

# **The EMPOWERMENT of WOMEN**

## **pursuant to the implementation of**

### **Whole System Transformation**

**Whole System Transformation (WST)** starts with women, is led by women, and succeeds through the efforts, work, and the support of women. It can bring new health services, safety, education, and business opportunities to communities and villages that are in desperate need. And it all starts with clean water.

Women are largely responsible for the provision and supply of water at home in rural communities where clean water is not readily accessible. Accordingly, it should come as no surprise that the improvement of water and sanitation has a direct impact on the overall health of communities and the safety of the individual women and children who live there.

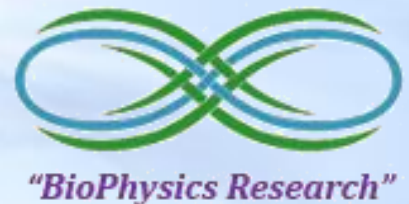
WST is set into motion by eco-technology - controlled by women - that:

- (1) converts village and household waste to energy and electricity;
- (2) provides sanitation and clean water;
- (3) provides methane gas for heating and cooking; and
- (4) produces BioChar, mulch, and fertiliser as by-products that may be used in the community to improve food production or sold to neighbouring communities as soil improvement and enhancement agents.

Transformation is the operative word; a community and the life of the community is transformed in ways that whole villages have always dreamed about but lacked the necessary skills, experience, and knowledge to bring for themselves.

#### **Communal toileting and ablution blocks can change lives.**

Most certainly many houses will over time install their own piping systems that link to main village sewage treatment works, but, no matter how that progresses, the whole community benefits from being able to access clean water in which to wash, available in the communal facility or at a closely situated stand pipe or pump. Open defecation ceases or comes close to ceasing. The incident of rape is drastically lowered by a well-lighted village and communal toilet/ablution block.



## Basic Health

Infant mortality is always above normal international standards and expectations in these types of villages to have high rates of infant mortality are common. The effect on women and the whole family is tremendous, it saddens all concerned and, in many cases, causes women long-term, ongoing general health and mental health problems. The availability of clean water and additional food for pregnant women and the availability of new health services brought about by WST can save lives and change dramatically the lives of women. Visiting nurses and in some cases doctors are able to provide prenatal and postnatal care and advice that in all cases proves invaluable to expectant and new mothers. Mothers are taught to make their own antiseptics and the basics of disease prevention as they now have that extra precious time to attend classes and information sessions.

Yaws is a major problem in Africa, Asia, Latin America, and the Pacific where 75% to 80% of those affected are children below 15 years of age. Health education and improvement of personal hygiene are the starting points to prevent Yaws which is a part of a group of chronic bacterial infections commonly known as the endemic treponematoses. Yaws is found in poor communities with inadequate clean water and sanitation where the climate is warm humid and tropical. The eradication of Yaws is a major initiative of the WHO.

## Energy

Energy will enable the use of refrigerators in communities where women would otherwise have to walk five or six miles a day, five or six times a week to purchase fresh foods for their family. The shortened food chain made possible through WST is a massive help in this regard and liberates women who now are able to find the time needed to improve not only their position in life, but also to influence the life of an entire community. Time is precious.

In addition, the access to energy will power central lighting at a toilet and ablution block facility and provide overall safety for the women of these communities. Just one street light in a village square can have a massive influence on the lives of women and the entire village community.

## Heating and Cooking

Indoor heating and cooking, smoke, and fumes affect the whole family, but it is the woman of the house that is most affected as she hovers over the cooking fire making meals for the family at least two or three times a day, every day. These fumes bring on lung disease, heart disease, eye disease, and much more.

Having the availability of just a two-burner small stove, fuelled by gas from a biodigester in the village, would make a huge contribution to the lives of the whole family. It would make life for the woman, who in nearly every case must go and forage and work to find the fuels for the old open cooking systems, much easier, and this then provides more of that precious time for other pursuits.



*"BioPhysics Research"*

## Hot Water

This availability of gas allows for a house to have hot water. A luxury to have on hand in many villages. Hot water and good health go hand in hand, and, when combined with soap, can and does save lives and eyesight, prevents bacterial infections, and much more.

## The Availability of Extra Time and Increased Opportunity

The saving of precious time for women now provides **more** time for those women to grow on a personal level and work on growing more food for the family, time is now available for work making sellable handcrafts, pottery, trinkets, clothing, and other valuable items. Women can now start a small business either in concert with others in a village or by themselves.

Empowering women has a huge flow-on effect to the whole family and the whole village. All of these small things that give women more precious time are able to be turned into advantageous situations for their children and their husbands, as well as themselves.

## Health

As part of this new hall, a few rooms could be included to be used as a village health centre with refrigeration for medicines, vaccines, and such. It would have electricity to power small, minimum medical equipment that would bring huge increases to the overall health of a village. It can be run by women who now have more time for things other than walking for hours daily just to get water and fresh food to barely survive.

## Clean Water

Clean water produced by implementation of the WST program saves time for women, saves lives in a village, and saves children and adults from, in many cases, extremely bad health, early death, and a generally shorter life expectancy. In most, if nearly all, cases it is the woman of the house that must take in the burden of looking after the sick and injured of the family. Clean water brings better health to a community.

## Community Benefit

WST can help provide a small hall in a village, which women and children can use as a school house during the evenings as, in most cases, they are working helping with food production and other things during daylight hours. Electric lighting can light the village hall/schoolroom, and children can attend and be educated as not available before. Women are able to attend classes held by doctors or nurses or become involved with other education courses that would have meaning in their lives.



***"BioPhysics Research"***



## Soil Improvement and Food Production

Mulch and fertiliser availability at little or no cost to a farmer and his wife allow the family to grow more food of a better quality. Women win as they now are able to feed the children of their union and provide a better start for their future with more and better-quality produce. Having this more abundant and higher quality produce available from their own family garden saves them time and opens doors for trade and for business.

BioChar made as a by-product of running a gasifier added to fertilizer and mulch produced by the biodigester significantly enhances their abilities to enrich the food growing proposition and outcomes.

## Led by Women

In each location for implementation of WST it is important to understand the male/female division of work. In most of Africa, the men look after the animals, and the women and girls do the horticulture, fetch water, cook, and make **and** create handiwork. It is important that the women are immediately involved in the organization and planning of the WST, including the location of communal showers and toilets, lighting, and water stands/tanks, as well as the location of the public hall and agricultural storage facilities.

They also need to discuss and have vital input into family and community water needs. Health and education should include adult education and basic education on nutrition, as well as the village manufacture and use of health and antiseptic products, to include knowledge of soap making. Tens of thousands of people in Africa either go blind or lose a limb or die all because they have no hot water and soap.

It is proposed to hire three local people for each project, and two of these should be women. These three will look after practical arrangements and be closely involved both in planning, execution, and liaising with community leaders. One of the women should be trained in basic bookkeeping principles and business development over the first two years.

## Embrace Change

Women are able to ensure that their husbands and children know and understand what is happening, what must happen, and what the results can and will be by embracing change, the change brought about by the implementation of Whole System Transformation.

We talk about "precious time," and many people know and say "time is money." Time for women is freedom, the freedom to pursue activities of major importance to themselves and their families and communities.



***"BioPhysics Research"***