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Sibol ng Agham at Teknolohiya

## Village-Level Sustainable Development



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# Village-Level Sustainable Development



A centerpiece of SIBAT's community led approach is the Village level sustainable development (VLSD). It is a model characterized by collective crafting of a community development plan and the pursuit of its objectives by its organized members. The features of VLSD have been taken from on-the-ground experiences in advancing sustainable agriculture and appropriate technology with NGOs and POs over the years, and are essentially aimed at developing the sustainable resource management capacity of the community around three components:

- sustainable food production [through the community-based sustainable agriculture (CBSA)]
- appropriate support infrastructures [through community-based renewable energy systems (CBRES), community water systems development (CWSD)]
- farm-based social enterprises [through community-based enterprise development (CBED)]

CBSA, CBRES, CWSD and CBED are SIBAT's current core programs and are therefore complementary and integral to village level approach to rural development. Currently, SIBAT is piloting the VLSD model in two sites in Datalnay/Dlumay, Malapatan, Sarangani South Cotabato together with the Center for Lumad Advancement (CLANS) based in General Santos City and in Bryg. Bonbon, Aloguinsan, Cebu together with the Farmers Development Center (FARDEC-Central Visayas) .



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## Community-Based Sustainable Agriculture



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# Community-Based Sustainable Agriculture

**Sustainable Agriculture** (SA) is based on people and driven by people. Community basic needs of adequate and safe food, health and nutrition are prioritized in the development plan. Sustainable agriculture promotes ecological conservation, protection and enhancement by tapping local resources with technologies appropriate for the people. These are carefully and rigorously undertaken in steps or phases, where each step leads to the objective of increasing productivity while conserving and improving the state of resources.

Motivated by objectives of self-reliance, sustainable agriculture is based on local or indigenous knowledge of farmers, upon which their capacities and innovativeness in agriculture and in appropriate technology are built. It values and aims to restore and re-enshrine cooperation in the culture of the farming people.

Sustainable agriculture promotes social justice through land resource ownership and control, empowerment of the disadvantaged groups and sectors, particularly of indigenous people and rural women.

**Community-based SA- Diversified and Integrated Farming System** (DIFS) constitute the core technological approach to sustainable food production or SA in our model. Our experiences have shown that DIFS proceeds even in rigorous resource-scarce conditions. It flexibly proceeds in five stages or phases towards maturation, relying on organizational cohesion and individual resolve at every stage.

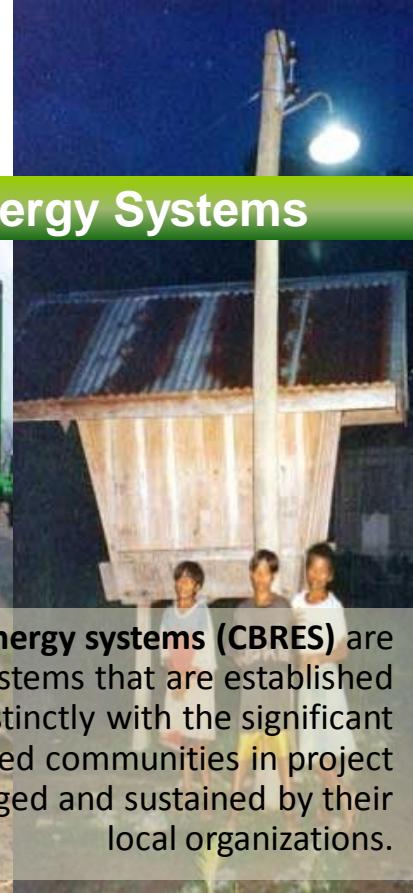




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## Community-Based Renewable Energy Systems



**Community-based renewable energy systems (CBRES)** are small, decentralized power supply systems that are established through multi-stakeholder efforts distinctly with the significant participation of organized communities in project development, and are owned, managed and sustained by their local organizations.

# Community-Based Renewable Energy Systems



**Community-based Renewable Energy System (CBRES)** was instituted when SIBAT, through its network members, embarked on a pioneering task of developing a 5 kilowatt Ngibat microhydro project in Tinglayan, Kalinga in January 1993. It has remained to date, the oldest yet functional renewable energy system providing electricity to 38 households with livelihood applications for rice milling, sugarcane juice extraction and blacksmithing.

It is a unique approach because it recognizes the lead role of the community - through its people's organization (PO), in collectively harnessing their local resource, cooperating to implement the technology, and actively operating and managing the system to support their primary needs.

CBRES provides direct benefits to rural communities by generating affordable electricity based on community needs (e.g., production and processing). It likewise promotes equitability and gender-sensitivity by ensuring that access and benefits accrue to the poorest and marginal sector including women, children and elderly. It similarly banks on and further strengthens community solidarity as well as indigenous cooperation and resource sharing. Local environment is enhanced, managed and protected by the PO's collective resolve.

Supporting the PO in their community endeavor are multi-agencies other wise known as stakeholders. A local NGO (or faith-based organization) acts as local facilitator during and after the project's establishment. The local government unit (LGU), as the local authority mobilizes additional support to the project and to the community through local administration.

SIBAT, as technical service provider, chiefly provides assistance in terms of site and resource appraisals, project studies and designs (e.g., PFS and FS), funding options or proposal development, technical supervision during implementation, organizational and technical capacity building, project monitoring and evaluation.

Currently, SIBAT offers a range of technology options and applications for CBRES including:

**Micro-hydro power (MHP)** systems (e.g., 100 kilowatt and below) with applications for household electricity, public infrastructure and facilities, farm irrigation, and enterprise support through post-harvest milling and processing, carpentry, weaving, blacksmith and handicrafts.

**PV solar systems** for communal irrigation and drinking water. Small wind systems (e.g., 500 - 1,000 Watts) with Level 2 potable water distribution systems to households

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## Community-Based Water Resource Development



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# Community-Based Water Resource Development

Most poor communities in the rural areas do not have access to water system facilities that bring water closer to their homes or to their farms to improve crop production.

SIBAT's **Community-based Water Resource Development (CBWRD)** seeks to develop water resources particularly those situated in far-flung areas for potable water supply and to support farm productivity through irrigation. Children and women's burden of fetching water for long hours from distant sources are lessened and more hours are maximized for other equally productive activities.

Aside from just implementing the infrastructure component, SIBAT's CBWRD strategically aims to build the capabilities of community people to develop water resources in their areas. To do this, the program trained select community members on the fundamentals of technical survey work and basic water resource assessment design and planning. To sustain and manage their water system, they are likewise trained on basic project and finance management, leadership skills, policy development as well as technical operations and maintenance.





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## Development Consultancy Services



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# Development Consultancy Services

SIBAT's **Development Consultancy Services** (DCS) provides advisory services to NGOs, Peoples Organizations (POs), faith-based organizations (FBOs), multilateral agencies and even government agency partners on appropriate technology (AT).

DC serves as a venue for SIBAT in advancing appropriate technology work through sharing of its expertise, and ground-honed competencies to partners that are pursuing similar endeavors.



Revenues earned from DCS are plowed back to finance SIBAT's development work. Earnings also contribute to the institutional requirements for SIBAT to sustain its operation.

DCS depends primarily on SIBAT's in-house staff to deliver the services. However, SIBAT similarly engages the help of professionals or volunteers with technical work backgrounds to augment the workforce. These are professionals or volunteers desirous of making a difference or create social changes in the lives of the poor.

Among the services that SIBAT provides include the conduct of feasibility studies, project designing and cost estimation, trainings, monitoring, evaluations, construction supervision of projects around Community-based Renewable Energy Systems (CBRES), Community-based Water Systems Development for potable and irrigation (CBWRD) and Community-based Sustainable Agriculture (CBSA).

Among the DCS engagements of SIBAT include the conduct of feasibility studies for Microhydro development with Asian Development Bank-Winrock in select sites in Negros Oriental, JICA in Agusan del Sur, social appraisal for pre-investment study for 6 market Packages for rural electrification with IRG-AED/APL Worldbank Project in Negros Oriental, Davao del Sur, Palawan and Masbate, the Alliance for Mindanao Off-grid Electrification (AMORE) in select areas in Autonomous Region of Muslim Mindanao (ARMM), Accion Contra del Hambre (ACF) in Surigao del Sur areas, and Municipality of Calbiga, Samar. Wind/Solar Systems were constructed in partnership with the Municipality of Lubang island and the demonstration farm of CABIOKID in Cabio, Nueva Ecija. SIBAT's DCS in Sustainable Agriculture includes partnerships with Plan International, Philippine Development Assistance Program (PDAP) along sustainable agriculture trainings, project designing and development, monitoring and evaluation among others.



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## Policy Research and Advocacy



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# Policy Research and Advocacy

## “Walking the Talk”

For the past 26 years, SIBAT had made efforts to address issues of food insecurity and poverty in the poorest areas of the country, which, typically are farming communities seated over a range of agricultural typologies ranging from lowland, sloping to mountainous. On these farmlands, people subsist from seasonal growing of rice and corn for staple food, and derive livelihood from crop production, selling forest products or small wage earning from off-farm work. These are resource scarce areas where socio-economic conditions of people are commonly described to be with low productivity and incomes.

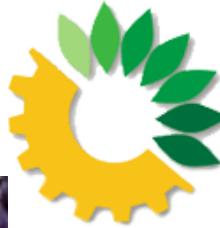
SIBAT believes that these prevailing agricultural and rural conditions as essentially constituting under-development and mal-development that grip many rural communities, particularly in these upland ecosystems, in unrelenting poverty and food insecurity. Because of the enormity of the problem, SIBAT believes that *development change* should be undertaken by and involve the community (and not to begin from just a middle-to-upper section of the community, i.e., asset-based), but which should ultimately reach deep into the transformation of each member. SIBAT and its partners continue to reveal the potentials latent among producers and their environment, in many baseline researches conducted in varied agricultural landscapes and conditions.

*SIBAT, therefore, basically promotes community-based development as one strategy in confronting poverty and food insecurity and sovereignty in Philippine rural areas.*

SIBAT partners with POs in areas where the struggle for land tenure had been substantially or decisively engaged, or where farmer-tillers are clearly and staunchly on the path of agrarian struggle. SIBAT believes that sustainable agriculture can be more fully realized where farmers can freely make decisions on the fate of their agriculture.

SIBAT partners with local NGOs who have shown record and commitment to genuinely serve communities through capacity building, which starts from recognizing the potentials of human resources alongside local or indigenous knowledge and natural resources that can be tapped for development. We believe that with this basic idea, the members of the community can be mobilized to act on the basis of a development plan collectively drawn.

In partnering with NGOs and POs, SIBAT steps beyond technology advisory to partner with said stakeholders in rural development.



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## Urban Organic Food Production



Urban Organic Food Production is an approach that aims to contribute to addressing problems of malnutrition, food insufficiency and deficiencies in nutritional content of food sources commonly found in urban poor areas.

# Urban Organic Food Production

SIBAT's urban organic food production was started in partnership with the Catholic Parish of Sto. Nino in Bagong Silang Caloocan City and implemented through the Basic Ecclesiastical Community (BEC) formations. The project focuses on building up the skills and knowledge of BEC members in organic food production through a series of organic food production technologies.

Open urban land spaces normally left idle or used as garbage dumping areas were converted into communal gardens. Used containers like milk cans, plastic pails, basins and sacks are optimized to grow crops known as container gardening where open spaces are not available in certain slum zones and packages. Urban kitchen and market wastes like fruit peels, fish wash and vegetable left- overs were used as substrates to make biofertilizers that the BEC members themselves processed. This activity also has helped in managing urban wastes as articulated by law.

SIBAT has expanded the project in Montalban Rizal with relocated squatters being demolished in Manila, and in Graceville Subdivision, San Jose del Monte in partnership with the Barangay LGU. Urban gardeners are able to augment their food supply with various vegetables sources, and have earned some income through vegetable sales. They experienced a sense of empowerment with the capacity to produce additional food sources and the activities have promoted unity and cooperation among community members. Members who are advanced in the practice are being developed to become trainors themselves as the project activities are being expanded to adjacent zones and packages in the area.





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## Volunteering Program



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# Volunteering Program

Volunteering enables the participation of academe, professionals, students and local community members in appropriate technology for rural development. It promotes the spirit of partnership, mutual learning and service in people-based science and technology by bridging them with communities.

Volunteers are individuals that collaborate with SIBAT in various capacities in this same spirit. The term 'volunteer' is chosen not to mean that they are not supported financially but to highlight the character of the motivation as not chiefly financial. In SIBAT, a volunteer serves as innovator, facilitator, trainor, researcher, adviser/consultant, networker, and resource mobilizer in developing people-based science and technology.

In SIBAT, a volunteer serves as

- Innovator
- Facilitator
- Trainor
- Researcher
- Adviser/consultant
- Networker
- Resource mobilizer



For more information, please visit our website at [www.sibat.org](http://www.sibat.org) or contact Charlene Tan at [charlene.c.tan@gmail.com](mailto:charlene.c.tan@gmail.com)

## Volunteering Process

