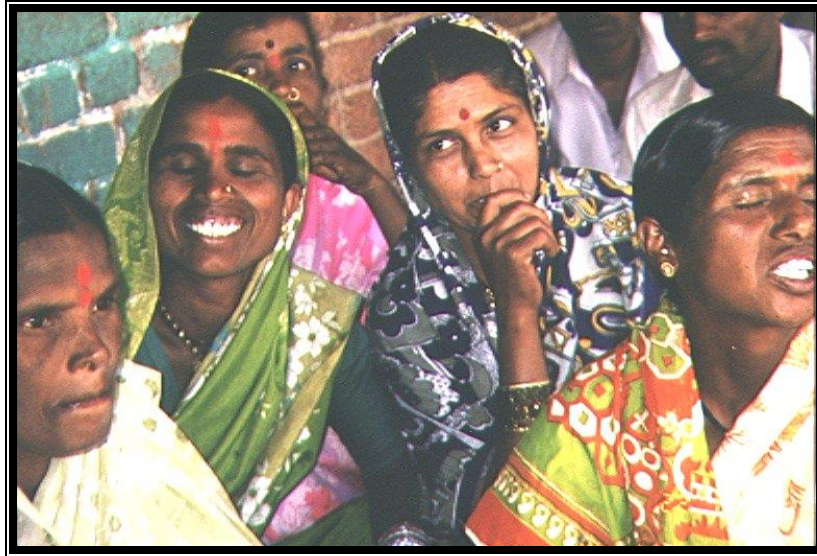


The Village Earth Model

for

Sustainable Village-Based Development

Developed by the Consortium for Sustainable Village-Based Development (CSVBD)



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THE VILLAGE EARTH MODEL
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I. EXECUTIVE SUMMARY

Two out of three people in the world live in rural areas, most in so-called "developing nations." They have one striking feature in common: they are largely disconnected from the resources that contribute to human well-being. Like their parents before them, the rural poor face severely limited opportunities, and they are migrating to the overcrowded urban centers.

Addressing a World Bank meeting in Hong Kong in August 1997, President James Wolfensohn observed of the Earth's almost 6 billion people: "We are living in a time bomb, and unless we take action now, it could explode in our children's faces. Three billion people live on less than \$2 a day; 1.3 billion on less than a dollar; 100 million go hungry every day; 150 million never go to school; and long-standing inequities between rural and urban areas, and the skilled and the unskilled, are widening."

Poverty is a crushing weight for most of the rural poor as they search in vain for opportunities that continually elude their grasp. They live out their lives isolated from the resources which the rest of society enjoys.

The Village Earth Model is designed to address global poverty. It is a fresh approach to stimulating and sustaining village development -- a road map to a brighter, more equitable future for all of the world's rural poor. It was born in 1993 at an International Conference on Sustainable Village-Based Development in Fort Collins, Colorado, where more than 300 participants from 30 nations created the Consortium for Sustainable Village-Based Development (CSVBD) and gave it the mandate to implement the model and pilot projects.

The model described in this document has every chance to succeed because it is based on a synthesis of the best development practices pioneered and tested over the past 50 years. Using the model, it is possible to achieve a vigorous and effective empowerment of poverty-stricken communities worldwide.

The model is founded on the premise that lack of access to resources is the primary obstacle to building a better life, and that poverty is the symptom rather than cause of the problem. To facilitate access to resources, including financial, social, energy, information, and hard and soft appropriate technologies, the model calls for the organization of villages into clusters, or Resource Access Units.

In the mold of U.S. counties and Chinese communes, for instance, the Resource Access Units (RAUs) would assure a critical mass of population, 25-40 villages with a total population of 35,000-50,000, required to mobilize and tap the resources necessary to sustain development. The RAUs follow a five-phase, five- to 10-year path to self reliance with the assistance of the CSVBD and other non-governmental organizations. That achieved, they are capable of replicating their success, of spawning new RAUs.

A single project includes approximately 1 million people with some 20 Resource Access Units. Each village is linked to an RAU Service Center, and each RAU is part of a cluster of RAUs, all of which are linked to multi-resource institutions supplemented by an

International Service Center -- a market place of shared global development experiences.

The Village Earth Model holds that villagers already possess the seeds of their own development. Unlike traditional methods, it employs a bottom-up approach to development. It listens rather than dictates. It provides access to resources rather than aid. Pilot projects are already underway in India and Indonesia.

Recently, three members of the consortium's board of directors toured the university system of Indonesia at the invitation of the director of private universities in the Ministry of Higher Education, sharing their vision of sustainable village-based development. The question was asked of more than 5,000 students at 20 universities: "When you graduate, would you like to live and work in the village?" The answer -- to a person -- was a resounding "NO!"

Then when asked whether they would go to the village if there were real opportunities there for which they could use their newly acquired university training, approximately one-third said they would. This sentiment of talented youth -- the rural world's best hope for development -- is not unique to Indonesia, but is the rule in most developing countries. Consequently, there is a "global brain drain" from the rural to the urban areas.

Unless a mechanism is created to empower the residents of rural areas to participate fully in the extensive resources available, the vast human potential of the rural populations will be wasted, and the future of the planet Earth will see most of its citizens living in poverty as a permanent underclass.

This program can radically and rapidly put in place, in rural communities strategically located around the world, resource access mechanisms that release and empower millions of people in rural villages to participate vigorously in the 21st century.

II. OBJECTIVES

Purpose: To address global poverty by bridging the gulf between the two-thirds of the world's population that live in rural areas and the technical, financial, social and informational resources enjoyed by the remaining third. To accomplish that, the Village Earth model adopts the following specific objectives:

1. Institutionalize a Participatory Orientation.

Stimulate participation at all organizational levels, creating grass-roots ownership of each project. Regular planning meetings and discussions of "lessons learned" at all program levels will create a dynamic and flexible environment for responsive social change.

2. Make Resources Accessible.

Create structural linkages to resources in order to support the RAU villages and to empower non-governmental organization (NGO) leadership with access to the resources available in the broader NGO community and the public, university and private sectors. This is done through an RAU Service Center with competent staff trained to address priorities identified by the villagers.

3. Build a Bank of Scientific Knowledge.

Through an intensive program of monitoring and evaluation, data are collected and processed and made available to all RAUs through regional and International Service Center management.

4. Establish Global Communication Networks.

Build and create resource access networks that make soft and hard technologies available to an increasing number of villages and family units in each RAU.

5. Emphasize In-Depth Development of Each Village and Rapid, Systematic Expansion to Other Villages.

Any effective approach to rural transformation must catalyze intensive village transformation and rapid expansion to a large number of villages. A single project with broad institutional support includes approximately 1 million people with some 20 Resource Access Units in various phases of activation after five years. During the first three years, a small network of NGOs would work interactively to launch each RAU of 35,000-50,000 people. They would replicate after three years, and again after five or six years. All of the development wisdom gained in the initial projects would serve as a base for expansion to additional RAUs.

6. Facilitate Technology Generation.

Share appropriate soft and hard technologies in response to locally defined needs. Local knowledge systems must be honored and incorporated in all technology generation packages.

7. Attract and Generate Indigenous Technical Ability to Rural Areas.

This joint effort employs technical leadership from the RAU Service Center staff, which has skills in both soft and hard technologies, to build technology generation packages. A cadre of young high school graduates are selected from the villages to serve two years as apprentices. They are then sent for university education in their specialty. When they return to their RAU after graduation, they assume responsibility in the Service Center for their technical areas as they agreed by contract.

8. Build a Collaborative NGO Network.

Each sufficiently strong NGO usually has one or more specific villages with which it is associated. In a cluster organization, the NGOs work together in each of the five developmental phases, sharing their insights and building their local library of appropriate hard and soft technologies. They use common participatory methods in planning, implementation and evaluation. They share, as needed, their personnel and their technical and program strengths to expand their skills, leadership and technical capacity.

9. Create a Collaborative Global Village Network.

In the first phase of the program, a local network of villages in an RAU are interconnected as their autonomy and economies develop. They will be responsible, along with Service Center staff, for initiating new RAUs and sharing their development insights. Finally, they are interconnected with other RAU villages beyond their own area and country, contributing their successes and sharing them in building an international library of technologies that work.

III. FUNDAMENTAL PRINCIPLES

A set of basic principles guides the design of a serious effort at sustainable village-based development. They are:

1. Participatory, Village-Based Development:

The village is the basic unit of planning and action. Village priorities must be decided by the villagers and not by an outside authority. Only when village residents direct their future will they own it. And only then will they be able to manage the development process that will bring them out of poverty. This is accomplished by providing leadership so that the villagers:

- a. **Express their hopes and aspirations for the future.**
- b. **Identify and analyze the problems which stand in the way of achieving these hopes and aspirations.**
- c. **Find solutions to the problems with the help of the Service Center staff.**
- d. **Carry out the solutions and then operate and maintain the mechanisms to achieve them.**

Participatory involvement by *everyone* in the village is vital in creating a positive development climate. Participation is the key to human motivation. Villagers must have the opportunity to participate and have ownership in the decisions affecting their lives. Women must be empowered to play significant roles in improving village life. Youth need to express their hopes and dreams for the future and see them materialize through their own efforts and actions. Community elders must contribute their wisdom in shaping the directions of village life. Each village that supports full participation of its members is ready for project participation.

Where participation is the motivator of effective action, broad-based community planning is the generator of strategic action. Service Center staff are trained to be skilled in planning methodologies so that they can transfer these skills to key village leaders for application in the village setting. Three major planning events launch village participation in the project:

- a. **A one-day village meeting to awaken villagers to their capacity to be in charge of their own future**
- b. **A Participatory Rural Appraisal, pioneered by Robert Chambers in 1983, to analyze village resources and empower local analytic capacity**
- c. **A four-day strategic planning event, developed by the Institute of Cultural Affairs, in which a village articulates its vision, identifies major constraints, determines strategic directions and creates implementation timelines**

2. A “Critical Mass” for Sustainable Development.

Although the village is the basic unit of planning and action, a single village is not large enough to access essential resources. A viable development unit for supporting the village to access resources is between 35,000 to 50,000 people -- large enough to have an effective voice in making village needs known to resource institutions, and at the same time small enough to maintain local autonomy. The Resource Access Unit will be able to effectively access the necessary external resources through mobilizing local resources and supporting, in part, a professional staff competent in the needed expertise. Historical research indicates that where development has been pursued in this

framework, the rate of development has accelerated. Examples include the township in Japan and Taiwan, the commune in China, and the county in the United States.

3. The Importance of Resources.

Resources -- human, information, physical, technical, energy and financial -- are essential for any sustainable developmental effort.

- a. **Local, often latent, *human resources* are the most important. It is the villagers who must draft a plan and carry out the entire village development program. They are empowered through participatory planning, training and action.**
- b. ***Information resources* are essential for providing immediate access to the wealth of enabling information available worldwide.**
- c. **A careful analysis of the available local *physical resources* is essential for building any realistic plan. A Participatory Rural Appraisal is one tool for facilitating this analysis.**
- d. **Identifying local *technical resources* -- "technologies that work" -- in and nearby any development effort provides a base for increasing viable options for local action.**
- e. **Renewable *energy resources* are vital to the sustainability of all economic and social development efforts, from soil fertility to appropriate technology innovations.**
- f. ***Financial resources* are necessary for micro-enterprise development, small-scale industries and commercial activities.**

4. A Trained External Catalytic Force.

An external force is nearly always needed to assist in catalyzing development. However, it should encourage local initiative and motivation by asking questions rather than proposing solutions at the outset. Team members must be trained in participatory planning and implementation skills. Technical expertise is required to identify realistic options to be explored by the villagers in priority areas which they have identified.

5. A New Approach to Stimulating Village Development.

The Village Earth model employs a new approach to development . It is a bottom-up approach in contrast to the traditional hierarchical, top-down approach. It is characterized by:

- a. **Listening and asking questions, not giving answers.**
- b. **Interaction, discussion and consensus building, not authoritative imposition of top-down "solutions."**
- c. **Partnership problem solving, not experts imposing "technically correct" fixes.**
- d. **Active participation in decision making, not passive compliance to external suggestions.**
- e. **Sharing appropriate technologies, not technology "transfer."**
- f. **Tandem use of local and scientific knowledge, not exclusive use of either.**
- g. **Mutual learning, not, "We know what is best."**
- h. **Village control of development, not external control.**
- i. **Team building, not control by elites.**

6. Local Values.

Western culture is not determinative. Rather, indigenous values must be identified and employed as a motivating force to support the achievement of locally determined

priorities. Both indigenous and developmental values need to be identified and understood before full project initiation.

7. Inclusiveness.

In order to be sustainable, any village-based development effort must include all members of the village. Villagers not only must participate, they must have a genuine voice in the process. Exclusion of any group risks the failure of the entire enterprise. Those not included may intentionally or unintentionally block or inhibit forward progress of a "privileged" majority or minority. Women must be assured that their planning and actions are their own, and that the community supports their self-help efforts. Caste differences must not be allowed to exclude a group of people from participating. Basic mutual agreements at the very beginning of a project insure a favorable climate for development which includes all village members.

8. Self-Reliance and an Entrepreneurial Spirit.

Opportunities for individual and team initiative are the heart of any development effort. The future genuinely is in the hands of local activists and family members. A spirit of individual investment, community investment and local responsibility is essential for achieving village objectives. This creates genuine ownership of the project. Micro-savings and micro-lending programs make financial support accessible to feed that spirit.

8. Basic Mutual Agreements.

It is very easy to have misunderstandings between the village leadership and the Service Center. For this reason, each participating village and the Service Center will make Basic Mutual Agreements. Once a participating village has been identified for project participation, Service Center staff will devote several days in formal and informal discussion with village leaders to be certain that all parties have a complete understanding about the responsibilities and activities that the village and the Service Center are expected to carry out. Then, while all of the details are fresh in mind, they will commit this understanding to paper in the form of a Basic Mutual Agreement.

9. A Systems Approach.

Experience has shown the interrelatedness of phenomena. When wood is used as a fuel without protective parameters, forests disappear, water tables drop, sanitation facilities are abandoned and agricultural productivity is curtailed. When undisciplined grazing of livestock is permitted, small trees are destroyed, forest resources are diminished and water resources are affected. With this pattern of development, poverty thrives. Solutions require a combination of soft and hard technologies, using a systems approach, to be viable and sustainable.

10. A Holistic (Multi-Sector) Approach.

A corollary to a systems approach is that all problems are interrelated, requiring an interaction of sectors and interdisciplinary solutions. When a particular sector is emphasized to the exclusion of others, a sustainable solution is often impossible. The Drs. Arole's work in India, originally as physicians, rapidly diversified from treatment of human illness to agricultural development, sanitation systems, nutritional supplements and job creation. Without a holistic approach, their primary health center could not have been effective. Usually, this is the case with any single sector activity. For development to be effective and sustainable, a number of sectors must be treated simultaneously.

12. Sustainability.

There are four dimensions of sustainability that must be integrated into all aspects of Sustainable Village-Based Development planning and action: environment, economy, socio-cultural features and political sustainability.

Environmental Sustainability.

Sound scientific procedures must be followed in measuring variables relevant to adequately protecting the environment for future generations. An energy inventory must be taken, identifying present energy use and evaluating its impact. All sectors must participate in this energy-use analysis as well as analyses of other aspects of potential environmental degradation of the air, water and soil.

Economic Sustainability.

It is imperative that each development program be viable economically -- including entrepreneurial business activities. Frequently a conflict arises between making a short-term profit and long-term environmental sustainability. The Service Center staff have data and expertise and offer advise about the most economically sustainable solution to a problem.

Socio-Cultural Sustainability.

Any technical innovation must offer a relatively good fit between local socio-cultural knowledge and practices and scientific knowledge and appropriate technologies. Many efforts at technology transfer have been rudely rejected at the village level, because outside authorities did not consider local needs and values. The presence of indigenous sector assistants and apprentices in each technical team helps to ensure the appropriate inclusion of local knowledge, geographical factors, local practices and other socio-cultural factors in designing appropriate technology packages and schemes.

Political Sustainability.

Links with the local bureaucratic structures are especially important, as many of these structures have very well-developed technologies that can be integrated into an RAU program of action. Frequently, these institutions are eager to work with a local Service Center and offer resources. There is a wealth of resources available for development if there are institutions such as a RAU Service Center willing to forge a good fit between local needs and government resources. Most often, the missing link is the absence of an interface, such as a Service Center, to bridge the gap between the government and individual villages. Key village leaders from specific sectors play an important part in building links to the political and bureaucratic structures. All RAU Service Center staff are responsible for forging working relationships with governmental entities, including departments of agriculture, business, health and community services.

13. Appropriate Technology.

Technology generation begins with a need. High technology for the sake of hi tech is irrelevant. New for the sake of new may be a waste of resources. Appropriate technology addressees a need by providing a solution that fits the village resources and goals within the local culture. "Appropriate technology is the skills, knowledge and procedures for making, using and doing useful things, while making optimum use of

human, natural, and person-made resources in the village -- with 'optimum' determined on a village-specific basis by the villagers themselves." (Faulkner and Albertson, p. 128)

Hard technology does not stand alone.

"Appropriate hard technology relates to engineering techniques, physical structures and machinery, that meet a need defined by the village, and use materials at hand or readily available." (Faulkner and Albertson, p. 128). Hard technology must be surrounded by appropriate soft technology, such as organizational structures, interactive processes and motivational techniques. Soft technologies are vital for the success of hard technologies.

Technology Generation requires:

- a. A technology that fits.**
 - b. A package.**
 - c. A plan.**
- Monitoring and Evaluation.**

An appropriate *technology fits* local resources and knowledge and fills an expressed need. It is based on local knowledge of circumstances, social arrangements and what works, and imported knowledge of innovations that have worked for others and have solved similar problems elsewhere. It is sustainable from all points of view: environmentally, economically, socioculturally, and politically. For sustainable development, technologies are not "transferred" by some external force that "knows best" what villages need. Rather, effective technologies must be found which are appropriate to the local social, physical and technical conditions, using local knowledge in a good fit with scientific knowledge to build locally acceptable "technology generation packages."

The appropriate *technology package* is the way a technology is introduced in terms that make sense to the people using it. It includes design, installation, operation, maintenance and rehabilitation as needed.

An appropriate *technology plan* is the way a technology is made usable and sustainable. Nothing happens without a plan. A plan involves a way to provide the technology, a way to pay for, develop and maintain it, and a way to operate and manage it. Plans involve incentives, agreements, organization and commitments. For example, the Heifer Project has plans for cows and milk, and the Grameen Bank has plans for micro lending and finance.

A final task of technology generation is ongoing *monitoring and evaluation* of results with appropriate modifications, improvements and documentation of the technology with an eye to expanding its use.

14. Networking.

A primary way to access essential resources is to build and participate in networks. Networks stimulate access to appropriate information as well as soft and hard technologies. These networks must be intra-village, inter-village and beyond.

15. Monitoring and Evaluation.

It is essential to determine, by scientific means, whether a technology, be it soft or hard, is actually working as intended. This information provides the data necessary to determine whether to continue the technology, how it should be modified as needed, and

how it might be employed elsewhere. In this way, only technologies that work are recommended and made available to the villages.

IV. STRUCTURE

The following design features are essential components of Sustainable Village-Based Development:

1. The Principle Parties

a. The Villages:

The people in the villages in developing countries must identify their problems and find solutions to them with the help of NGOs and the Village Earth-trained staff. The Village Earth model is a catalyst to release the villages' untapped human resources, which in turn will release the villages from the grip of poverty.

b. Local Indigenous Non-governmental Organizations:

The Village Earth model works through local, indigenous, development-oriented NGOs in developing countries. More than 100 NGOs were represented at the CSVBD assembly in Fort Collins, Co., in 1993, and a number are working toward implementing pilot projects using the Village Earth model in their own countries.

c. The Consortium for Sustainable Village-Based Development:

The CSVBD, through its International Service Center in Fort Collins, trains and assists in-country participants to apply the Village Earth model.

2. Village Organization for Access to Essential Resources.

The essential resources villages need are described in Table 1. This simple chart is similar to the one created by the Institute of Cultural Affairs after 10 years of intensive work in more than 500 villages throughout the developing world. Each of the basic areas reappeared time and again in planning sessions with village residents and leaders.

a. Each village demonstrated its need for access to *economic resources* that create a viable economic base for sustainable agriculture, light industry and local commercial services.

It was broadly recognized that agriculture alone, although the basis of a viable economy, cannot produce sufficient employment opportunity for men, women and youth. Light industry and a strong entrepreneurial emphasis, backed by access to financial resources, are necessary for micro-enterprise development and sustainable agriculture.

b. The need for *social resources*, especially preventative health care, basic education and essential infrastructure, was a common theme arising from village voices around the world.

Health services emphasize a pure water supply, sanitation, nutrition and inoculation. Inadequacies in these areas cause up to 80 percent of all unnecessary deaths in developing countries. Basic education must nurture functional literacy to manage small micro-enterprises, to move beyond subsistence farming, and to improve access to higher education for youth and young adults. Women's desire for access to health, appropriate employment opportunities and financial resources also were heard repeatedly. Technical education is needed for participants in new appropriate technologies and innovations. Infrastructure needs such as adequate roads,

transport systems and access to modern communications were recurrent issues voiced by villagers.

c. Finally, villagers said they needed access to *cultural resources*.

They often express a feeling of isolation from the broader society. Their sense of identity as self-reliant actors appears to be diminished. Living environment issues such as adequate housing, village cleanliness and sanitation, and adequate streets and roads were key concerns. Organizing to accomplish common objectives often is made ineffective because of old authority systems that do not permit broad participation by all villagers in village planning to forge a common vision.

Table 1: Basic Human Needs

Basic Human Needs		
Economic Resources	Cultural Resources	Social Resources
Sustainable Agriculture	Community Identity	Preventative Health Care
Light Industry	Village Organization	Basic Education
Commercial Services	Living Environment	Essential Infrastructure

3. The Resource Access Unit.

A new approach to improving the condition of impoverished peoples is described earlier in "Objectives." It is based on the premise that lack of access to needed resources is the primary block to building a better life, and that poverty is the symptom rather than the cause of this problem. The Village Earth model builds on the footing already in place in the developing world and focuses on creating avenues for the poor themselves to identify their problems and to access the necessary resources for solving the problems of poverty. In order to mobilize and provide the necessary resources, a critical mass of 25 to 40 villages -- a Resource Access Unit (RAU) -- with an aggregate population of approximately 35,000 to 50,000 is needed.

Figure 1: Schematic of a Resource Access Unit

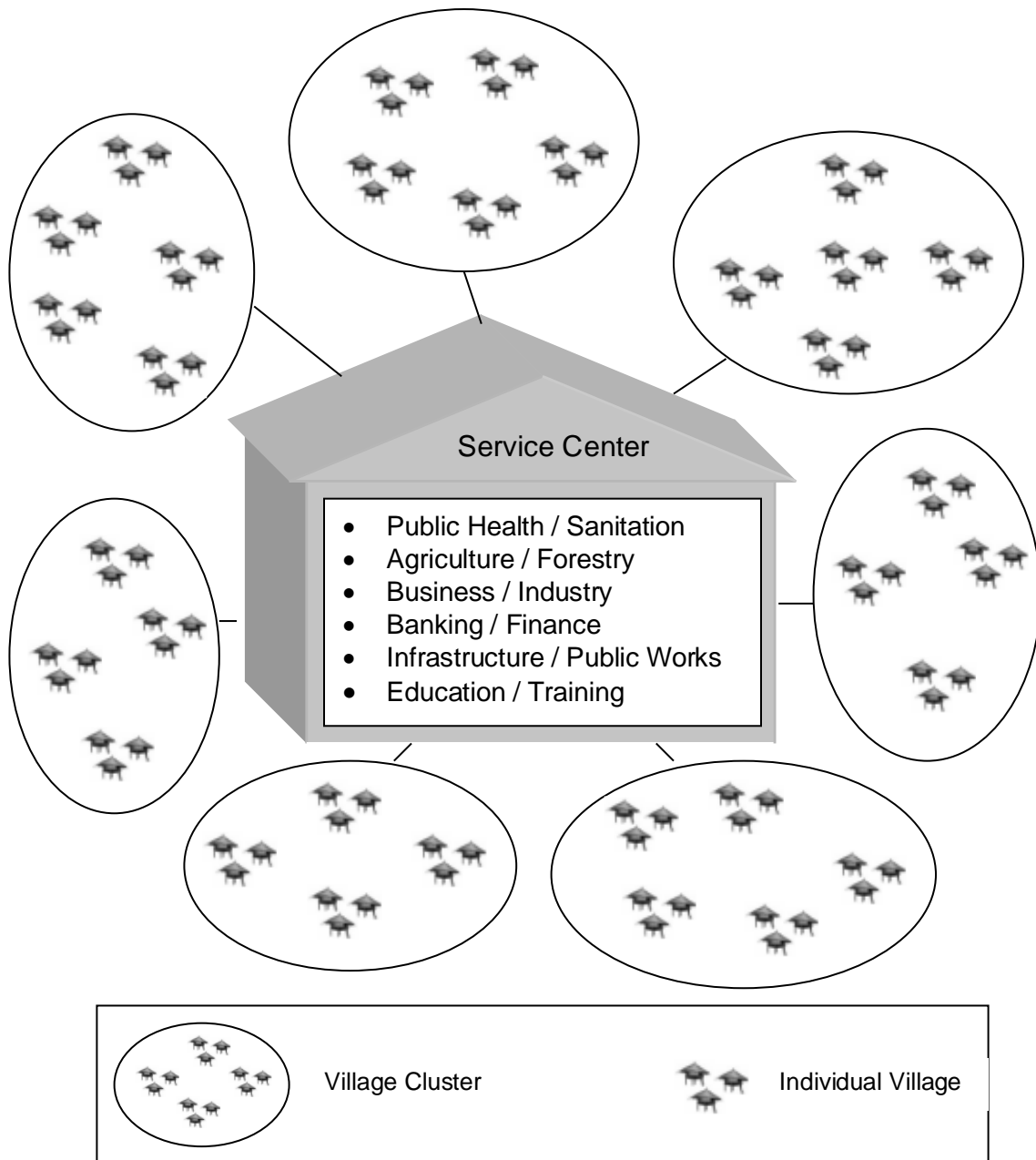


Figure 1. shows the relationship of the three organizational components: the RAU Service Center, the individual villages, and an intermediate organizational level of a cluster of villages. Organizing development efforts within a service area this size provides the population, over time, with well qualified resource personnel to service local villages, empower mobilization of village resources for cooperative action, and stimulate the development of a market-driven economy. There is evidence that development

efforts of this size provide a sufficient population to attract investment, new business and industry, and investment in essential infrastructure such as telecommunications, electricity, roads and transportation.

Two major role-sets within an RAU are required for effective sustainable development. A major presupposition is that one of the major tasks in SVBD is to build the capacity of:

- a. The NGO and external, activating staff serving the villages in an RAU.
- b. The village leadership, already described, to operate in a participatory, problem- solving mode with enhanced productive skills.

If the NGO and external activating staff do not experience ever-increasing effectiveness and enhancement of their own skills, they become stale, and revert back to more authoritarian (vs. participatory) leadership patterns. At the same time, village leaders must learn a new participatory style that supplements the old, traditional patterns of village interaction. Experience shows that these are not necessarily competing styles of operating, but can, with time and experience, become complementary. There will always be a hierarchy and traditional ways of operating for the foreseeable future. But with careful attention from the activating staff, many of those who are accustomed to traditional patterns can learn new participatory ways of operating. And if the traditional authorities have ownership in the program of action, they in all likelihood will be supportive.

4. The Service Center.

A multi-sector Service Center established in each RAU and operated initially by NGOs, is at the heart of the Sustainable Village-Based Development approach. It is a vital intellectual center, grounded in the practical resource needs of the rural areas of the nation. It is the repository of appropriate technologies that work, and it is in communication with technology centers throughout the world.

The Service Center has five basic functions:

- a. **Training locally-appointed Internal Activators and Sector Specialists to collaborate with and train other villagers to implement action plans.**
- b. **Providing support for village planning and program implementation, developing links to private and public resource institutions.**
- c. **Providing appropriate technologies and other resources needed to meet locally defined objectives.**
- d. **Facilitating village and inter-village consultations and decision making.**
- e. **Monitoring and Evaluation.**

Who is best able to do the extension of knowledge? Dr. R.W. Roskelley, former Professor of Sociology at Utah State University, strongly recommended the "Farmer-Scholar" approach. Villagers, appointed by their peers, are prepared to be trainers for a specific technology generation package. These villagers can be very effective in the extension of technology generation packages and schemes. Where Roskelley called these village appointees "Farmer-Scholars," the CSVBD calls them "Sector Specialists" in diverse areas of village-defined need.

The Service Center trains those appointed or elected by the village to be the communicators of appropriate soft and hard technologies. This is outlined in greater detail below in “Staffing the RAU.” The primary value in this approach to extension is that it puts Sector Specialists in a position of authority with their colleagues who selected them. Experience has shown that villagers are able to communicate more successfully with one of their own members than with an outsider. This approach generates increasing competence in an expanding nucleus of village leaders. And finally, it provides a way to extend knowledge to every person in the village who desires it.

Service Center staff and participating NGOs use their collective experience to establish basic participatory planning and decision making processes. They train village-appointed leaders in participatory methods for involving their villages in each of the five development phases of the project. Village leaders at all levels learn to:

- a. **Lead meetings and elicit participation, and help the members of their communities to define problems, identify constraints, decide objectives, set priorities, access information systems, build links with resource institutions, create management plans, and find and implement solutions.**
- b. **Establish economic and social organizations.**
- c. **Collect and record data as a part of the monitoring and evaluation program.**

5. Staffing the RAU and the Service Center.

The RAU consists of the villages, the Service Center and the NGOs. The Service Center staff comes from the various NGOs involved, with expertise in areas of need identified by the villages. A lead NGO, trained in the methods and approach of the Village Earth model, is initially responsible for managing and staffing the Service Center. All Service Center professional positions have counterparts from participating villages who, over the (approximate) 10-year life of the project, are trained to fill most technical roles and are phased into technical leadership positions during years six through 10 (see the five phases in Table 2). These staff members are involved in operations, training, and monitoring and evaluation. The villages provide a number of their members to be trained, and then they work in the villages to carry out various operations to accomplish sustainable village-based development.

a. The Service Center Manager

Serves as the Service Center team leader and is responsible for overall project coordination of Service Center activities for the RAU. He or she also is responsible for ensuring that the objectives of each developmental phase are accomplished. The manager works with all village activator teams to ensure that the priorities determined by participating villages are being implemented. The manager builds Service Center staff cohesiveness by conducting weekly evaluations of accomplishments that include the insights of all staff members, and by conducting regular planning events to facilitate project implementation. Also, the manager works with all external activator staff persons to facilitate the activation of village planning and program activity, find ways to access essential resources, and ensure that the Service Center builds its library of appropriate technology generation packages and schemes.

From the earliest moment, the Service Center Manager and staff are responsible for helping the villagers to create economic and social enterprises in the villages, at the request of the villagers, which will, within five to six years, ensure the financial sustainability of the villages and the Service Center. The Service Center is not only a

repository for village development schemes, but will ensure their success through sharply focused demonstrations of the profitability and sustainability of technical innovations.

b. Two External Activators

A man and a woman who are part of the professional paid staff of the Service Center. Their primary role is to “activate” villages and villagers, and to engage them in the Village Earth Program. They work quietly and informally throughout the village, mainly asking questions about aspirations and visions for the future of the village. The External Activators have the help and assistance of the Service Center support staff, who answer questions and give technical advice regarding both soft and hard technologies. The External Activators work very closely with the Internal Activators, and as the Internal Activators become more and more skillful, the External Activators gradually turn their attention to other villages, working with and helping to train the pair of indigenous Internal Activators in each village.

The External Activators know when it is time to hold a village consultation and when to honor the request of villagers for technical help from the Service Center staff to plan and design various village-initiated development projects. During their first 12 to 18 months in a village, the External Activators carefully and systematically move each village through Phase 1 into Phase 3. After this has been accomplished in the first village, they move on to the second and third villages.

c. The Internal Activators

A team of a man and a woman from the village who are highly respected in the community. They are selected by the village. Over time, they become the trainers in participatory practices at the village level. They work very closely with the External Activators. Because they are from the village, they are able to guide the External Activators in the best approach with the villagers and to help them interpret and understand the responses of the villagers to the Village Earth program. The role of the Internal Activators is to support the village in accomplishing its goals and prioritizing objectives. They are trained in participatory practices by the External Activators and other training personnel in the Service Center. They remain the primary activators in the village after the External Activators have moved to the next village.

In the Basic Mutual Agreement, the village agrees to assign leadership personnel to be trained in participatory practices, other soft technology, and special hard technologies. Among those selected are Internal Activators, Sector Specialists, Task Force members and Sector Apprentices.

d. The Field Supervisor

Trains the External and Internal Activators. The supervisor is very skilled in the soft technology of village activation and is continuously in close contact with each of the External and Internal Activators on a day-by-day basis as needed.

e. The Technical Staff

Will vary with each Service Center both with time and need. Each village will have different needs, depending on the sectors the villagers choose for their development projects. It is the responsibility of the NGOs involved, with the help of the International Service Center, to provide the soft and hard technologies that are needed to meet the villagers’ needs as each development project unfolds and matures. The Technical Staff person at the Service Center may be an expert in a given subject and provide the needed information directly. Frequently, however, he or she will need to refer to the Service Center computerized database or contact an expert through the International Service Center for specialized questions. Technical Staff will be responsible for training village-appointed Sector Specialists in specific technical packages to implement village priorities. They will operate on the “Farmer Scholar” model.

f. Sector Specialists

Villagers selected by the village to be trained in one or more of the hard technologies required for the development of the various sectors, such as agriculture, business or health. The training takes place on a regular schedule at the Service Center, where the Sector Specialists are able to exchange ideas and experiences with their counterparts from other villages. The Technical Staff prepares technology generation packages and works with Sector Specialists on how to communicate the technical packages. Each of these specialists go back to their villages and guide and train other villagers in turn. This system yields technically trained villagers distributed throughout each of the villages in the RAU and builds village-level technical capacity.

g. Sector Apprentices

One of the most important programs for the project and rural areas. It is of vital importance for the rural areas of the world to have an educated leadership who are university graduates, exposed to global knowledge systems, and have technical positions in a Service Center. Young high school graduates who have a passion in a particular area of defined need work under the supervision of a technical professional staff person for two years, then complete a course of university study. They return to the RAU Service Center for two years as part of their agreement. By this time, they are eligible to take over the leadership of a particular sector, either in their own RAU or in another.

h. The Training Manager

A skilled organizer who directs the training programs. The training program is the most extensive activity of the Service Center. There are training programs taking place at the center all day and into the evening every day.

i. Task Force Leaders

Appointed by each Task Force and are trained and supported by both the Internal and External Activators. They are responsible for planning and acting to realize objectives identified in the strategic planning process.

Task Forces are essential for many village activities. Each project or program, no matter how large or small, requires a Task Force to plan and carry out the activity. Although no village would have Task Forces for all areas, many villagers can join together to access needed resources in a number of the different task arenas.

j. The Monitoring and Evaluation Director

A person well qualified in scientific research methods, data collection, data processing procedures, data analysis and report writing. He or she will be responsible for the M&E component of the project.

The M&E program has a strong structural relationship with the International Service Center and a nearby university to insure reliability and validity of the data collection and analysis process. The M&E team must be adequately structured to assure objectivity. An outside evaluator may be needed at strategic points in the M&E process.

k. Enumerators

Well trained in research methods and data collection procedures and work as a team in the data collection tasks. Up to five different M&E instruments are used in every project and RAU. Each RAU has three to five enumerators who work under the supervision of the director.

I. Data Entry Specialists

Trained in data entry, data reliability checks and methods of data analysis. They are employed to work as office assistants, record keeping, and computer data entry specialists. They work under the supervision of the M&E Director.

m. University Associates

Play an important part in the model. It is most desirable to establish relationships with a nearby university for access to needed facilities when necessary, as well as to find ways for the university to participate in jointly designed research projects involving faculty and students.

6. The RAU Cluster.

The idea of an RAU cluster came from NGO leaders in India who discovered first hand the advantages of shared training, and from private universities in Indonesia. Both locations are moving toward developing a cluster approach in implementing SVBD designs.

The procedures for initiating a CSVBD project with one RAU of 50,000 are very similar for those needed to launch a cluster of RAUs. These procedures are described in the four sections on the International Service Center below. The advantages that a cluster of three-five RAUs bring to village development are many.

While conventional development efforts too often are rife with duplicated efforts and can result NGOs actually working at cross purposes with one another, the cluster relationship encourages NGOs to coordinate their efforts and to share resources. Rather than competing with one another, a network of NGOs involved in SVBD can share information on technologies that work, resource delivery institutions and plans, and other informational resources. Where intractable issues confront more than one NGO, it can call upon its partners in development to share their experience, or together seek additional help and expertise. NGO staff could be trained together rather than separately. One NGO may have considerable prowess and expertise in participatory process, while another has developed excellent health care and management systems. These resources can be interchanged to the mutual benefit of all parties.

Often constraints cut across NGO or RAU boundaries, such as marketing structures, forest reconstruction, transportation and roads, etc. The NGO network can work collaboratively, with the assistance of the International Service Center, to create proposals to access major funding for meeting common needs.

7. The Support Chapter.

NGOs wishing to establish a village-based development project form a local chapter. Its initial purpose is to make preparations for project formation. Other functions of the chapter are: to provide a support structure for activated projects by recruiting a variety of supporters and support organizations, particularly in the private sector, as members of their organization; to hold regular monthly or quarterly meetings of the membership, sharing new insights on SVBD and sharing well-planned programs, often with invited guests in a particular field of expertise; to assist the monitoring and evaluation efforts by circulating timely reports of project developments; and to help recruit and provide support and guidance, as needed, to the new Coordinating Council.

8. The Coordinating Council.

CSVBD works with all stakeholders and organizations involved to establish a Coordinating Council within the first three months. The function of the Coordinating Council is to support the project activities by carefully listening to the identified needs and program priorities of participating villages, helping to remove obstacles to action, building effective communication links with all parties, and working with Service Center staff and village leaders to provide alternative actions for resolving intractable problems. A Coordinating Council is an indispensable institution for creating the necessary links and communication channels between people and institutions for the first five years of the project. As links and communication channels become well developed, the functions carried out by the Coordinating Council will have become institutionalized.

10. The International Service Center.

The task of the International Service Center (ISC) is to provide a support system for each RAU project worldwide. It has four major functions: training, consultation, monitoring and evaluation, and networking. The ISC does not manage projects. Only local villages and their residents, with one or more NGOs, do that. They are far more knowledgeable of the situation and needs of their villages and RAU than any outside agent. But NGOs and villagers do need empowerment-consistently, strategically, and technically-to guide villages in the direction of development and to link them with resources. An ISC team trains the lead NGOs, and these NGOs in turn are responsible for all village training and other activities in the Service Center. During the first five years, the ISC provides much support in appropriate soft and hard technologies. The second five years focus on developing local capacity to generate support and management expertise as indicated in the five phases. The four functions of the ISC are as follows:

a. Training.

The ISC staff is responsible for all formal training events involving Service Center and field staff personnel for the first two years. Initially, special emphasis is placed on learning to use the techniques of participatory interaction with the villagers so they will gain skills at identifying problems and solving them.

It is important to emphasize that the major role of Service Center staff is to build local leadership capacity and skills to manage their communities and self-chosen task areas. At the end of five years, villagers have been trained in the soft technologies of participatory practices and community organization. Most have been involved in specific skill training related to their individual sense of vocation. All have experienced a broadening of choices for meaningful participation in their community and the broader society.

This training also intends to develop a corps of SVBD trainers worldwide from participating NGOs and trained village leaders. These trainers would be skilled not only in teaching particular SVBD courses, but also in the practices of project implementation. Specifically, they would be trained in participatory methods, specific technical areas and in project management practices.

b. Consultation.

The ISC provides Service Center staff with regular consultation services. A minimum of three in-country major consultations is held each year. Their primary task is to review past events, glean "lessons learned" from past efforts, build an implementation plan for the coming four months based on plans developed at the village level, and conduct intensive training to equip the activation staff to implement these plans. International Service Center consultation visits also are used to clarify strategy, unblock constraints,

focus and support training efforts, assist in fund raising for special designated tasks, and build competency of senior staff members in team building methods.

The first year's consultation focuses on the village activation plan, developed during the initial village consultation, to insure broad participation, and on the effectiveness of training village leaders in participation methods. A vital component of the early work with all activated villages is forging Basic Mutual Agreements between the RAU and each village. It is of vital importance that the external activating staff be trained to ensure that important community values are identified, articulated, vitalized and maintained in the planning and implementation process. A Participatory Rural Appraisal and a four-day Strategic Planning Workshop is held in each of the first villages to be selected for participation in the project.

The second year consultations focus on assisting Service Center staff to work with participating villages to build viable community organizations and to begin to move toward the goals set forth in their initial village consultation. This is followed as soon as possible with generating the appropriate technologies requested by the villages, and then training village residents appointed by the village leadership to be their Sector Specialists. Training events are held for: specific agricultural crops, establishing micro-enterprises and small business, preventive health care, youth training and employment opportunities, etc. This is the predominant focus of consultations during the third and fourth years. In year five, or as soon as technical capacity develops and begins to mature, consultations and Service Center training focuses on organizational development and management training. The ISC staff work to make available all outside technical resources and persons, within means, when Service Center staff need additional assistance.

c. Monitoring and Evaluation.

Measurements are taken before and after most interventions or action programs. Villagers will have high involvement in identifying the strengths and weaknesses of each program and making recommendations for improvement. This is guided by village External Activators working with Internal Activators, Sector Specialists and Task Force Leaders.

M&E also will include baseline data collection, a mid-point project evaluation, and final evaluation by a Service Center team especially assigned to the project. An outside evaluation team is involved, if needed. Evaluations also are conducted at the end of each of the three phases of implementation (initiation, mobilization and technology intensification). All technologies implemented are evaluated for their impact on villages and the environment and their usefulness for assisting sustainable development strategies. Universities are contacted in the beginning of the project to work with M&E efforts, including setting the stage for more extensive university research activities that become possible through the life of the project.

i. Networking.

Networking involves resource identification, building communication links among villages and with appropriate outside agencies and institutions, establishing a supportive Coordinating Council of all active organizations --public and private -- that have a stake in the project, and holding regular and special collaborative events and forums.

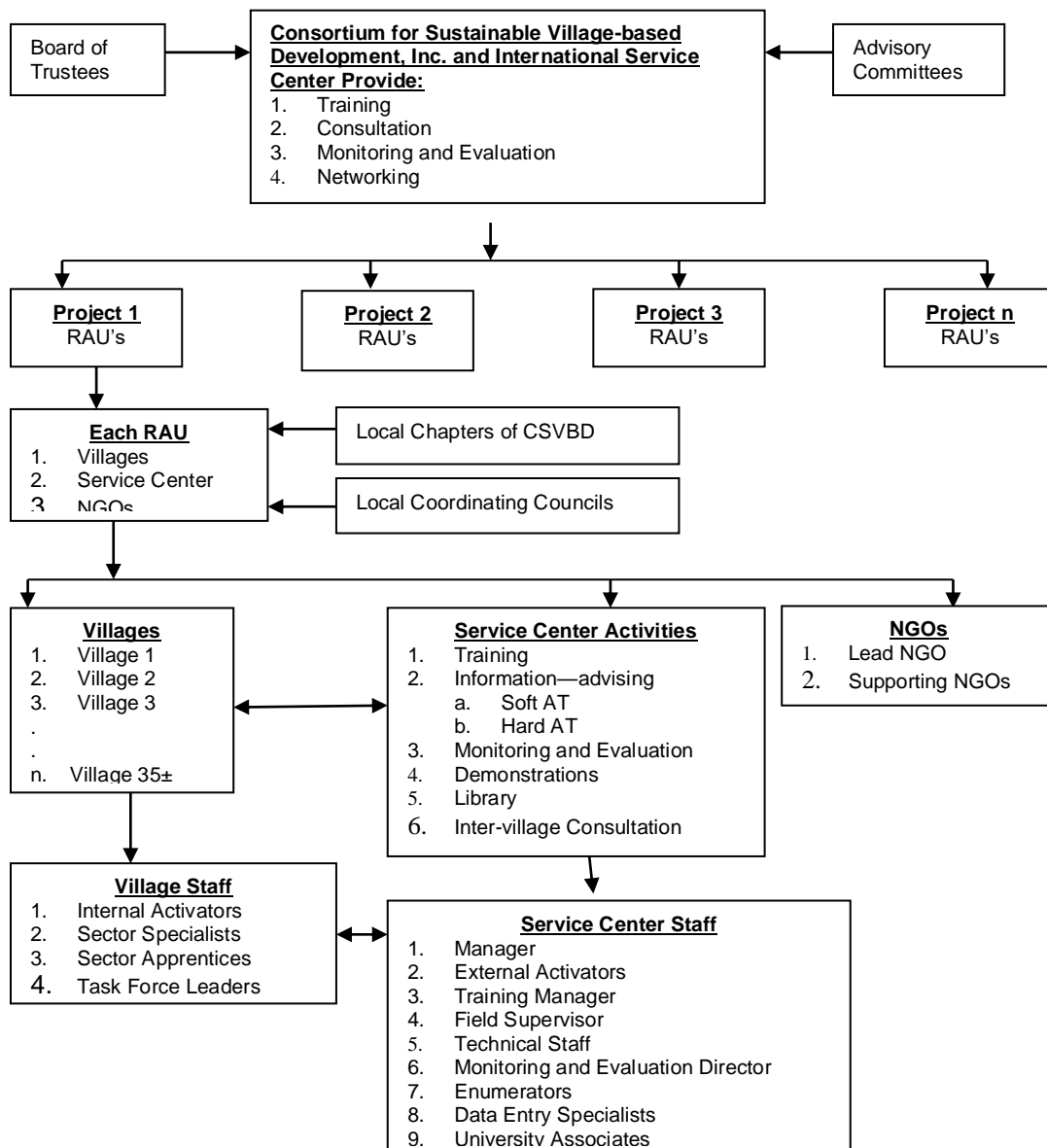
The project commences with a concerted effort to identify as many development resources from the public, private, university and NGO sectors as possible. First, resources in the immediate vicinity that are potentially useful to these villages in the project area are identified. The second priority is identifying appropriate technical organizations within the country. Third, a mechanism for identifying and channeling global resources to the project site is pursued. At the end of five years, the Service Center has a

fully operational library of technologies that work for local communities. This library is on computer and, as much as possible, is available in the local language and, where needed, in the local dialect. It is the Service Center's task to put into useable forms the information systems the villages need.

It is essential to build a viable and effective communications system. This requires careful, on-going collaboration among villages, Service Center staff -- especially field staff -- in communication processes. Field staff personnel are in direct contact with participating villages for a substantial part of every week. A weekly newsletter is a potent communication instrument for disseminating information.

Service Center staff work with the village leadership to make new social and economic opportunities accessible through regular and special forums. These forums are held at the Service Center, at a leading cluster village, or both.

Figure 2: Village Earth Organization Chart



V. THE FIVE PHASES OF SVBD

The five phases of sustainable, village-based development are the guideposts for building links between effective access and resources. It is crucial to note that each of these phases is designed to facilitate participatory development. Each phase requires different skills in participatory action. Participatory development requires that the skill level of the entire community be systematically developed and expanded. The five phases seek to provide direction to this end. See *Table 2*.

Phase 1, *Project Initiation*,

focuses on gaining skills in methods of participation that encourage ownership of the development effort by both the local villager and the village. A "Village Consultation" uses participatory methods to engage the entire village in articulating a common vision, discerning constraints, creating strategic directions and creating implementation plans by interested villagers. The consultation can take three to five days to complete.

The Village Earth initiative works with all villages in an RAU to create effective channels for accessing resources to meet locally defined village objectives. Such a process does not begin initially with all the villages in a RAU. Rather, those villages most ready to commit themselves to the task of village-based development begin first. Also, a village is chosen from each cluster of villages so that it can demonstrate to more reluctant villages in the cluster the concrete possibilities of sustainable development. After 12 to 18 months, a second group of villages is selected for inclusion. The final group -- completing the inclusion of all RAU villages -- is selected at an appropriate time during the third year of the project. By the end of five years, the aim is to engage all villagers in all RAU villages in accessing needed resources for comprehensive, self-reliant, sustainable development.

Phase 2, *Appropriate Technology Development*,

has a strong emphasis on technology generation and capacity building. Those technologies that are directly related to solving problems and realizing objectives determined by local village consultations are pursued and simplified for local use and management. The technology generation phase requires several years and usually overlaps with building viable social and economic organizations.

Phase 3, *Expanding Organizational Infrastructure*,

moves toward legalizing and giving form to the informal economic and social organizations that have begun to develop. Training in good management practices strengthens this institution-building process for establishing viable and sustainable local economic and social organizations.

Phase 4, *Network Linkage Extension*,

is a program of outreach and establishing linkages with other villages and RAUs for mutual benefit.

Phase 5, *Building upon Sustainability of Village-Based Development*,

establishes the project as self-sustaining with the capacity to train others in economic and social development processes and programs. The project also is able to provide support for new RAUs by assisting project initiation in new areas.

VI. CONCLUSION

For approximately five decades, some among the “developed” world have sought to help the rest of the planet’s peoples improve the quality of their lives. Although there have been pockets of success, global poverty remains the Earth’s sad burden, and as looming a challenge as ever.

The Village Earth model draws on development’s fragmented successes. It attempts, for the first time, to fit those pieces together into a coherent, overall strategy to challenge global poverty, particularly in the rural areas where it oppresses the greatest number of people.

Its basic components include the following:

- 1. A participatory, village-based development approach involving the entire community that assures community ownership of every project**
- 2. A service center which provides access to all resources as needed**
- 3. A trained activating/leadership team**
- 4. Adherence to local values**
- 5. Generation of self reliance and an entrepreneurial spirit**
- 6. A multi-sector (holistic) approach**
- 7. Assurance of sustainability**
- 8. Use of appropriate technologies which are economically optimum and environmentally sound**
- 9. Monitoring and evaluation at every step**

At the turn of the new century, the first three Village Earth projects are underway in Arghakanchi, Nepal Poona, India, and Bandung, Indonesia. The Poona project, launched in 1997, has established one 35-village RAU with a Service Center and has identified two adjacent RAUs toward the formation of a cluster.

In Bandung, a city four hours southeast of Jakarta, CSVBD-trained organizers have signs of successful implementation, the RAU approach to development has the capacity to enable both small and large nations to forge a viable development strategy to eliminate poverty and open the door for genuine participation in a productive future for all of society during coming generations.

established one urban RAU within the city and a sister, rural, RAU of 35 villages nearby. Together, the Bandung RAUs represent approximately 100,000 people. The CSVBD also is in partnership with the Consortium for Family and Village Development, a group of 20 Indonesian private universities, to apply the Village Earth model to the schools’ rural extension initiative.

Strategic networking at all levels of society can make informational, financial and material resources accessible to the hinterlands of the world. And with concrete

Note: Further information about the Village Earth Model may be obtained from Maurice L. Albertson or Edwin F. Shinn, Engineering Research Center, Colorado State

University, Fort Collins, Co., 80523, USA, E-mail: alberts@engr.colostate.edu or by visiting our web site at www.villageearth.org

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Village Earth: 20 Programs Toward Sustainable Village-Based Development					
Phase I: Human Resource Mobilization (18 months)					
Phase I	PROGRAM 1 Community Organization I	PROGRAM 2 Micro-Credit I	PROGRAM 3 Village Plan	PROGRAM 4 Technical Training	PROGRAM 5 Natural Resource Management
	Mobilize Community Interest	Initiate and Entrepreneurial System	Develop a Five Year Community Task-Force Organization	Develop an Entrepreneurial Support System	Build Watershed Development Program
Phase II: Appropriate Technology Development (18 months)					
Phase II	PROGRAM 6 Community Organization II	PROGRAM 7 Technological Generation	PROGRAM 8 Community Education	PROGRAM 9 Community Health System	PROGRAM 10 Basic Infrastructure
	Establish Community Organization Structures	Develop Appropriate Technology Packages	Focus on Primary and Adult Education	Focus on Preventive Health	Secure Appropriate Services
Phase III: Organization Structure Establishment (12 months)					
Phase III	PROGRAM 11 Community Organization III	PROGRAM 12 Intermediate Credit Access	PROGRAM 13 Market Access	PROGRAM 14 Enhancing Village Living Environment	PROGRAM 15 Natural Resources
	Single Sector Coop Organization	Small Enterprise Mutation	Enhancing Marketing Capacity	Secure Quality of Life Improvements	Watershed Development Programs
Phase IV: Network Linkage Extension (12 months)					
Phase IV	PROGRAM 16 Community Organization IV	PROGRAM 17 Communication Linkages	PROGRAM 18 Best Management Practices	PROGRAM 19 Network Linkages	PROGRAM 20 Extension Service Interaction
	Developing Sector Network Linkages	Initiate Globalization Technologies	Adapt and Apply What Works	Accessing Routes	Sharing RAU Successes
Phase V:					
V	Build Upon and Celebrate the Sustainability of Development				