Global Conference for Sustainable Humanitarian Relief

June 17-18, 2013

Haiti Economic and Viability Group

**New Model of Green Architecture for Haiti**

Ing. Marcel Susko. Dip. Perm. Des. / Lifesprings International Association - Haiti

During our humanitarian work and research (2010-2012) we mapped approximately 158 problems which are conditioning the life of local communities in Haiti. We found that majority of them is conditioned by the existing environment and environmental problems and therefore is reasonable to start on the ground and this will eliminate majority of other existing problems. Simply said: The people in a good environment wouldn’t have these problems. The key and very strong factor is the architecture. We were working on finding sustainable environmental solutions, and the intensive research took 18 months.

We found that new model of architecture can solve environmental problems. Environmental problems contain issues such as water, sanitation, pollution, waste management, waste water management, energy, fuels, food production system... When the environmental problems are solved, it will automatically bring reduction of health risks, malnutrition, and together with good housing, education and professional training, people can begin to work on the development of the economy. Today, this potential of hidden human capital is lost by the everyday effort for survival and fighting unfavorable living conditions (weather, insects, diseases, insecurity, pollution, heat, floods …).

When people hear about the problems of developing countries, often (after the hunger, malnutrition, and poverty) the first thing mentioned is the lack of water. After that is sanitation, etc.

In November 2011 when counting the detail parameters I found very surprising fact. Everybody is talking about missing water resources to cover the needs of people and local communities in Haiti. In Haiti the yearly rainfall is 1357mm which is 1357 liters of water for every square meter. In Slovakia there is 400-700mm, and there is no problem with the shortage of water for all uses, so how then in Haiti where is 1357mm can be a problem? The major fact is that the infrastructure and architecture is not designed in a way which would support people living in local communities. The task was to design suitable environmental technological solutions.

In January 2012 we discovered a unique system by which all existing environmental problems of urban areas can be successfully solved with high rent ability and huge amount of multiple benefits for residents, users, surrounding local community, and visitors, with zero negative environmental impact. It got name Integrated Environmental Design System – IED System. The system is based on creating living bio-food-productive cells of the urban space which will cover majority of missing key resources and provide abundant nature-rich environment for residents, users and the whole area. The system enables to turn concrete-iron-asphalt-gravel-pollution areas without soil and resources into green, productive, ecologically sound and economically viable urban units, universally adaptable for the whole urban infrastructure. The model enables to turn semiarid climate into productive ecosystem with all the benefits for people living in urbanized areas. The system contains the combination of local building technology with 40 environmental technologies and minimum of 40 planting systems in 3D space of the city. The system was originally designed to solve the problem of anemia and malnutrition in the local schools environment where majority of low income families cannot afford the nutritionally valuable food for their children. Finally the system was developed to solve all existing environmental problems in local urbanized areas, and is adaptable for the whole infrastructure including green streets, neighborhoods, city zones, towns, villages, and whole new green cities. Building on these principles can bring huge economic impact and solve all current environmental problems, and to create suitable beneficial working environment and the environment for all other social activities.

The first models of complex new urban areas were prepared in the design form.

We are looking for the donors and partners who are willing to support the development, pilot production, and related innovative applied research. The pilot project was prepared and submitted on April 13, 2013.

If the Haiti would be degraded since the beginning of the history, we would think that there is such a geographically determined environment and nothing can be done. But we all know that Haiti was beautiful green island, so the problem is not in the land itself. We developed model which will be able to cover all needs for water for all uses, missing nutrition and other resources .

Food production in poor urban areas is very limited or not possible at the moment. When the water is not available and during dry months, people who don’t have even water to wash themselves, will not have water to care about gardens. Another main factor of the poverty in these urban areas is that many of them do not have any soil, only gravel and sea sand.

People in these communities fight for daily survival. They don’t have often even extra money to buy even 1 bucket for their household during the whole year, the barrel to catch the water is quite a big property. So the humanitarian help and all the little improvements are playing essential role in helping local communities.

The imprint of the existing environment on inhabitants plays crucial role and it works both directions, good imprint is supporting positive change and bad imprint is supporting the spread of further destruction. Depleted resources in urban areas are increasing the demand for the resources from the rest of the country while unsolved system of creating the new local resources and speed of rising population in context of unsolved environmental problems is bringing the country with 98.5% deforestation into the risk of environmental collapse. These communities are dependent on resources coming from outside. To create sustainability means to create self-supportive productive systems.

The people living in poor and depleted environment will not be able to change their situation unless they have chance to see something better and to learn and be trained in achievable ways how they can change their environment. The imprint of the bad environment is made in early childhood. If majority of the population is imprinted by wrong environment, there is no motivation and strong subconscious barrier inside to change it for the better one, since they think that what they saw and experienced since childhood is the normal and the only good option. Not only 350 years of slavery in Haiti when black people were forbidden to be educated, but also the last 200 years the population was very isolated from gaining experience abroad. Of course it has damaging chronic negative effect which is deeply rooted. Probably the only tools for really effective change are positive and visible models. Another important thing to know is that the sharing in poverty is a duty, and any strategy which is only for elite, will not be received or welcomed by poor people. So the successful strategy is the one which can be available for everyone. It does not mean some kind of uniform approach, it means that it must be complex and diverse enough to cover the diversity of needs and lifestyles.

The longer it takes, the more it takes hope. The longer it takes, the more people begin to believe that any change of their situation is possible, and that therefore everything will only go back where it was before. Over 40 years of international intervention in Haiti is quite long period, for many of the people it is a lifetime. When coming to Haiti and observing the work of humanitarian intervention, I saw that it was a habit to only react on crises, prepare for crises, and only to promote crises. But fixing the crises can become a chronic disease, even the people are paid for it. Therefore it must be a strategy to fix the whole situation effectively and sustainably. For many people working in humanitarian sector it can bring about fear from loosing their job in a short time period, but sustainably means that also jobs will be sustainable, but not based on maintaining or elongating degraded stage, but from economic development of the country. The situation of the approach now - 3 years after the earthquake – is much better, but it doesn’t mean any reason for satisfaction.

Our organization is urging leaders and organizations to put effort in sustainable solutions which are not only provisional and solving only 1-4 basic problems (buildings/shelters, sanitation, water, electricity), but which will address all existing problems in much more cost effective way (from sustainable perspective). Our solutions are designed with steady buildings (with the lifetime of 50 years +) with permanent bio-production systems and comprehensive ecological landscape reclamation.

The present designed basic models are available in form of IED Universal Units suitable for urban green schools, local enterprises and other applications, and IED Family Housing Units.

The house with whole system can be built and fully installed in 3 months, the school in 6 months. But at present we are not there yet. The first pilot project will take 2 years, where the building phase for the whole 3 model units will take one year. The project needs this phase for the models to be tested and optimized. The technology of this concept needs this time to be developed and applied research to be done. The critical number of IED professionals need to be trained and after that can start step by step mass production which can give people immediate jobs in IED Housing & Construction.

People can act suitably only when they act from good supportive environment. If they act from poverty without connection to a good energy of supportive environment, it is only spreading stress involved in their situation. To break this pattern it must begin from well managed centers of positive influence.

Economic viability can start when there is capital created. Now there are many mistakes remaining from the past and creating the situation where the whole environment sucks resources, but doesn’t retain them to create growing capital. In the natural ecosystem, the capital is created by growth of the biosphere. According to Adam Smith the wealth for the nations begins with the natural capital (soil, water, trees, animals, …) and proper land use from which the goods can be generated, and only after that the exchange of the goods can begin. So then all the modern theories which start in fiscal market speculations are very deeply ignoring this truth and only swimming on the surface without ability to bring real positive economic change. Whole world is talking about financial crisis, but economic crisis is something more, and when considered properly it brings people back to think about nature, land and their value. Economic crisis is ecologic crisis. And then where people are disconnected from ecology and real economy based on natural resources, if they are just in solving financial speculations and at the same time loosing natural resources from their ground, then real social crisis begins with all the problems.

Our model is designed to solve these problems. The neighborhoods of Cocohuana Strategy are designed to create suitable clean and healthy environment for whole bioregions and their watersheds with resources for people’s everyday life. Everyone can profit from this solution.

The IED System is introduced and its benefits clearly described in our summary case study material which can be obtained by e-mail: IED Systems & Green Schools for Haiti (Version 1.0).pdf (December 2012). In this document are described all the benefits and economic cost effectiveness of the solutions designed by IED System.

After reading this document the short Power Point Presentation prepared for this Conference as an addition will make sense. We apologize that due to shortage of time for the preparation we were using for the demonstration mostly images from internet.

The IED models can work everywhere in similar conditions where is at least 300mm of yearly rainfall and hot weather, for other climates it needs little more of applied research to be done to adapt all subsystems. For now we can say that this model will work in countries like Tanzania, Mexico, Pakistan, US South, Spain and other countries along with Caribbean region. The technology of IED System is based on local resources (over 95%) and only very little part of technology needs to be imported from abroad. Therefore the potential of this system is huge for bringing positive humanitarian relief for suffering regions.

Great urban green impact to support poor urban communities can be achieved immediately if funding for the public programs will support the import of basic resources (soil, barrels, basic piping, tools, and planting materials, and payments for Cash-for-Work or Food-for-Work programs) into urban areas and its placement according to IED system for which local projects can be prepared. The effective organization of the whole process is outlined in the Power Point Presentation and contains IED Urban Environmental Training Centre, IED Green Schools, and Local Community Activity Centers with Public Education & Training Program.

The purpose of this presentation is to gain public support for this program, to invite institutions, humanitarian and local organizations, professionals and international community into support and mutual cooperation in development and implementation of this program through the open forum and mutual discussion.

Thank you for your attention, for more details or with the related questions, please, contact us via e-mail.

Marcel Susko

Lifesprings International Association

E-mail: marcel.susko@gmail.com