT)	TARA, New Delhi	NGO	Technology source and process design
13	Compressed Earth Block (CEB)	TARA, New Delhi	NGO	Technology source and process design
14	Gas engines for biodigester	Diya Automobiles, Calcutta	Chartered Engineers	Technology transfer and process design
15	Solar PV Street Lighting System	Soltech Energies (P) Ltd., with subsidies from WBREDA	Private company; State Govt. body	Equipment and Technology provider
16	Spirulina culture	Simplicity Farm, Auroville, Tamil Nadu	NGO	Technology transfer and process design

8 Spirulina



Spirulina, the current project in progress, is a food supplement combining the vitamins, iron and many other **micronutrients** that the human body needs. Spirulina is a **tiny blue-green algae in the shape of a perfect spiral coil** (see 400X magnification on the right). Biologically speaking, it is one of the oldest inhabitants of the planet. Appearing 3.6 billion years ago, it provided an evolutionary bridge between bacteria and green plants. This water plant has renewed itself for billions of years and has nourished many cultures throughout history, in Africa, in the Middle East and in the Americas. Spirulina grows naturally in mineral-rich alkaline lakes which can be found on every continent, often near volcanoes. The largest concentrations of spirulina today can be found at Lake Texcoco in Mexico, around Lake Chad in Central Africa and along the Great Rift Valley in East Africa.

Spirulina is a low-fat, low-calorie, cholesterol-free source of easily-digestible vegetable protein containing all the essential amino acids that cannot be produced by the body but are needed to synthesize the non-essential amino acids. Spirulina has no cellulose in its cell walls and is therefore easily digested and assimilated. It is called a '***super food***' because its nutrient content is more potent than any other food. Many of the essential nutrients needed by our bodies are concentrated in spirulina. It is comprised of at least 60% all-vegetable protein, **essential vitamins** and **phytonutrients** such as the rare essential **fatty acid GLA, sulfolipids, glycolipids and polysaccharides**.

In the case of **Vitamin A** and **iron** – the two most important micronutrients – **Spirulina is cheaper than any other natural product, including carrots and spinach**. One gram of Spirulina per day is less costly than the 50 or 100 grams of carrots or spinach that would provide roughly the same amount of micronutrients. This is not an argument against carrots or spinach but, to be realistic, poor children would very rarely get 50 grams of carrots or 100 grams of spinach every day. Another compelling feature of Spirulina is that it improves not only the physical strength of the body but also the **cognitive development** of the child.

Spirulina is also highly relevant for people affected by HIV/AIDS: improved and more balanced nutrition can ease their life considerably although it cannot, of course, cure their disease. In West and Central Africa, HIV/AIDS patients are buying Spirulina every day as a dietary supplement. A recent study with children in Burkina Faso has shown that HIV/AIDS-infected children put on weight and grow if rehabilitated with Spirulina.

'Sitting on a gold mine'? How the diabetic doctor got convinced:

Antenna Trust in Madurai was convinced that Spirulina would help diabetic patients in their daily struggle. They approached a well-known diabetic doctor and were invited to several sessions of the diabetic society. They had a small booth and sold Spirulina products to the patients who seemed to appreciate the product.

One day, the booth was shifted towards the toilet and Antenna Trust could hardly sell anything more.

Later, they discovered that the doctor had created a Spirulina capsule factory and had started to prescribe his own "brand" of Spirulina to his patients. While industrial second-grade Spirulina can be bought at a cost of US$8, one capsule of 500 mg sells for close to 2 Rupees, equalling more than US$ 90 per kg.

Message supported by:
Employment and Income Division of SDC,
Swiss Agency for Development and Co-operation

What makes Spirulina even more attractive for our Sankalpa Research Center at Nadia is the fact that Spirulina can be produced locally with little investment. With (a) proper training and capacity building; (b) decentralized production, processing and distribution—Spirulina can be organized as a small business for women. With proper funding mechanisms, these same women can be involved in feeding programs and become sustainable '*barefoot nutritionists*'. Women who produce, process *and* sell

Spirulina can also become agents of awareness creation and nutrition education.

A feasibility study for scaling-up production in India has shown that it is possible to run a profitable social enterprise with decentralized production units, combined with centralized marketing and technical support. **Profits can be made on sales in the up-scale market—to health-conscious people, body-builders, diabetes patients, 'joggers' and used for cross-subsidies in the rural market of the poor**. Once they are aware of the nutritional benefits for their children and provided that prices are affordable, poor people in India and Africa have shown their willingness to pay for Spirulina products.

In the long run, there are no cheaper and better ways to sustainability than creating local businesses which make use of the knowledge and skills of local women. A truly sustainable solution will emerge if rural women can be profitably involved in the eradication of malnutrition and, in the process, make a living out of it. Spirulina can become a sustainable long-term solution if programs can be designed which enable profitable enterprises that are capable of combating malnutrition as a business.

The benefits of the use and local production of Spirulina from three complementary angles are:

1. Spirulina as a natural product that provides a comprehensive solution to malnutrition. It contains most critical micronutrients although, it must be noted, not all and it is by no means a miracle solution. However, **with just one gram per day being enough to correct a malnutrition of a child in a few weeks, it is an effective solution.**
2. Spirulina is a relatively **cost-effective solution**, even if the prices of artificial vitamins, minerals and other food fortification additives are very low.
3. Local Spirulina production can become a **viable business for a group of entrepreneurial women and can thus create sustainable employment**, income and also establish a profitable supply chain for feeding programs…if the same women who are producing also get involved in the distribution operations.

The areas in West Bengal where spirulina cultures may be grown in collaboration with local partners include Barasat, Budge Budge, the Sundarbans and Puruliya.

There is also collaboration in Bangladesh with Society for Development Initiatives (SDI), Bangladesh, for promoting spirulina cultures in the wastelands or *Urichars* of Sandwip Island.

8.1 Spirulina commercial farms for social and economic empowerment

The proposed two-year **Spirulina Project** at Village Baidyapur—in technical collaboration with **Simplicity Farm, Auroville**—has the potential of becoming a 'game-changer' as a means for achieving a wide range of socioeconomic, sociocultural and sociotechnical benefits for the target beneficiary community at Village Baidyapur, Nadia. The project for the physical realization of **spirulina commercial farms** (SCF), which will incubate a series of livelihoods and community development initiatives for the tribal and village-based beneficiary communities, shall be implemented in three phases, as summarized below:

Phase	Plan of Work	Duration	Budget	
1	Build a 'pilot' Spirulina Tank; technology transfer of the 'mother culture' and project initiation.	Three months	Rs. **222,280**	US$ **4,940**
2	Develop a sustainable seven-tank spirulina project and establish the marketing and dissemination program	Six months	Rs. **1,628,204**	US$ **36,182**
3	Institutionalize a 20-tank Spirulina project and develop community building/livelihoods programs.	Fifteen months	Rs. **8,353,480**	US$ **185,633**

A '**Concept Note**' on "*Spirulina micronutrient cultivation in Commercial Farms for social and economic empowerment of women and children in tribal communities in Village Baidyapur, Nadia District, West Bengal, India*" can be downloaded at [http://www.sankalpacmfs.org/src/01liv/scf.pdf] ~ 535 kb.

The dissemination of spirulina cultivation will not only help to empower women and children in tribal communities everywhere, but can also impact on the future development of an integrated health and energy generating system based on appropriate waste management technologies, for village-based communities.

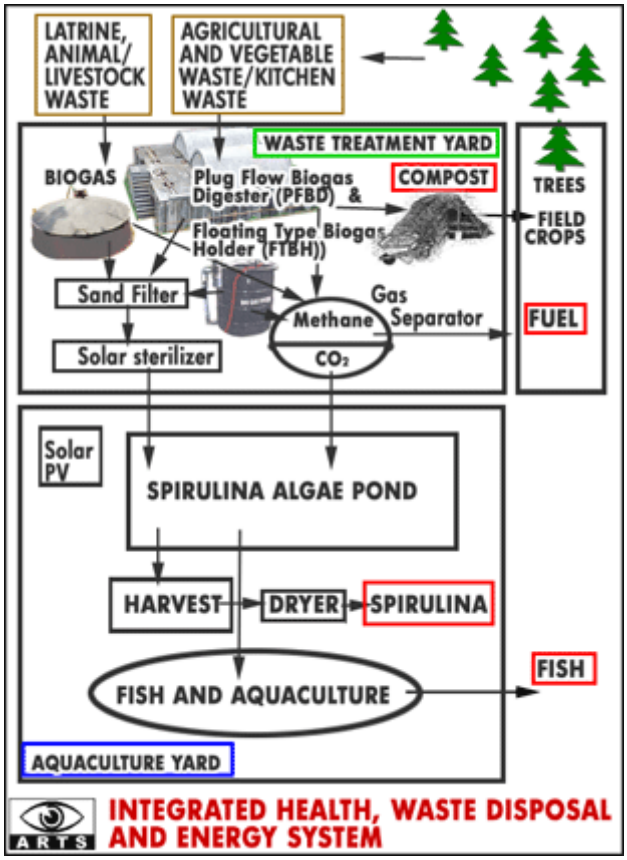
8.2 Village-based Distributed Model

Spirulina—the 'Super Food'—has the potential of becoming the centerpiece of sustainable village and rural development, as it has important links and synergies with other sustainable and appropriate renewable energy technologies that have already been implemented at SRC-Nadia.

The image on the right describes a village-based distributed model (VBDM) for implementing a sustainable and integrated health, waste disposal and energy generation system, which can produce:

(a) Methane fuel from biomethanation of agricultural, livestock and domestic waste; and

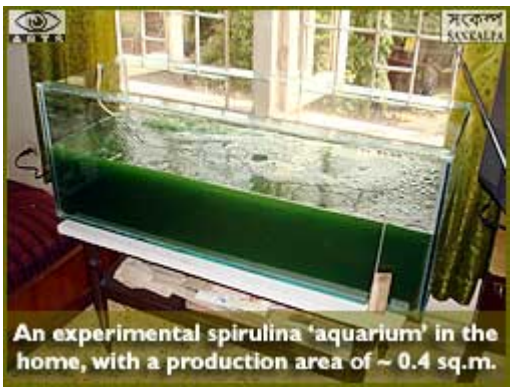
(b) Spirulina and fish through appropriate spirulina production processes and aquaculture practices, by utilizing the large amounts of CO_2 present in biogas, as shown in the figure.



A '**Concept Note**' on "*A village-based distributed model (VBDM) for implementing a sustainable and integrated health, waste disposal and energy generation system at Village Baidyapur, Nadia District, West Bengal, India*" can be downloaded at [http://www.sankalpacmfs.org/src/01liv/scf.pdf].

8.3 Urban Distributed Models

Spirulina can also be grown in a distributed model in urban homes. The only demerit is that the spirulina culture will absorb the heavy metals that are inevitably present in the atmosphere and environment of all major urban centers. However, the design, development and dissemination of modular systems for growing spirulina in urban, domestic homes is currently underway, as seen below. *Please watch this space for new developments and announcements*. ***Technology transfer arrangements are available.***


An experimental spirulina 'aquarium' in the home, with a production area of ~ 0.4 sq.m.


An experimental 'roof-top' spirulina facility with a production area of ~ 1.5 sq.m.

A '**Concept Note**' on "*Urban distributed models (UDM) for producing spirulina for home consumption*" can be downloaded at [http://www.sankalpacmfs.org/src/01liv/udm.pdf].

9 Community Radio

The narrow definition of 'Community Radio' describes the local/community radio as broadcasting that is for, by, and about the community, with ownership that is representative of the community, pursues a social development agenda, and above all, is run as a non-profit.

> *Radio could be the most wonderful public communication system imaginable...if it were capable, not only of transmitting, but of receiving -- of making the listener not only hear but also speak.*
> *-- Bertolt Brecht,*

The United Nations Educational and Scientific and Cultural Organization (UNESCO) states that community radio is characterized by "access, public participation in production, decision-making and listener-financing. The intention is that management of the station is in the hands of those who use it and listen to it." Community radio attempts to integrate participants in order to create an active and diverse listener-base, in the following three-part approach:

- By the active participation of the community in the process of creating news, information, entertainment and culturally relevant material, with an emphasis on local issues and concerns. With training, local producers can create programs using local voices.
- By actively participating in the management and running of the station, the community shall determine the scheduling and content of the programs; being essentially a non-profit enterprise, community radio can raise the ethos of community by remaining independent and serving the community, not the advertiser.
- Community radio programming is designed by the community, to improve social conditions and the quality of its cultural life; the community itself decides what its priorities and needs are in terms of information provision.

The CR project is ideal for a cluster of village-based communities, with one central broadcasting center and, say, two hand sets given to each local community sub-groups, initially.

Network Partners: Our network partner, Development Alternatives in New Delhi, is the first NGO in India to develop a 'Community Radio' project in Bundelkhand. We are in touch with Mr. George Varughese, President and Ms. Indira Mansingh, Project Manager who spearheaded the process in Bundelkhand to help us get started in Nadia, and we believe we can transfer this knowledge to the Nadia Project, if the community elders agree to start a CR Project, and the 'non-owner' stakeholders agree to work towards participative management of the community radio station.

Our other network partner is Auroville Radio. Mr. Andrea Tazzari has agreed to help us at Nadia, to develop the CR infrastructure, which he says will cost around Rs.50,000.

Project Description: The community radio system is one of the most effective tools in rural areas, to communicate in an inexpensive and direct way. When the station grows in experience and skill, local production of news and communications on technology, health or education-related programs, capacity building programs and other segments of interest to the target community can begin.

Community radio systems are:

a) Cost-efficient in terms of investment—both for those that run the station and for the audience;

b) It is pertinent in terms of language and content—ideal for illiterate and marginalized people;

c) It reinforces local practices, traditions and culture;

d) Once the initial investment in equipment is made, sustainability is feasible, though dependent on the level of community participation;

e) Its benefit-to-cost ratio is high in terms of outreach and geographic coverage over other media; and

f) The convergence between radio and the Internet is providing new strengths to community radio and has enormously increased networking opportunities.

These are the factors which are also of interest to us in the present brickfield project, as a means for enhancing the networking and communications system for empowering the disenfranchised brickfield worker community, on the whole, and the children and women, in particular.

10 Mobile health clinic


Network Partner: Our network partner for delivering reliable and inexpensive health care for our rural development programs is Dr. Jacques Verré[8], Dental-Surgeon, Auroville, who has perfected a new universal concept called "Zero Concept", applied in dentistry.

Project Description: Dr. Verré's mobile programs need only the barest of infrastructural facilities—even possible under the shade of a tree, at the receiving community, as shown in the images, although more firm structures would be welcomed. His programs require dedicated health care givers, who can be trained by him over a two-month training course. According to our discussions with him, the specialized dental care can be generalized to cover general health care, as well.

As in the case of the community radio suggestion, we propose that each community sub-group develops a no-frills "Health Clinic Chapter", where a mobile team of nurses trained in Dr. Jacques Verré's universal concept can go around delivering meaningful and sustainable health care services, which can be progressively learnt by the members of these sub-groups over a period of, say, one to two years, so that these health care programs can be institutionalized and made sustainable in the long run.

11 Telemedicine services

Network Partner: Our network partner in telemedicine is the Aravind Eye Hospital in Madurai, Tamil Nadu. They arguably have the finest telemedicine services in the country for people in rural areas, which the author has visited and has actually used to receive preventive medical advice and treatment, having registered for the service by paying only Rs. 15, which entitles the author to visit that particular rural center for a whole year.

Project Description: Active health care services by telemedicine can be provided independent of the mobile health clinic, suggested above. However, provision of telemedicine services in tandem with the 'Mobile Health Clinic' idea could bring in a revolutionary conjoint service delivery program, from the point of view of program effectiveness.

Open source software for managing a telemedicine program is already available, and which we have already experimented with it in Nadia/Calcutta. For hardware, we are in the process of discussing with a 'Private' partner and 'well-wisher'—Mr. Arun Surana, a businessman—who has promised to help us get the needed hardware for the Nadia center. He and others endowed with corporate social responsibility can be similarly approached for expanding the service network.

12 Micro-enterprises and Micro-finance institutions (MFIs)

It is known that micro-enterprises promote the market creation approach. The Society for Development Initiatives (SDI), Bangladesh will provide its expertise to the Sankalpa Group in the development of Micro-finance Institutions (MFI), so that we may approach leading institutions, such as Plan International and other project development resources, for system development programs and for raising finances. The specific work areas will be defined in a suitable "Plan of Work" for introducing MFIs to Nadia, including:

(a) Field study and assessment of Nadia conditions;

(b) Microcredit/micro enterprise system development and suitable product development for Nadia;

(c) Staff training;

(d) M&E system development.

In order to develop an MFI project at Nadia, SDI will (a) advise Sankalpa on modalities for getting funds for system development and loan fund; and (b) provide an estimate for implementing a one branch unit [i.e. one manager, one accountant, one caretaker and four Credit Officers (CO)], which will include:

Hardware:

a. Field study and feasibility assessment costs, and for product development
b. Training costs and staff development costs.
c. System development costs, including manual, financial formats, passbook,

Software:

d. Follow-up and M&E
e. Development of credit plus booklet.

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