Practical Actions and Strategies further to the Implementation of Whole System Transformation and the Empowerment of Women

Increased availability of time and money, together with a more efficient time management program, is now available and benefiting individuals and communities who implement the Whole System Transformation (WST) program.

The availability of this extra time enables access to education and new deliverables such as health services as well as better understandings of sales and marketing programs via computer-driven education and various Internet communication programs.

People no longer need to dedicate every minute of the available time they have to producing food to sustain themselves. They can now eliminate non-productive tasks such as spending hours walking to market or walking to obtain a day's water or fuel supply.

But most importantly individuals and communities have completely new opportunities for generating income and revitalising local economy.

This new sales/marketing knowledge, skills and competencies gained through new education initiatives demonstrates the way to take the resultant goods, handcrafts, and horticultural/agricultural products, now able to be produced in larger quantities of better and increasing quality, to local, neighbouring, and regional markets in a most direct way, thus cutting out many intermediaries.

More and more consumers are looking for ways to buy directly from the producer. Using Internet communication services enables direct connection with producers and this means that a greater portion of the selling price is now retained in a community.

This is the start of export, economic revitalisation and local capital accumulation.

We now examine the by-products of the actual physical eco-machinery and biological compounds used in the WST program and the development of new business and services for communities, through energy, recycled water, sanitation, mulch/fertilizer, BioChar, community facilities and services, education, health services, and communications. The starting point is to secure nature's life support systems for individuals and communities in ways that assure safe water for drinking, washing and food production, deal with wastes in ways that provide for clean air and soil. The approach is to deploy eco-technology solutions to local needs, circumstances and opportunities by working with community leaders and not just acting for and on behalf of such leaders and community.

Energy

The first by-product is energy, which can be in the form of biogas or electricity, as desired and driven by any given community, coming from the installation of a bio-generator and a gasifier, most importantly working in concert as part of a WST program.

This energy, when delivered as electricity, powers Internet and WiFi access and opens the doors to distance education programs and distant medicine as well markets the world over.

When delivered as gas there is energy to produce hot water, a much-need commodity in remote and rural communities. The gas may be used for cooking needs, replacing wood and charcoal thus removing harmful smoke and cancer-causing substances from the air inside dwellings which are often the cause of lingering congestive diseases amongst children and women.

Electricity means that individuals and the community are now able to maintain a website promoting the village and its various products, tourism, and handcrafts. Internet solutions can also provide new ways of sharing revenue generated among those involved and provide a basis for new institutional structures for organising and providing goods and services.

The available power allows a community to light a small hall or other form of public venue where teaching may occur at night. It also means that a small heath clinic may operate on some basis and that there will be power to run refrigeration and medical equipment.

An electric light in the village square can change the face of a community, and lighting in and around public toilet/ablution facilities ameliorates the incidence of sexual harassment and assault on women.

Refrigeration can also have a huge effect on the life of the women of the village. It allows them to utilise foodstuffs that in many cases must be fed to the village dogs because there is no way of keeping such food safe for human consumption for periods longer than just three or four days.

No longer spending many hours four or five times a week going to market to buy fresh food for the family frees up children's and women's time for other, sometimes income-producing, work. It minimises mundane work and provides time for education classes.

A village can now have electricity and gas for hot water, lighting, Internet, electric appliances, and other time saving gadgets and equipment. It also allows any Windows computer to act as a WiFi hotspot, allowing access to mobile phones and the ability to charge batteries for phones and other devices. WiFi hotspots may be connected with any computer or mobile phone, whether they are Apple or Android.

This energy provides a door, a gateway to the 21st. century, a gateway for a new kind of development that is based on working with nature, locally.

Education flowing from access to the Internet brings cash flow to individuals and to a village or community as a whole where previously cash flow was meagre or almost non-existent. There are new models for sharing revenues and accumulating capital that benefits individuals and the collective community.

As the old saying goes, "Cash is King." When combines with the right revenue sharing models, all those in the community can benefit.

Biodigester, Mulch, and Biochar

With access to mulch for gardens and small household food crops, communities move toward better family health, which in turn means the ability to create new opportunities for study and to learn new ways to produce cash flow and generate revenue.

The fertilizer made from the digestate of the biodigester means that less money is used and needed to purchase expensive fertilizers. These fertilizers, when mixed with a microbial enhancement biological agent (Solutek), the fertiliser can keep soils healthy and productive.

New styles and forms of crops and produce may now be grown successfully, and a village may move towards building and using "hot houses" or "Bio Domes" to increase year-round food production. There is the opportunity of installing a small aquaculture system to assist in the provision of protein, as necessary nutritional building material for human life.

Mulch and fertilizer are produced as a by-product of the biodigester and this, combined with a sanitation system and an ecosystem based water treatment unit known as TreeWell, will provide "A" grade agricultural water for irrigation of family and other vegetable growing plots, as well as for the watering of fruit trees. This water, with minimum treatment (ultra-filtration and UV sterilization), is able to be used as potable drinking water.

BioChar, the by-product of the downdraft high-temperature gasification equipment, BioChar may be used as it comes from the gasifier for adding to soils. However, if it is made into a very fine nanoparticle sized powder, this BioChar may be added to a mix of water and the biocatalyst organic solution and then used as a fertilizer type soil rejuvenation agent. The gasifier used must be a high-temperature gasifier that produces a prilled type of dry char.

The use of such a mixed product will assist greatly in turning clay soils into friable, food-producing soil and so will encourage microbial growth in soil that in turn produces nutrients for plants by the breakdown of naturally occurring and ploughed-in humic material. Communities now have an extremely inexpensive way to rejuvenate and revitalize soils and, flowing from such rejuvenation and revitalization, an increase in quality and productivity at reduced cost.

Community Facilities and Safety

Collective action and collective benefit is an important part of the WST approach. Communities may now provide facilities available to all, these are a key priority. These include facilities such as communal sanitation and toileting facilities built with washing and showering cubicles that can change dramatically the face of a small community, providing the opportunity to wash clothing and bedding more often. With solar-powered lighting, available power, and the use of biological sewage treatment products coupled with an ecosystem based TreeWell sanitation unit, all water passing through the system may be recycled, ensuring not just quality but quantity. Water may be stored and reused for toilet flushing.

Public facilities when placed in well-lighted areas that are not surrounded by vegetation, assure safety. There are no hiding areas for miscreants. The result is change and improvement of the lives of women and children providing a degree of safety previously unattainable in a community. These sanitation/ablution stations may be strategically placed around a village in response to local needs and circumstances.

Other community facilities such as a small hall with attached rooms can provide a meeting place for functions and a school room during certain hours of the day, as well a focal point for community festivities. Attached rooms are used as the community health care centre and medical clinic. With a sanitation/ablutions facility close to the hall with washrooms and toilets allows for the development of a village centre of substance and creativity.

With a satellite dish on the roof and a blackboard on a wall, the hall becomes a school at times and a gateway to the world at other times for local developing business partly based around a village WiFi hotspot. Refurbished computers may be obtained from leasing companies and computer manufacturers for use by the community and little or no cost.

Education, health services, and community Internet communication facilities, all powered by electricity generated by the waste-to-energy systems of a WST program now gives the foundations of change a strong foothold in the community and associated and ancillary conditions and buildings/constructions to service village requirements. These WST programs are now available for small-scale use and, in many cases may be augmented by solar or very small-scale wind power.

Ancillary Activities and Benefits.

Women may learn new skills and acquire new competencies, for example, how to make soap and antiseptic products from locally produced plants thus saving eyesight and limbs and, in some cases, the lives of villagers. Such initiatives are vitally important as tens of thousands of children alone each year lose their eyesight or die on a worldwide basis because they do not have essential basic products such as hot water, soap, and antiseptics.

Dirty water causes death and the development of intestinal worms and this results in massive costs to the productivity of the community and the life of the infected individual. WST programs bring clean water, recycled water, soap and hot water, antiseptics and food, and better internal housing air quality that radically changes a community for the better.

Communications

In our increasingly interconnected 21st.century world, communications and the ability to speak with potential buyers, sellers, medical services suppliers, and educationalists as well as many others in distant places, is a "must have" situation for the successful growth of a person, a community, or a business. WiFi hotspot technology allows villagers to use messaging services on mobile phones without charge and can connect a small village if deployed adequately.

In summary

Waste-to-energy eco-technology and water reclamation and recycling solutions designed for small- to medium-sized communities is now an essential element of regional socio/economic development.

Whole System Transformation directly addresses the needs of remote and small regional communities from 50 to 2,500 people with the ability to be expanded in a modular style and manner to larger communities of up to 5,000 or more people.

By provision of what so many of us take for granted in our daily lives, power, hot water, medical services, education, communication, and more than enough to eat and safely drink, is life-changing and is the basic human right of every person on the planet.

Whole System Transformation is a harbinger of human rights and improvement in the life and lifestyle of a committed community.

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