

# PRINCIPLES AND GUIDELINES FOR DESIGNING A PERMACULTURE ECONOMY<sup>1</sup>

*So it's a revolution. But permaculture is anti-political. There is no room for politicians or administrators or priests. And there are no laws either. The only ethics we obey are: care of the earth, care of people, and reinvestment in those ends. — Bill Mollison*

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<sup>1</sup> Many of the concepts in this paper are based on the decentralized economic theory called PROUT (PROgressive Utilization Theory), that was propounded by the Indian sage Prabhat Rainjan Sarkar and introduced in 1959. Sarkar saw PROUT as the necessary antidote to the destruction and wastefulness of global capitalism and the means by which the world's people, organized at the local level, could secure their basic needs in a sustainable manner.

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## A Brief Account of the Economic Status Quo (Plan A)

According to the UN Population Division, in 1950 there were a little over two billion people on earth. By 2000, there were over six billion. In 50 years, the human population on earth more than tripled. In 2012 we passed seven billion. It is projected that by 2050 there will be 9.1 billion people on earth, another China and India added.



\* each dot represents one million people

This population explosion fueled the global economy which grew seven-fold since 1950. We are now consuming more of the earth's resources than we can possibly grow or recycle or that the earth is capable of regenerating on its own. In 2005, the United Nations and the World Bank sponsored a Millennium Ecosystem Assessment of the Earth's natural capital. The report was prepared by 1360 experts in 95 countries. They stated that of the world's 24 basic eco-systems, 60 percent (15 of 24) had already been degraded and were being used unsustainably.<sup>2</sup>

<sup>2</sup> See [www.millenniumassessment.org](http://www.millenniumassessment.org)

Oil is one raw material that industrial civilization cannot live without. Many reports indicate that oil production has already peaked. Others say that it has not yet occurred. Even so, this inevitability (even if it is postponed for a decade or two because of fracking technology), when coupled with increasing demand due to population growth and economic growth, will spell disaster for the world. Eighty percent of the cost of producing food alone is derived from fossil fuels – which gets used in farm machinery, pesticides, herbicides, fungicides, crop drying, transportation, packaging. Without oil, modern agriculture is dead.

The accelerated growth of human population was made possible by an increased food supply, which in turn was made possible by an abundance of cheap fossil fuels. Powerful water pumps also allowed us to drain underground aquifers for the irrigation of large farms.

The global food production process and the world stock of grains have already begun to decline, diminished by eroding soils, deteriorating rangelands, collapsing fisheries, falling water tables, rising temperatures, the lack of affordable oil and, of course, more mouths to feed. A recent study<sup>3</sup> using state of the art computer simulation has revealed that

“A warmer world is expected to have severe consequences for global agriculture and food supply, reducing yields of major crops even as population and demand increases. Now, a new analysis combining climate, agricultural, and hydrological models finds that shortages of freshwater used for irrigation could double the detrimental effects of climate change on agriculture.

Given the present trajectory of greenhouse gas emissions, agricultural models estimate that climate change will directly reduce food production from maize, soybeans, wheat and rice by as much as 43 percent by the end of the 21st century. But hydrological models looking at the effect of warming climate on freshwater supplies project further agricultural losses, due to the reversion of 20 to 60 million hectares of currently irrigated fields back to rain-fed crops.”

This startling revelation signals wide-spread famine in our future. It portends that we could lose 80 percent of our grain growing capacity by the end of the century, at a time when billions more people are projected.

## **PLAN A**

*“More than at any time in history, mankind faces the crossroads. One path leads to despair and utter hopelessness, the other to total extinction. I pray we have the wisdom to choose wisely.”*  
Woody Allen

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<sup>3</sup> "Constraints and potentials of future irrigation water availability on agricultural production under climate change." Joshua Elliott, Delphine Deryng, Christoph Müller, et al. *PNAS* December 16, 2013, DOI: [10.1073/pnas.1222474110](https://doi.org/10.1073/pnas.1222474110) Provided by University of Chicago

*“Energy security is a fundamental component of national security. Military force will be an increasingly important prerequisite to safe guard [safeguard] the flow of foreign oil.”* Spencer Abraham, Former Secretary of Energy

*“The era of the resource war has arrived”*  
Alexander Haig, Former Secretary of State

*“When I have discussed the problem of severe disruption of Gulf oil with government officials in London and Washington the usual reply is that since there is no option other than oil we must just make the best of things. When I questioned an expert on the U.S. National Security Council about the lack of any 'Plan B' if the existing political strategy in the Gulf (Plan A) failed, he merely explained that America's Plan B was to make sure that Plan A worked”.* Stephen Twigg, British Foreign Policy Centre

The powerful nation states are already circling each other in preparation for the endgame of industrial civilization as we know it. The object of the final contest will be to control the remaining oil supply on the planet. The United States has moved its armies into Central Asia and the Middle East to ensure control of the last large remaining oil fields. Russia, China, Iran and Brazil are forming a counterbalance, protecting their own fields. China and India especially are gulping down greater quantities of oil to feed their rapidly industrializing economies. It is accepted by all the powers that the supply of oil is finite and becoming more difficult to access.

The cost of maintaining U.S. forces in Central Asia and the Middle East, since the onset of the so-called War on Terror, has been over \$4 trillion dollars. The US borrows over a billion dollars a day to support its military might and protect its consumer economy. The cost of maintaining the military is approximately \$700 billion per year. This expense is being met by selling U.S. Treasuries. Total U.S. outstanding debt is currently \$17.2 trillion, 40 percent of which is now owned by foreign nations. China owns \$1.3 trillion and Japan owns \$1.18 trillion. Currently 85 percent of the world's savings is absorbed by US debt.<sup>4</sup>

As long as the US dollar remains the reserve currency in world trade, countries must buy dollars in order to buy oil on the international market. This monopoly, however, is quickly shrinking away as oil producers convert their pricing to rubles and euros and Russia, China and other countries are making their own deals outside of the dollar hegemony. Now central banks are beginning to sell dollars to protect the value of their holdings. China alone could bankrupt the US by dumping its treasuries and dollars. So could Japan, Saudia Arabia or Russia. Even a country as small as South Korea could do serious damage to the dollar on the world market. These countries will not do so without hurting themselves, but as the struggle for resource dominance intensifies, this internal contradiction in the currency wars will play itself out.

On the home front, there is a big push to cut food stamps, social security, early education, unemployment compensation and other human service programs, while simultaneously preparing population/crowd control methods in the event of an environmental or financial disaster. Empowered by

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<sup>4</sup> Financial Globalization and the U.S. Current Account Deficit, Matthew Higgins and Thomas Klitgaard, Current Issues in Economics and Finance, Vol 13, No, 11, [www.newyorkfed.org/research/current\\_issues](http://www.newyorkfed.org/research/current_issues). 2008

the Patriot Act and similar legislation, the NSA, FEMA, and the Department of Homeland Security are setting up the systems to deal with this inevitability.

The trends in macro-finance, the perpetual War on Terror, the change from mainstream reporting news to crafting propaganda, the gutting of environmental legislation, the reduction of social programs and financial resources to state and localities, the intense development of an infrastructure for population/crowd control, speak to Plan A put into practice. The government also realizes, despite the public posturing of Republicans to the contrary, that global warming is upon us. As far back as 2004, a Defense Department study predicted that "abrupt climate change" would likely occur within a decade, triggering violent storms, mega-droughts, dust storms, and soil loss. Faced with starvation or raiding, the study concluded that human groups would start to raid each other. Eventually the impact of climate change would lead to the breakdown of the "carrying capacity" of the planet and its ability to sustain the present population.<sup>5</sup> [This is already the case (ie, without climate change), as you had pointed out earlier. ]

Plan A is the last ditch effort for the industrialized nations, under the hegemony of the global capitalists to remain in power. They will employ every strategy to maintain their process of global economic colonization by commandeering as much of the earth's remaining resources as possible. Plan A is also the response of China, Russia and its partners, who see no other alternative. Plan A, therefore, is mutually assured destruction based on the premise that there is not enough to go around and that we must fight to the death to get our share. All the while, we continue to voraciously consume the earth's remaining resources in a "throw-away" society so that we can produce more useless products to pay off our all-consuming debt. This is the framework for the end game that has already begun. Plan A is leading us as a species down the road to oblivion.

## THE URGENT NEED FOR PERMACULTURE ECONOMIES

*"Greed and envy demand continuous and limitless economic growth, the material kind, without proper regard for conservation. And this type of growth cannot fit into a finite environment."* E.F Schumacher

*"I think that we have the technologies right now that we need to sustain ourselves as a species, but we're not using those technologies in a way that will really work for us. But we do have the communication tools to allow us to talk about how we use those other technologies, so that we can begin to design ourselves into a more workable and sustainable future. So the real challenge now is to move from competition in our use of these tools, to reconciliation and what I would call a future of mutually assured development."* Duane Elgin

*"For the first time in history it is now possible to take care of everybody at a higher standard of living than any have ever known. Only ten years ago the 'more with less' technology*

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<sup>5</sup> The Pentagon's Weather Nightmare: The climate could change radically and fast. That would be the mother of all national security issues. David Stipp, 2/9/2004. Fortune Magazine. [Money.cnn.com/magazines/fortune/fortune\\_archives/2004/02/09/360120/?link=mkfw](http://Money.cnn.com/magazines/fortune/fortune_archives/2004/02/09/360120/?link=mkfw)

*reached the point where this could be done. All humanity now has the option to become enduringly successful.” R. Buckminster Fuller*

*“Permaculture design is a system of assembling conceptual, material and strategic components in a pattern which functions to benefit life in all its forms.” Bill Mollison*

The current trends in macro-finance, the perpetual War on Terror, corporate media’s change from reporting news to crafting propaganda, the gutting of environmental legislation, the reduction of financial resources to state and local agencies, the slashing of services to the poor, the secret institution of a population control infrastructure, all speak to the ruling class’s Plan A for addressing the end game of industrial civilization. They do not believe that there are enough resources to go around and so they plan to hoard what’s left and imprison or kill anyone who wants a share. The elite also realize, despite the public posturing of the oil industry and Republicans to the contrary, that global warming is upon us. As far back as 2004, a Defense Department study predicted that "abrupt climate change" would likely occur within a decade triggering violent storms, mega-droughts, dust storms, soil loss. Faced with starvation or raiding, the paper concluded that human groups would start to raid each other. Eventually the impact of climate change would lead to the breakdown of the “carrying capacity” of the planet and its ability to sustain the present population.<sup>6</sup>

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We know that different movements are working to stave off the crisis. The “small is beautiful” movement and the green movements are working to conserve and recycle resources. The technology designers are working to “do more with less”. The sustainable development movement and the Green Party are working to develop appropriate policies for use in a post-capitalist world. Such movements however, are grossly inadequate without a movement like Permaculture that is actually training the foot soldiers to build the alternative system from the ground up. Unfortunately, permaculture too is a small, unstructured movement without a cogent political economic analysis.

Bill Mollison coined the word “Permaculture” to describe the ecological design science that he introduced to the US in the early 1980s. It was a contraction of “Permanent Agriculture”. As the Permaculture movement has begun, however, to address the importance of human systems to its agricultural revolution, the word has come to mean “Permanent Culture”. Imbedded in this broader definition is the work by Permaculturists in the areas of community building and local economic revitalization. Sometimes referred to as the “hidden architecture”, or “invisible structures”, this branch of Permaculture acknowledges the values, mores, political policies and economic structures, including the laws, regulations and market configurations that retard the practice of Permaculture at the local level. Permaculturists who are working to meet the basic needs of local people are negatively affected by these existing systems but yet have not developed a post-capitalist, socio-economic paradigm of their own.

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<sup>6</sup> The Pentagon’s Weather Nightmare: The climate could change radically and fast. That would be the mother of all national security issues. David Stipp, 2/9/2004. Fortune Magazine. [Money.cnn.com/magazines/fortune/fortune\\_archives/2004/02/09/360120/?link=mkfw](http://Money.cnn.com/magazines/fortune/fortune_archives/2004/02/09/360120/?link=mkfw)

What is lacking in the Permaculture movement today is the articulation of an invisible infrastructure that applies specifically to permaculture. While Bill Mollison and other permaculture leaders intend Permaculture to be a “revolution” to save the planet, unless there is a clear understanding of the invisible structures of Permaculture, the movement is doomed to offer little more than backyard hobbyists while the world cries out for an army of permaculture foot soldiers to slay the all-consuming dragon. Under crisis conditions, the few canned goods that we have stored away, the energy efficiency of our houses and the nice layouts of our property will mean little. Only by engaging our communities with a clear message of “where do we go from here” will we be able to actualize the magnificent vision of Permaculture.

Let’s begin with the largest contextual question, “What must we do to transition society from global capitalism to local Permaculture?” Local permaculture, in order to be successful, must be a community pursuit and not just an individual pursuit. There will be little scope for *individualism* in the coming social and environmental crisis. In other words, survival will largely depend upon community rather than individual efforts. Community building requires a change in emphasis from *private property* to *community welfare*. As permaculture activists we will need to apply our design principles within a social context and not just on our own land in order to meet our survival needs. In order to do this we must have a social-economic theory and strategy to guide us in our project work. We will need principles that allow us to scale up our projects to benefit the community as a whole. This paper attempts to a theoretical base and strategy for trainers and practitioners to be able to build a local permaculture social-economy. In other words, it attempts to flush out the meaning of “invisible structures” that will allow permaculture activists a comprehensive approach to social and environmental transformation.

Today, despite the rapid degeneration of capitalist society, very few community organizers and activists are engaged in creating a systematic alternative to capitalism. While the creation of an alternative local economy is a common goal for many activists, work is driven by the fear of industrial decline rather than a clear plan to replace capitalism. This means that most organizers continue to work within the capitalist system, having no other vision of social organization.

While such local activism may prove fruitful in the short term in that it may contribute to the self-reliance and resiliency of a household or small group of people, in the long term it will amount to little beyond an exercise of repairing the deck chairs on a sinking Titanic.

While local organizers suffer from a lack of an alternative vision, local governments are even worse. Their economic development plans do not extend beyond encouraging international companies to build factories in their locality to create jobs. There are few efforts on the part of local governments to help community people design a basic needs support system and muster local resources to build the local economy from within.

As local people, we have an important choice to make. We can either stagnate while we wait for the crisis to become life threatening as big corporations like WalMart, British Petroleum, MacDonalds etc continue to drain resources and money from our area, or we can work to mobilize our neighbors to design a local economy in which *we control the local resources* required to meet our basic needs and we create the jobs among ourselves that are required to realize this goal.

Given such a mission, the purpose of Permaculture planning will be to build a local life support economy that meets the basic needs (food, shelter, clothing, health care and education) of local people in a sustainable manner. We can call this local economy a *people's economy* because its specific goal is to place control of meeting basic needs back in the hands of the local people. To accomplish this, we will have to plan and cooperate with each other to maximize our resources and look after the interests of everyone. In this process meeting our collective basic needs will trump profit-making at the expense of everyone else. At the same time, we don't want to discourage the individual from doing his or her best. Having said this, there are many other ways to reward individual initiative, than by exploiting another's labor to accumulate cash. In this work, we can look to Totnes England as a model for project development.

It will not be enough to simply increase the number of gardens in our community, or improve local health care, rather it will take an understanding of permaculture's invisible structures. It is the contention of this paper that the progressive utilization theory of Proutist Universal can serve to help us develop this hidden architecture.

Prout offers a set of design principles upon which to construct a local economy with the specific intention of meeting the basic needs of local people in an environmentally sustainable manner through the cooperative use of local resources and local labor. A proutistic economy is one that is based on meeting needs, not securing profit at each other's expense. Any household or community can make use of these principles to guide their economic activity.

Proutists see the need for developing a revolutionary approach to local economies because no current economic system, neither capitalist, fascist, socialist nor communist, can steer us through the decline of industrial society and allow us to come out the other end in a better place as human beings. Everyone knows that capitalism as a value system and as a political-economy means death. Therefore, if we do not change our values or our political and economic principles, we will continue to destroy everything in our quest for wealth and power and will have learned nothing from the collapse of industrial civilization. Human life on earth will have proven itself to be little more than an unsuccessful experiment.

But if no current ideologies have the power to provide a beneficent future for humanity, what does? Clearly we need an ideology that is based upon universal principles and practices. Neither religions, nor political dogmas can meet this need. Rather genuine spirituality is required, the kind expressed by the great spiritual masters of the world. The concept of universal care of people and care of the earth is at the core of prout and permaculture philosophy.

As human beings, there are three things that distinguish our specie. One is that we have a longing for limitlessness. The second is that we are rational beings. And the third is that we are physical, mental *and* spiritual beings.

Our hunger for limitlessness does not exist in any other species. This incessant longing expresses itself in the quest for wealth and power, for limitless consumer goods and sensory stimulation. This longing is given full throttle in the obsessive quest of capitalism for more. Unfortunately, this longing can not be satisfied by such a quest because the earth is finite and cannot support the infinite longing of 7 billion people. The truth of this statement is evident in the current destruction of the planet which only increases each day that capitalism holds sway.

The quest for limitlessness can only be satisfied by attaining an infinite entity and that is Divine Consciousness. Divine Consciousness is the Supreme Oneness. Spiritual teachers throughout the world, in both civilized and native societies have taught this truth. Through spiritual theory and practice this Oneness can be attained and one's human destiny fulfilled. As such it is a quest for the limitless loving consciousness that allows us to fulfill our destiny as human beings.

Spirituality, because it is universal, provides the base for the unity of all living things. It provides the base for human unity. It provides the ground for morality, for human progress and for human cooperation. Its appeal is universal. As such, it provides the antidote to fear. In our time together we have a great mission to bring undaunted courage and cooperation to this war-torn planet.

To put a local economy on the ground that is not rooted in the exploitation of others will require spiritual unity. As such spirituality needs to guide our efforts to meet our collective basic needs.

Both prout and permaculture are based upon universal spiritual principles. Prout is based upon the spiritual science of yoga. Permaculture is based on the spiritual principles of care of earth, care of people and the use of surplus wealth to better the condition of life. Permaculture understands the interconnectivity of all of life and the role of human beings in this process. This same interconnectivity is at the core of yoga theory and practices. Yoga means to yoke or to connect. Yoga is the spiritual discipline of proutists.

The core elements of a Permaculture socio-economy are already known – the meeting of basic needs independent of fossil fuels, the protection of and partnership with earth's systems, the use of renewable resources in a sustainable manner, organic agriculture, sustainable water and waste systems, energy-efficient tools and technology, natural health care, green buildings and green neighborhoods, the development of an alternative education and training system, the strengthening of local economies to meet basic necessities etc.

What is lacking, however, is a common grasp of the social and economic principles, the hidden infrastructure, needed to optimize the conditions for Permaculture to grow and flourish in a comprehensive way. Without such a socio-economic vision, we cannot move beyond backyard gardens, small scale energy-efficient housing, etc. We will not be able to create sustainable *basic need economies* on a scale in which in the local people and local environment can participate and benefit.

## **A. WHAT ARE INVISIBLE STRUCTURES?**

In their seminal work Permaculture: A Designer's Manual Bill Mollison and David Holmgren introduced the concepts of *visible* and *invisible* structures. Visible structures are comprised of tangible resources like water, landscape, organic systems, tools and technology, buildings, etc. Invisible structures, while equally important, are more intangible. They include resources such as values, trust between people, communication, cultural, political and economic structures, etc. The visible structures are physical structures, while the invisible structures are social constructs. In any locality, both structures are necessary. Projects without a plan lose their meaning, a plan without projects is an idle venture.

While the visible structures have gained the most attention in Permaculture literature and practice, the knowledge of invisible structures has not kept pace. Yet we are encouraged that Permaculture activists are acknowledging with greater frequency the role of invisible structures in the transition to a sustainable society.

According to David Holmgren, one of the founders of Permaculture along with Bill Mollison:

*Historically, permaculture has focused on Land and Nature Stewardship as both a source for, and an application of ethical and design principles. Those principles are now being applied to other domains dealing with physical and energetic resources, as well as human organization (often called invisible structures in permaculture teaching).<sup>7</sup>*

A vivid example of the need for permaculturists to address invisible structures is made in Rosemary Morrow's The Garden at the End of the World. In this work the author addresses the need for invisible structures in war torn countries. In his analysis of this book, Gary Caganoff says:

*It's the 'invisible structures' that Rosemary has applied and adapted to her work in war torn countries for 25 years or more. It is in these devastated communities where a permaculturalist must begin at the beginning, simply because there is not a lot of the invisible social structures left after war and anarchy (if any) to hold up any physical or ecological building project. To re-build the visible structures the invisible structures must first be put in place. If not, then the project, no matter what it is or how big or small it is, will fail. The fact that international aid has failed in Afghanistan is largely due to this.<sup>8</sup>*

Understanding the corruptive force of invisible structures that define the current political economy, Bill Mollison wrote:

“The tragic reality is that very few sustainable systems are designed or applied by those who hold power, and the reason for this is obvious and simple: to let people arrange for their own food, energy, and shelter is to lose economic and political control over them. We should cease to look to power structures, hierarchical systems, or governments to help us, and (instead) devise ways to help ourselves..... We lay waste to our lives in proportion to the way in which the systems we support lay waste to the environment... we need to expand the concept (of social responsibility) to include social and environmental responsibility and to create our own financial and employment strategies in those areas. We should not be passive workers for established destructive systems, but rather we can be investors in life. We cannot profess or teach one ethic, and live another, without damage to ourselves and to common resources.”<sup>9</sup>

Again, addressing the topic of global capitalism, he states:

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<sup>7</sup> [http://holmgren.com.au/downloads/Essence\\_of\\_Pc\\_EN.pdf](http://holmgren.com.au/downloads/Essence_of_Pc_EN.pdf)

<sup>8</sup> <http://www.thegardenattheendoftheworld.info/?p=443>

<sup>9</sup> Bill Mollison. *Permaculture: A Designer's Manual*. A Tagari Publication. 1988

“If you have a dysfunctional institution, don’t try to change it, that’s like wrestling with the “tar baby”. Rather, determine what that institution was supposed to deliver and design a better system to actually deliver that purpose or service. If you have done the thing correctly, then people will come to you for that. The old institution will eventually wither and die.”<sup>10</sup>

It is clear from these words that Bill Mollison intends for Permaculture to be a revolutionary movement with its own institutions and social constructs to sustain them. That being said, when the rubber hits the road, it has been much easier and more immediately gratifying to plot optimal growing arrangements for food, or to identify the best renewable materials for construction purposes than it is to determine what roles existing institutions should play and design a better system to deliver that purpose or service.

To date, despite the “Transition Initiative”, and other small scale community-based Permaculture projects, the issue of 'invisible structures' remains underdeveloped. While models for change exist, they are in their infancy and are applied for the most part in a piecemeal fashion without the benefit of a clear socio-economic theory. This problem forces local leaders to operate within the existing economic paradigm, blindly working to make repairs on the mother ship before it pitches over the falls. Such an approach may serve us in the short term, but eventually we will need to create an entirely new ship that will allow us to live in a sustainable manner. To do so, we will need to understand the basic principles of a local economy as well as established guidelines for establishing one.

## **B. WHAT IS A PERMACULTURE SOCIO-ECONOMY?**

According to Prout, a permaculture socio-economy consists of all the social and economic interactions within a given locality that meet the basic needs of local people in a sustainable manner. Permaculture is a movement that seeks development from within. It does not depend on national or international political systems, nor does it depend on chain stores or large corporations to realize its goal. The goal of a permaculture socio-economy is to engage local people to meet their own basic needs (food, shelter, clothing, health care and education) in a sustainable manner in cooperation with natural systems. As such the permaculture movement is ideally suited to lead the effort to create local economies.

Permaculture planning and design, insofar as a socio-economy is concerned, disperses decision-making to the local level of production. This decentralization process is critical today as the global economy continues to fail to meet the basic needs of local people everywhere. As jobs disappear and incomes shrink things become more costly, people suffer in silence, often blaming themselves. The national economy is shrinking and is less able to extend credit or build new businesses in local areas. The economic development strategy of local government to seduce large companies to build factories or chain stores in their towns as a means to create jobs is a bankrupt notion. This is a remnant of Plan A thinking.

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<sup>10</sup> [http://well95490.org/wp-content/uploads/library/plan\\_it\\_green\\_toolkit/food\\_and\\_permaculture/permaculture\\_resources/Invisible\\_Structures/Invisible\\_Structures.pdf](http://well95490.org/wp-content/uploads/library/plan_it_green_toolkit/food_and_permaculture/permaculture_resources/Invisible_Structures/Invisible_Structures.pdf)

Many of the products required to meet basic needs can be grown locally on farms, landholdings and even in urban and suburban environments. Everything comes from the land. Learning how to meet our basic needs in a sustainable manner is the centerpiece of a Permaculture education system. This approach to economic decentralization can also be called *economic democracy* because people vote with their resources and labor to build an economic system that benefits everyone. This is far more meaningful than political democracy where our political representatives are dependent upon the donations of corporations to run their campaigns and thus are obligated to serve them in their exploitation of local labor and resources. Inherent in the concept of economic democracy is the sense of economic empowerment insofar as it encourages democratic decision making in the creation of the local economy.

## **B1. THE ATTRIBUTES OF A PERMACULTURE SOCIO-ECONOMY**

### **Basic Needs for All**

In a Permaculture economy the basic needs (food, shelter, clothing, health care and education) of even the lowest paid worker will be met along with the needs of children, the infirm and the elderly who cannot work. In other words, the established minimum wage will be a living wage or allotment, one that guarantees enough purchasing capacity to meet defined needs. Needs are not desires. They are requirements for survival and human development. Wage levels can be determined by planners and paychecks can be supplemented by a local currency that can be exchanged for the purchase of locally produced goods and services. The goal of Permaculture planners is to take a proactive role in mobilizing resources (capital, technology, education etc) and to remove all the obstacles that interfere with the people having their basic needs met.

In time the basic needs should be supplemented by guaranteed common amenities. For example, they should be able to procure dinner ware for their tables, wedding apparel, money for entertainment, etc.

### **Economic Decentralization**

In a Permaculture socio-economy, the control of the local economy will be in the hands of local people.

The purpose of creating a local economy, ie economic decentralization, is to produce goods and services to meet people's needs, not produce for profit. Economic decentralization is not possible under capitalism, because capitalist production always tries to maximize profit by exploiting the cheapest labor. Corporations predominately produce at the lowest costs and sell at the highest profits. They prefer centralized production, which leads to centralized wealth, regional economic disparity and imbalances in the distribution of wealth. In the decentralized economy of Permaculture on the other hand, production is for the local people, and the minimum requirements and common amenities of life will be guaranteed to all.

## **Economic Democracy**

In a Permaculture socio-economy, planning and implementation is also in the hands of local people. The current system of *political democracy*, without *economic democracy*, has proven unable to meet people's basic needs and protect the environment. Under the present system, decisions about the local economy are made in the air-conditioned offices of skyscrapers by corporate and national planners as well as international agencies. Their goal is *not* to meet the needs of the local people, but rather to exploit local resources and labor for corporate profit. Having wealth and power, it is easy for the corporate elite to persuade politicians at every level to do their bidding. There is only one way to stop economic exploitation and alleviate the plight of the local people, and that is for local people to have the conceptual tools (invisible structures) to pool their resources and labor to create the visible structures within their own economy.

Economic decentralization cannot be realized without economic democracy. Only by participating in the design and construction of our own socio-economic life-support system will local people be able to guarantee the minimum requirements of life to all participants and protect the resources in their vicinity. To put economic democracy into practice means that the people will work together to assess their situation, make plans, and design the systems to serve themselves. In other words, they will have to develop a Master Plan for their locality based on the science of Permaculture. "Know the locality, make the plan, serve the people." People by nature are simultaneously individuals as well as social beings. The flaw of capitalism is that it has reduced us all to individuals where we hardly know our neighbor, nor our community. A permaculture economy seeks to create a balance between these two expressions. As individuals merge their sense of identity with the community, the benefits of each will accrue to the other and life will be more fulfilling and productive.

Many local people still believe that they can depend on outside planners to design and finance the systems to meet their basic needs. They point to food stamps, Medicaid and other federal programs to alleviate poverty but they are generally inadequate and can be snatched away at a moments notice as we have recently seen. Even one's pension and savings cannot be protected. People should not depend upon politicians and outside corporate money to initiate a local economy for them. They should not depend upon foundation or federal grants for their success. Plan B must not be co-opted by Plan A thinkers. Plan B is moving in the opposite direction to that of Plan A in order to develop a positive future for our children and their children. While the goal of Plan A is to continue to centralize wealth and power in the hands of the few, the goal of Plan B is to empower local people to be self-reliant while reversing the devastation of the planet.

## **A Balanced Local Economy**

A basic tenet of permaculture is that everything comes from the earth. Local resources consist of land that is composed of minerals, soil, water, forests, and animals, as well as farms, structures, small businesses, villages, towns etc. To increase local employment requires that we use resources that are available in the local environment to create the goods and services that can meet the people's basic needs and amenities. In addition, we also need to make proper use of our mental and spiritual resources. Basic needs are food, water, shelter, clothing, health care, education, energy and transportation. Although the amount of resources required per individual will be slightly different, a norm can be established for the quantity of each resource and this norm can be used to determine the collective need.

Creating the goods and services necessary to meet the basic needs of the local people is the core activity of the local economy.

Because basic needs must be met from local resources and these must come from the land, the agriculture sector along with silvaculture, fisheries, fuels, minerals, etc will be greatly increased. This includes not just farms and gardens for food production, but fibers for clothing, trees for lumber, plants for medicine, materials for housing and tools etc. In addition, *pre-farm* businesses like seed production, the manufacture of tool and technologies for growing, harvesting and processing etc will be required. So also *post-farm* production like food processing operations, mills, product development, distribution, sales etc.

Today, in the United States less than 3 percent of the population work on farms and this number keeps dropping. This is due to the continued use of fossil fuels, the introduction of genetically modified crops on large scale corn and soybean farms and the purchase of food (especially vegetables and fruits) from outside the country. It stands to reason that in a permaculture socio-economy, the sustainable agricultural sector must be greatly expanded at the local level. This includes urban agriculture. Permaculture already has done a lot of work in creating models for growing food under all kinds of conditions. The work in Cuba, for example, has been nothing less than breathtaking. Cuba now has the only national organic agriculture system in the world. Forty percent of the food supply for Havana is grown within the city itself. This work needs to continue and expand.

For an economy based on food and materials production, we will need to shift our allocation of the workforce. Instead of having only 3 percent of the population employed in agriculture as exists in the US national economy, this number may have to be 30 percent or 40 percent within a local socio-economic unit. In addition, greater numbers of people will have to be employed in the pre- and post-agriculture industries. It is possible that as much as 80 percent employment within a local socio-economic unit may be in agriculturally related production. Agrico-industries (pre-ag) include all inputs to production including machinery, tools, seeds, fertilizers etc. Agro-industries (post-ag) include all value-added operations such as flour mills, oil mills, cloth mills, paper mills, herbal medicine factories, food processing, fiber processing, building materials etc).

Permaculture ultimately will require a balanced economy that is determined by time, place and condition. For example, if we consider the allocation of the workforce in a location like Wyoming or Alaska, comparatively more people will be employed in mineral or oil extraction. It will be unlikely that 80 percent of the workforce would be engaged in agriculture and pre- and post production.

In this effort, the urban areas within a developed socio-economic unit, especially those containing colleges and universities with research capacity, may develop more jobs in agrico- and agro-industries, while the rural areas engage more in agricultural production. There is a great need for a wide range of local industries to support local production. Small scale farm tools and machinery, for example, are difficult to come by, and farmers need to search for machinery that often goes back to the 1940s and 1950s. Organic fertilizers and organic pesticides are often difficult to procure at the local level and presently must be ordered from across the country. Seed companies that grow and package cultivars that grow well in a local area are vital to local agricultural growth.

In time, local quasi-governmental agencies can also be instrumental in providing energy, raw materials and equipment on a *no-profit, no loss* basis in order to facilitate local development and help to maintain prices for these basic materials. It must be remembered however that existing government agencies typically lack the vision and mission required to facilitate economic transformation. Government employees are acculturated into the status quo and work according to regulations, guidelines and practices set up to facilitate the centralized economy. As such they often must enforce laws that put local people at an economic disadvantage.

Having said this, efforts should be made to engage government employees but we should not place the success of permaculture planning at their disposal. We must be able to move without them if they do not stand with the local people in their efforts to meet basic needs and amenities. Nonetheless, it would be beneficial if local administrations explore how to locally generate power such as solar energy, wind energy, geo-thermal energy, bio-gas, hydroelectricity, bio-fuels or any other power which is easily available locally. Ideally, the generation of power should be viewed as a key industry with public and private partners that can be run on a no profit, no loss basis so that the cost of production is minimized and the purchasing capacity of the people is increased. The energy requirement for such things as transportation, communication, schools, colleges and hospitals should also be supplied on a no profit, no loss basis to maintain social dynamism. Non-profit organizations having participants from the public and private sector (quasi-governmental) are ideal for managing these functions.

## **Socio-Economic Units: Permaculture Planning Sites**

In a permaculture economy, the planning site for the development of a Master Plan is the geographic boundary of a local economy. How do we tell what is a “local economy”? At this point, it is necessary to distinguish between a local economy as it currently exists, (controlled, for the most part, by national and international corporations and governments) and a local permaculture economy that is planned, designed and put into practice by the local people for the local people. For convenience, let us call a permaculture local economy a Socio-Economic Unit (SEU). This unit constitutes the planning site for which a Master Plan is developed.

Socio-economic units should be formed by local people based upon social factors such as common economic problems and potentialities, common socio-cultural ties, the people’s sentimental legacy as well as upon the assessment of common geography, weather patterns, water, soil type, eco-systems, the availability of raw materials.

“Local people” are defined as those who have merged their individual socio-economic interests with those of the socio-economic unit in which they live. The concept of local people has nothing to do with physical complexion, race, caste, creed, language, or birth place. The fundamental issue is whether or not each person or family has identified their individual socio-economic interests with the collective interests of the concerned socio-economic unit. Those who have not done so should be considered outsiders.

In the initial stages of planning, “local people” should be considered as those who make every effort to buy local. An example of outsiders, for example, are the big box corporations that bring in finished goods that have not been manufactured or grown locally, exploit local labor in their sale and then export the profits to corporate headquarters, thus draining wealth from the area. As the movement for a local

socio-economic unit gains momentum and adherents, local people should become more narrowly defined as those who have merged their economic interests with that of the socio-economic unit.

While capitalism requires us to make many purchases that send wealth out of the community, as the local economy is able to develop a greater array of product substitutes, there will be less of a reason to export wealth.

No outsider should be allowed to interfere in the local economic affairs of a Permaculture socio-economy, otherwise the population of naysayers and those that are causing the outflow of economic wealth from the area will increase. If this occurs, the socio-economic unit will become increasingly more vulnerable to outside economic exploitation and the Permaculture economy will be undermined.

Permaculture planners should also try to reduce the need for outside investment capital. If it is required, ownership should remain firmly within the locality. In other words, outside capital can not hold ownership beyond 49 percent of the enterprise's value. To violate this principle is to lose control of the local economy again. In all situations, local planners should try to repay the investment of outside capital in goods or services and not in cash.

Initially a Permaculture socio-economic unit may consist of only a few farmers and tradesmen who buy and sell, or exchange goods and services with each other to meet their basic needs. This keeps money local and builds a base. They may use dollars, barter, a LETS system or a local currency to serve as a medium of exchange. The use of dollars should be limited to the procurement of products that can not be produced locally.

As a Permaculture economy matures, more goods and services will be able to be produced locally and the participants will gain security in having their local needs met. As more wealth is created by the synergy of the participants, it will be kept locally and jobs will be made secure. At some point "surplus wealth" will begin to occur. The surplus wealth, after meeting the minimum requirements of the people in the SEU, can then be distributed to meet basic amenities. From the beginning, however, there will need to be a reward system that encourages the meritorious action of individuals. However, the economic gap between the average person and meritorious people should be reduced as much as possible, and ceaseless efforts must be made in this regard. But this gap will never vanish altogether. In fact, it is not beneficial to eliminate this gap. Rather, it is better to set a minimum wage (a living wage) and a maximum wage. If the gap increases beyond this, the average person will be deprived and exploitation will re-emerge in society in the guise of amenities. If the gap shrinks too much, people of extraordinary merit will feel "used" and not appreciated. A decentralized economy attempts to keep a balance here because, on the one hand, the standard of the minimum requirements must be increased, and on the other hand, the provision of amenities to reward individual performance is also required.

## **B2. ELEMENTS OF A PERMACULTURE MASTER PLAN FOR A SOCIO-ECONOMIC UNIT (SEU)**

The purpose of a socio-economic unit (SEU) economy is to meet the needs of local people in a manner that is sustainable and that continually expands until all the needs of the local population are met. The aim of the SEU is to meet community needs not profit from each other.

The principles and methodologies of permaculture are the tools required to plan such an entity and the final product constitutes the Master Plan.

The site is the agreed upon geographical boundaries of the SEU as defined by the local people (participants).

Other factors that influence the definition of an SEU are social factors such as common problems and potentialities, common socio-cultural ties, common sentimental legacy as well as environmental factors such as climate, water, soil types, eco-systems, availability of raw materials etc.

The goal of the Master Plan is to help participants reorder their social and economic priorities and restructure their socio-economic activities.

Local permaculturists will set up a Local Planning Board to put together a Master Plan for the SEU. Participation should be composed of those who possess the necessary information and skills to design and build a local socio-economy as well as embody the moral and spiritual integrity to hold the interest of others equal or greater than one's own.

Although in time, political boundaries may be disregarded and replaced by more sensible geo-physical boundaries, in the beginning stage of planning it may be worthwhile to create a planning board at the county level. Short term plans should be set at 6 months, while long term plans should be set at 3 years.

### **Components of an SEU Master Plan include:**

1. The Master Plan will include the elements of a typical Permaculture Master Plan – local people's knowledge and skills, ecological components, site analysis, sector analysis, and zone designs.

In addition, the Plan will define the goods and services as well as the components required to produce the basic needs that must be met locally. For example, regarding food, we should determine the quantity of foods required, what cooperatives will be established to grow the food and handle its processing, storage and distribution, and what is the unit cost per food item.

2. When the cost of goods and services are determined to meet the basic needs of the collective, set a minimum and maximum wage. This wage in all probability will initially include hard goods, services and local currency as components of a local wage. Along with a wage, certain amenities should be determined and awarded for outstanding behavior on the part of individuals.
3. Make a detailed study of the surplus and deficit of labor trends within the SEU. If there is a surplus of labor, jobs should be created that make use of manual labor. The goal of an SEU is 100 percent full employment. Permaculture experts and skilled workers will have to train unskilled people in those skills necessary to contribute to the production of basic needs. Labor can be paid for in goods, services and local currency that can be exchanged for goods and services produced within the SEU.

4. Labor will be organized within cooperatives. This will improve buying power for materials, a more efficient share of resources, efficiencies of scale, and the building of trust through democracy in the work place. The cooperatives will set prices for goods and services based on the cost of production, transportation, storage, savings, depreciation profit margins etc in cooperation with whatever social boards have been set up to oversee the welfare of the community as a whole. The price of goods should be reduced as ways are found to maximize the use of resources and rationally distribute goods.
5. In setting up production facilities, the following factors should be addressed before capital support is granted: the cost of production, the productive capacity, the purchasing capacity of the local people, the collective necessity and the environmental sustainability of the endeavor.
6. Define the local raw materials existing in the SEU and how to optimize their use to meet the basic needs. Do not export these raw materials unless there is a surplus. Then these raw materials can be exported to neighboring SEUs that lack the resources to produce the same.
7. Do not import raw materials to substitute for local raw materials.
8. Do not export finished goods when local people still have need for them.
9. Be prepared to rethink the allocation of labor required to create a balanced economy. Currently only 3 percent of the population in the US grows food. In a SEU there may be as many as 40 percent of the population engaged in food production and another 40 percent engaged in producing goods and services in pre- and post-agriculture production.
10. Plan to produce locally as many goods and services locally (within the SEU) that are required to meet basic needs. Seeds, fertilizers, hand tools, mills etc should all be set up as local businesses and be supported by SEU participants.
11. Plan for a medium of exchange to facilitate the exchange of goods and services. This may be a LETS system, barter exchange, or a local currency. It is necessary to create an internal medium of exchange, because each interaction that does not require dollars will add that amount to the local currency and allow dollars to be used for exchanges within the larger existing economy. SEU money should be kept in constant circulation and not hoarded.
12. Design local markets for local goods. All goods and services produced to meet basic needs should be sold only in local markets. If there is surplus production, then they can be sold for export. If the local goods do not meet the needs or aspirations of the people, immediate steps should be taken to increase quality, reduce prices and increase the supply of local goods to discourage imports.
13. Plan ways to sustainably increase electricity generation within the SEU.
14. Plan for events that allow people to partake in spiritual and other higher pursuits and to build trust in community. Hold public award events for those who have made extraordinary contributions to the welfare of the people in the SEU.

## **B2. BENEFITS OF PERMACULTURE ECONOMIC PLANNING**

There are many benefits to local-level planning. The area of planning is small enough for the planners to understand all the problems of the area. Local leadership will be able to solve the problems according to local priorities. Planning will be more practical and effective and will give quick, positive results. Local nonprofit organizations and community groups can play an active role in mobilizing human and material resources. Unemployment will be more easily addressed. The purchasing capacity of the local people will be enhanced. The local environment will be protected and enhanced and the base for a balanced economy will be more quickly established.

The development of local industries will provide immediate economic benefits. In fact, the only way to solve unemployment and bring about full employment throughout the world is by developing local-level industries, including agriculture which should be treated as an industry. The growth of local industries will provide real social security to the local people and create greater opportunities for their all-round advancement, because all their basic needs will be met.

It is inevitable that there will be differences in planning for different regions. Temperature, rainfall, availability of water, soil quality, land contour, economic issues, culture etc all effect planning. A permaculture approach to planning will take into account all the relevant factors before development programs are implemented. Local planning will increase the efficiency of resource use and improve the health of the environmental because local people realize better than anybody that their own health and well-being is dependent upon the health of their environment. There will be problems as global warming continues to play out and planners and growers will have to make adjustments on an annual basis. The carrying capacity of the SEU will change accordingly but a balance must be kept between the population numbers and the local carrying capacity of the environment.

While local people under a capitalist system often exploit local resources beyond their capacity to regenerate, this will be less likely under a permaculture local economy where the environment is valued and designs integrate ecological systems into economic plans.

## **C. PRINCIPLES OF PERMACULTURE ECONOMIC PLANNING**

### **1) Produce to Meet Needs Not Profit**

The first principle of a permaculture socio-economy is to meet the needs of people within the socio-economic unit. The economy is “need-based”, not “profit motivated”. In a permaculture economy, the commodities produced by an SEU will primarily be sold in the local market itself. Only in situations where there is a surplus and the local resources required to produce the commodity can not be used to meet other basic needs, will it be beneficial to export products and raw materials. As a result, there will be no uncertainty among the local people as to their capacity to meet their basic needs. Because money will be circulated within the local market there will be no outflow of local capital. This will all but eliminate the possibility of an economic catastrophe in the local economy. As surplus wealth is generated, people’s income will have an upward trend and their purchasing capacity will continuously increase. At the same time surplus wealth must be dependent upon the carrying capacity of the

environment. New designs will always be required to increase productivity in a sustainable manner. This will be one of the great benefits of a permaculture economy. No economic system in the world has been able to continuously increase the purchasing capacity of the people, because economic power is concentrated in the hands of a few.

## **2) Employ 100 percent of Local People in Local Enterprises**

The second principle of decentralized economy is that all the local people who are ready, willing and able should be employed in the local socio-economic unit. Local people should determine the quantity of minimum requirements and common amenities and the basic policies connected with the community's economic well-being. If this principle is followed the problem of outside interference in the local economy will be made more difficult.

The basic right of all people is to have access to their basic needs. These should be met through guaranteed employment, not through undependable government dole-outs or chain store minimum wages. This is why local people should support local businesses first and chain stores last even if they must initially pay more for an inferior product.

In many cases, the use of credit cards are responsible for a tremendous drain of capital from localities. In such situations, it may be beneficial for the local people to pool resources by setting up a revolving loan fund to pay off credit card debt and use the savings from interest payments for local purposes.

Unemployment is a critical economic problem today and setting the goal of 100 percent employment of the local people is the only way to solve this problem. To create 100 percent employment among local people, we will need to develop both a short term and a long term economic plan. In the short term plan, labor intensive industries based on food and/or farm production should be started or made more productive where they already exist. These industries should be based on the *meeting local needs* motive, not the profit motive. While a rational profit is desirable, the higher priority is to meet peoples' need for affordable, healthy food and household items and to create as many local jobs as possible. This is best accomplished through the creation of producer and consumer coops. Aside from farm production, cooperative businesses should also be created locally to provide farm inputs (tools, equipment, seeds, organic fertilizers, etc) as well as process raw farm products into value-added foods or other products. All these jobs will help to alleviate the unemployment problem in the local economy. If state and local governments really want to act according to the well-being of local people they can use their buying power to serve as a market to kick start these enterprises.

As an example of the benefits of local food production, currently the people in Illinois eat \$48 billion dollars worth of food each year. Yet they produce only \$2 billion worth of food. It is estimated that they can add \$30 billion dollars to the state economy by developing local food systems in Illinois. If this \$30 billion went into job creation, Illinois could add 1 million jobs to at \$30,000 a year. Through localizing food production alone, Illinois could eliminate its unemployment problem.<sup>11</sup>

To solve the unemployment problem there must be an accurate assessment of the surplus and deficit of labor trends. In most areas there is surplus manual labor. So businesses, industries and programs in food and farm production that require manual labor should create employment. Permaculture planners and

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<sup>11</sup> Local Food, Farms and Jobs: Growing the Illinois Economy. A Report to the Illinois General Assembly By The Illinois Local and Organic Food and Farm Task Force, March 2009, p12.

designers should work with local groups, including colleges and universities, church groups, non-profits, the unemployed etc to make this a priority in their work. Basic permaculture training and retraining of people in rural and urban areas can equip them with the necessary skills for employment.

For the development of sustainable agriculture there is an especially great need for permaculture specialists and technicians who can train unskilled local people to develop the agricultural sector. In addition, all types of pre-ag and post-ag industries can be developed according to the needs and resources of the local area, and these industries will also employ local people.

### **3) Local People Control Local Resources**

The third principle of a permaculture socio economy is that all the resources in a socio-economic unit will be controlled by the local people. In particular, the resources which are required to produce the minimum requirements will be in local hands, and all the industries based on these resources will also be controlled entirely by the local people. Local raw materials will be fully utilized to produce all kinds of commodities necessary for the economic development of a socio-economic unit. In this regard, participants' property should be used as per agreements to serve the collective need. It will also be necessary to pool capital to purchase land and tooling from outsiders so that the carrying capacity of the SEU is expanded to meet basic needs. Local products will be designed so that they make optimum use of local raw materials in their production.

### **4) Organize through Cooperatives**

The fourth principle of decentralized economy is that most production and distribution should be organized through cooperatives. This is the means by which economic democracy is realized within permaculture planning. One of the principal reasons for the past failure of the cooperative movement is economic centralization. It is extremely difficult for cooperatives to succeed in an economic environment of exploitation, corruption and materialism, so people cannot accept the cooperative system wholeheartedly. On the other hand, as we've learned from Cuba and other 3<sup>rd</sup> World countries, a permaculture economy is one of the principal reasons for the success of the cooperative system. The availability of local raw materials will guarantee constant supplies to cooperative enterprises, and cooperatively produced goods can be easily sold in the local market. Economic certainty will create increased interest and involvement among the cooperative members, and as the local people become more confident in their economic security, they will more readily accept the cooperative system.

As far as possible, agriculture, industry and trade will be managed through cooperatives. In these sectors of the economy, the employment of local people in outside corporations will be gradually transformed into employment in local cooperatives. Only where production cannot be undertaken by cooperatives because of the complex nature or small scale of operations should it be undertaken by quasi-governmental and private enterprises. The distribution of commodities, including food, will be done through consumer cooperatives. Adequate safeguards for cooperatives will also have to be arranged.

The members of the cooperatives, in consort with local planning bodies, should decide production policies. Together they will establish prices for goods and services. The price of agricultural commodities will be fixed on a rational basis by taking into account the price of commodities; the costs of labor, raw materials, transportation and storage; depreciation; savings; etc. In addition, this price should include a rational profit of not more than fifteen percent of the cost of production. In a decentralized economy, agriculture will have the same status as industry.

Cooperatives will provide employment for local people, and also ensure that the skills and expertise of the local people are fully utilized. Educated people should also be employed in cooperatives so that they do not leave the local area in search of employment or move from the countryside to the cities.

### **5) Always Meet Local Demands First**

The fifth principle of permaculture economic planning is that the particular demands of the local area should be addressed first when it comes to economic development. The local situation should be carefully studied and programs should be adopted as per the requirements of the particular locality. In many areas, for example, diet-related diseases like heart disease, diabetes, obesity and certain cancers have reached epidemic proportions. As such we need to focus attention on the relationship between fresh, unprocessed, whole foods and the health of people. In the rural areas, we need to focus on building the infrastructure to train farmers and get their foods to local markets. Urban areas that border agricultural and rural areas can develop industries that either provide inputs to agriculture or add value to agricultural products.

### **6) Organize the Economy on a Three-Tiered Structure.**

Over-industrialized countries like the United States, based on a centralized economic model, maintain their existence by exploiting the raw materials and labor of undeveloped countries and undeveloped regions within their borders. This makes local economic self-reliance very difficult. In a centralized economy – whether capitalist or communist – capital-intensive industries are usually managed as either private companies or state enterprises.

In a decentralized economy, the economic model will be different. Labor intensive and capital intensive industries will be planned to specifically increase the capacity of the socio-economic unit. To accomplish this, Permaculture planning advocates a three-tiered economic structure: 1) *large scale key-industries* managed by the immediate government, 2) medium scale *cooperatives* and 3) small-scale, *privately owned businesses*.

Such an economic structure will be based on the principles of Permaculture - self-reliance, maximum utilization, rational distribution, decentralization, and progressive increases in the standard of living of all people. Through the creation of new industries, new products and new production techniques incorporating the latest scientific discoveries, the vitality of the economy can be continually increased.

In this model, *key industries* constitute those industries upon which all economic activity depend. For example, energy, water, raw materials etc are considered key industries. These should not be in private hands but be controlled by semi-government bodies that oversee production of these materials at a “no-profit-no loss” basis for the good of the local economy as a whole.

Every socio-economic unit needs to be self-sufficient in power generation. In time, as the socio-economic unit grows to include more of the local economy, the local government will play a larger role in optimizing the economic conditions for the benefit of local people. For example, while individuals may be able to create energy to power a household, a locally controlled power supply large enough to meet the needs of the entire local population as well as agriculture and industry needs will also be required. It will be up to local boards to arrange for the supply of sufficient power.

The local administration will have to supply locally generated power such as solar energy, thermal energy, bio-gas, hydroelectricity, pneumatic energy, electromagnetic energy and tidal power, or any other power which is easily available locally. The generation of power is a key industry which should be run on a *no profit, no loss* basis so that the cost of production is minimized and the purchasing capacity of the people is increased. For example, if batteries are produced through cooperatives, power should be supplied on a no profit, no loss basis, but the battery producers will be able to sell their batteries at a rational mark-up. Here the power that is used to manufacture the batteries is not an industrial commodity but a raw material. The power for such things as transportation, communication, schools, colleges and hospitals will also be supplied on a no profit, no loss basis to maintain social dynamism. The immediate government or the state government will have to take the responsibility to supply power as a key industry.

*Cooperatives* constitute the second tier of a Permaculture economy. They are responsible for the production, processing and distribution of common goods and services, especially those required to meet basic needs. The cooperative sector will be the main sector of the economy. Cooperatives are the best means to organize local people independently, guarantee their livelihood and enable them to control their economic welfare.

*Small-scale, privately owned businesses* constitute the third tier of the local economy. Most small-scale and cottage industries will be in the hands of individual owners. Small-scale industries should be confined mainly to the production of non-essential commodities such as arts, crafts, luxury items etc. Though privately owned, they will need to maintain adjustment with the cooperative sector to ensure a balanced economy.

## **7) Maximize Agricultural and Industrial Development**

Permaculture planners in cooperation with other local stakeholders will make a study of available raw materials and distinguish between those that are locally owned and those that are owned by outside interests. Efforts should be made to use locally-owned, renewable resources first, as this will add to the sustainability of the local economy.

In Permaculture economic planning all local resources will be maximally utilized and rationally distributed. Planners will strive for zero waste. Permaculture planners will develop as many local industries as possible according to the availability of raw materials and local consumption.

These new local industries can be financed through a model like the Self-Help Association for a Regional Economy (SHARE) that provides loans to small businesses at manageable rates of interest. This mechanism allows local people to pool their own capital for the purpose of building their own economy.<sup>12</sup>

Local farms and industries will feel secure when they know that sufficient raw materials are available to supply their needs, and they will be able to plan their future production efficiently. By encouraging the growth of local farms and industries based on local raw materials, especially farm land, we will

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<sup>12</sup> SHARE is a creation of Bob Swann of the BF Schumacher Center for a New Economics that also created a local currency and an agricultural trust as a means for making financial resources available to local people to develop their own economy. See <http://centerforneweconomics.org/content/share-microcredit-program>

strengthen local markets and mitigate the drainage of capital that is vital for the local area's economic growth.

Industries that require locally available raw materials can produce commodities cheaply by being located near the supplies of raw materials. This contributes to local self-reliance.

The agricultural, industrial and trade policies of a socio-economic unit will have to be formulated according to the principles of a local economy. The maximum utilization and rational distribution of local resources and potentialities to ensure full employment should be given priority, keeping in view that there will be a balance in economic development between agriculture, industry and other sectors of a socio-economic unit.

### **8) Don't Import or Export Raw Materials From the Local Economy**

Agriculture and industries should try to use locally available raw materials first and should not import raw materials from outside the socio-economic unit if possible. Raw materials are the basic ingredients necessary to make finished products. For example, we should use locally produced seeds and fertilizers rather than buying them from outside the locality. This practice of designing local agriculture and industries that use local materials will keep money in the local economy and contribute to local self-reliance.

If there are not enough raw materials in any socio-economic unit to meet the minimum requirements of the local people, and if no substitute material can be developed, then the necessary raw materials can be imported from outside the socio-economic unit.

By the same token, local raw materials should not be exported. Local materials are required for economic production. As such their value is much greater if kept in the local economy rather than sold for little money externally. Only in those cases where local supply of a commodity is in great surplus to the local need, can that commodity be traded or sold in exchange for commodities required for the local economy that do not exist within its boundaries.

Where there is a plentiful supply of local raw materials, industries can be developed to meet basic needs. The availability of raw materials will ensure the long term viability of local industries. As the local economy matures there may be reasons to import or export raw materials but these should be special case situations.

### **9) Don't Import or Export Finished Goods from the Local Economy**

By manufacturing finished products locally, a socio-economic unit will conserve its money and improve the purchasing capacity of the local people. Finished goods, therefore, should not be exported, but be kept in the local economy to meet the basic needs of local people.

Importing finished products that can be locally produced should also be discouraged. Local people will support their local industries by purchasing their own finished products. It is essential that the local population utilize the commodities produced in their own area to ensure the prosperity of the local unit. Initially, local commodities may be inferior, more costly or less readily available than outside commodities, yet in spite of this, locally produced commodities should still be used by the local people. If local commodities do not meet the needs and aspirations of the people, immediate steps need to be

taken to increase the quality, reduce the price and increase the supply of local goods, otherwise imports will be encouraged. With continued local support, the local industries will develop to a stage when they will be able to produce goods of better quality at a better price. But, if people purchase finished goods made outside the area rather than those made locally, then local industries will not be able to get established or grow, adding to unemployment and other social and economic problems. To spread this idea among local people, a public interest campaign should be created to encourage local people to buy locally-produced products rather than outside finished products wherever possible.

As a Permaculture economy aims to develop local industries and create employment for the local population, those commodities which are not produced within the local socio-economic unit should be gradually removed from the local market as local products become available.

In a decentralized economy, the application of this goal is very important. If it is neglected, the local industries will not be able to gain a foothold, local markets will remain out of the hands of the local people and unemployment will increase. Once locally produced goods are accepted in principle, not only will local industries survive, but with their further development the local economy will thrive. The outflow of capital from the local area will be checked, and because it will remain in the local area, it will be utilized to increase production and enhance the prosperity of the local people. With the increasing demand for local commodities, large-scale, medium-scale and small-scale industries will all flourish.

Importation of finished goods means that local capital is being transferred to another economy or corporation that has produced the product. The drainage of capital is always detrimental to the economic growth of a local socio-economic unit, therefore unnecessary importation should always be discouraged. Referring back to the above example, as the people of Illinois import \$48 billion dollars worth of food each year, billions of dollars are drained from the area that could be kept within its own economy.

If, however, no potential exists to produce the manufactured goods required by industry in the local area, only then should the importation of such goods be encouraged.

It should also be stated that a rural economy should not depend solely on cottage industries otherwise the economic welfare of the rural population will be stunted. Cottage industries (that are mostly developed by women) should be incorporated into larger scale industrial production to keep them from becoming side-lined in the economy. Cooperatives and the local administration will have to take the responsibility of supplying cottage industries with raw materials so that they do not suffer from scarcity.

### **10) Keep Money Circulating in the Local Economy**

Another important principle of a Permaculture economy is to always keep money in circulation and not hoarded. This will allow the economy to move with accelerating speed. The value of money depends on the extent of its circulation. The more frequently money changes hands, the greater its value. If a dollar changes hands once, it is only worth one dollar but if it changes hands ten times it is worth ten dollars within the economy. The greater the value of money, the greater the prosperity in individual and collective life, and the greater the opportunities for all-round welfare.

A local currency should be created to augment the national currency as soon as possible. This is legal and there has been historical precedent as far back as the original colonies. Examples from across the country demonstrate that millions of dollars can be added to the local economy in this manner. Planners

should therefore consider developing a local currency that local participants agree to accept in exchange for their goods and services. This will help buffer the new socio-economic unit from the negative influences of the larger economy while also developing value locally. The local currency will gain its footing by being exchanged for goods and services by those people who want to participate in the formation of a Permaculture socio-economic unit.

### **11) Support Spiritual and Cultural Development**

A Permaculture economy does not exist independently of social interactions and the need for spiritual and artistic expression. This is why it is called a “socio-economy.” There is a close relationship between the economic status of people and their psychic and cultural development. How often do we see local people who have no self-confidence in their economic activities, and who then become mentally weak. This weakness becomes an impediment to their economic well-being and they become easy victims of economic, political and psychological exploitation by vested interests. This unhealthy situation needs to be firmly resisted.

Economic improvements in individual and collective life will lead to the all-round welfare of people. As people gain confidence in their ability to meet their own basic needs and as they gain security in knowing that the community is set up for their welfare, people will begin to develop a better self-image. They will then begin to indulge in recreation, hobbies, as well as artistic and spiritual pursuits. This is one of the great benefits of a permaculture economy. It recognizes the humanity of local people and allows people to partake in higher pursuits. So also, as people gain confidence due to their spiritual and educational progress, they will contribute more to the efforts for economic improvement

As the local economy is able to provide people their basic needs in a secure manner as well as offer certain amenities to those who make extraordinary contributions to the local welfare, labor time may come to be reduced. A forty hour work week for example may be reduced to 30 or even 20 hours. The time no longer spent working can then be used by individuals or families to pursue opportunities for recreation or higher pursuits.

The overall well-being of society is the ultimate goal of a permaculture economy. This is a comprehensive ideal and should be established in each and every socio-economic unit. It will bring about economic prosperity as well as ensure greater opportunities for the mental and spiritual elevation of all members of society.

## **C. WHAT ARE THE GUIDELINES FOR LOCAL PLANNING**

The goal of permaculture socio-economic planning is to meet the needs of local people in a sustainable manner. To achieve this, the outflow of economic wealth from the local area must be greatly reduced. Of the basic needs, food production takes on special emphasis because it addresses the need for required nutrients as well as provides the means to restore and maintain health to local people. Malnutrition is a big problem. Poor diets in the US typically result in 15 percent of a local population having diabetes, 33 percent having heart disease and 55 percent being overweight or obese. What causes this problem? A main cause is the goal of selling food for profit instead of meeting the needs of people for proper nutrition. The quest for profit industrializes the food production system and leads to the processing of food that strips nutrients from it in order to meet objectives like standardization of products, increased

shelf life, better display appearance etc. To meet these objectives additives are put into the food which in large part are toxic to our body. These toxins contribute to the diet-related diseases mentioned above. The additives are listed on food labels so consumers can see what you are consuming. Industrially produced food is based largely on corn and soy beans which have been genetically modified leading to even greater stress on the body. The US government subsidizes this system by supporting its distribution to children in our public schools. Children's diets are dangerously short on fruits and vegetables that provide the vitamins and minerals to form the building blocks of our cells and keep our body healthy.

It will be difficult to solve the problems of malnutrition and of the misallocation of natural resources unless local planning is implemented to address them. If local people can meet their food needs, this will go a long way to creating healthy people as well as creating jobs and becoming more self-reliant. The practice of permaculture has always focused on food production and rightly so. Now the question is, can permaculturists increase the scale of production to help more people.

Socio-economic factors vary from place to place, as do socio-economic potentialities. Factors like the fertility of the land, the availability of water, the number of growing days, the availability of labor, etc. will be different in different areas, so there should be separate planning for each locality. Successful planning to meet the basic needs of local people cannot be achieved by sitting in an office hundreds of miles away from the place where economic development is to be undertaken. For example, centralized planning resulted in the people of Illinois having to import 95 percent of their food even though they live in an agricultural state with some of the richest farmland in the world. This central planning shapes local agriculture by the creation of agricultural extension services, research money for local colleges and universities, the marketing of seeds, fertilizers, pesticides etc, insurance coverage for crop damage, capital investment, assistance for corporations in the manufacturing and distribution of large scale farming equipment and other means.

But neither can successful local planning be achieved through adopting cookie-cutter formulas. To improve local economies, local people will need to volunteer their experience, expertise and knowledge for the benefit of all the members of the local community. To kick-start a local economy movement, we will need a moral leadership that upholds the well-being of their community in each of their actions. To bring such planners together is the role of the Local Planning Body. Permaculturists can form local planning bodies that are composed of local stakeholders from the non-profit, public, finance, educational, social services, retail, transportation, professional services, energy, communication, farm and industrial sectors. It should include farmers, land owners, local business owners, regional planners, local colleges and universities, business associations, non-profits, students, the unemployed etc.

Planning a Permaculture economy requires specific guidelines. When these guidelines are put into practice they allow us to develop a local economy. Guidelines for the local planning bodies should include:

## **1. Service to Local People**

In our planning process, service to local people is our first concern. For example, we will have to help people in our local area in times of disasters and economic distress. From a moral point of view and from a human point of view, the responsibility for helping our neighbors falls on us. Food pantries and

cheap kitchens will need to be stocked in all local plans. We want to make sure that everyone, no matter how dire his or her straits, has food to eat and knows that their community is there to support them. This is what builds community. This is the example that we want to set.

By adopting such an approach to economic planning, people will be able to do something to alleviate the suffering of others and build local good will. Therefore a goal of local economic planning should be to make each socio-economic unit self-sufficient in food supply.

## **2. Factors of Permaculture Local Planning**

There are many factors that prevent small farmers from succeeding in today's food economy. One reason, that can be readily addressed is that small farmers and growers do not take account of the true costs of production. They do not count their time accurately, or that of family and volunteers. There are other costs that they also ignore or records that they do not keep. If we are going to build a viable, sustainable food system we must account for the true costs and capabilities of operations. In this endeavor, we should be able to understand and keep account of the following factors: 1) the cost of production, 2) productivity, 3) purchasing capacity, 4) collective necessity and 5) sustainability. These factors collectively constitute a set of design principles for local level planning.

### **Cost of production:**

If we are to build a sustainable food economy, farmers must account for all the expenses incurred in producing their crops and farm products. This is the only way to get an accurate calculation of the *per unit cost of production*. Through farmer cooperatives, farmers networks, and community-based organizations involved in food issues, this information can be mutually developed. Once this occurs, if farmers share best practices with each other, as well as make bulk seed/tree purchases, coordinate transportation, crop research, irrigation etc they will be able to reduce the price of foods. As the cost of food drops, more local people will buy it and begin to join the local economy. In like manner local farmers will be able to compete more aggressively with outside producers. In the meantime local people should be encouraged to buy from local farmers despite higher prices. In time this price will be reduced by the methods indicated above, and local people will have greater social security.

The cost of production can be systematically determined and kept at the minimum level. All industries, including agrico-industries (inputs) and agro-industries (value-added), can see that the cost of producing a particular commodity does not exceed its local market value. All production will need to be economically viable. The more we share information, tools, equipment and resources, the more we will be able to keep production costs down. Cooperatives can facilitate this sharing.

Further, we need to gain the support of local people by educating them about the costs of food production as well as the nutritional benefits of buying sustainably grow local foods.

### **Productivity:**

This factor addresses the need for maximum production in order to meet the collective needs. Any under-utilization of production capacity should be identified and plans made to bring these resources into production while maintaining a sustainable supply of the raw materials required.

We want to develop a food economy that has the capacity to optimize production within the carrying capacity of the locality. This will require that money is continually reinvested – kept in circulation rather than hoarded -- so that the collective wealth of the locality is continually increased.

If local people are guided to contribute to the local economy based upon a mutual understanding of collective needs, productivity will become more beneficial for all. Maximum production in the economy will provide a congenial environment for more investment, more industrialization, more employment, increasing purchasing capacity and increasing collective wealth. Once basic needs are met and amenities are also produced to create a certain level of comfort for everyone, it may be possible to cut production so as to provide more leisure for people and allow us to pursue personal goals.

### ***Purchasing capacity:***

The goal of local planning is to increase the *purchasing capacity* of every local person. The existing practice of considering the *per capita income* as the indicator of people's economic well-being is a false standard that masks the concentration of wealth into few hands and the impoverishment of the majority of people. The genuine measure of people's economic advancement is increasing purchasing capacity. To increase people's purchasing capacity will require stable prices, progressive, periodic increases in wages and salaries, and increasing collective wealth.

When the amount of products and services required to meet the basic needs of an average individual is determined, it can be multiplied by the number of people in the SEU, to determine the collective purchasing capacity of the SEU. If, for example, there are 1,000 people in our SEU and they have a monthly wage of \$1,000, the total purchasing capacity of the community is \$1 million per month. If the average person spends 25 percent (\$250) of their income on food and 25 percent (\$62.50) of their food budget on vegetables, then local farmers know that the collective purchasing capacity for vegetables per month is \$62,500. When they know the collective purchasing capacity for their product, the farmer cooperatives will know how much to plant of each crop. They will be able to set a price based on the cost of production as well as upon other factors involved in adjusting the minimum wage to the cost of production of all basic needs. When we are able to determine the average amount of food products, clothing, household supplies, shelter costs, etc for the collective, we will be able to know the collective purchasing capacity for each area of products. The average purchasing capacity of the individual to meet basic needs will determine the community's minimum wage.

There should be no limit to purchasing capacity other than those dictated by environmental carrying capacity and a fair balance between the lowest and highest paid workers. The minimum requirements should be guaranteed to everyone, including the lowest paid worker, and should be increased occasionally as circumstances permit. There should be a minimum wage that makes this possible. There should also be a maximum wage, say three times the minimum wage, to encourage individual initiative, reward excellence and acknowledge extraordinary contributions to the public good, but the wage should not be so large that it threatens the basic needs of the average person.

### ***Collective necessity:***

Planners will also have to consider the existing collective need as well as the future requirements of a socio-economic unit, and develop programs accordingly. Raw materials and key industries, such as electricity generation, commodity transport and water supply will have to be accounted for in the planning process.

The greatest importance will be given to the production of the minimum requirements, so planners will have to make provision for the minimum requirements of all. This does not mean that the requirements of both meritorious people and those with special needs should be neglected, but that we will first ensure that everyone has their basic needs met.

### ***Sustainability***

Sustainability implies the use of resources in a manner that can be indefinitely sustained. It means using materials that are not derived from fossil fuels when possible. It means using renewable resources and renewable energy when possible. It means developing the soil so that it yields nutrients in a continuous way, rather than using additives produced outside the local area. It means protecting our water and raw material base. It means replanting and caring for our forests. Sustainability implies leaving our children with the same resource base, or even an improved resource base. In this endeavor, planners should remember that all species, aside from their utility value have an existential value. Their existence is no less important to the Divine than is ours. We abuse them to our own detriment.

### **3. Attributes of Permaculture Local Planning**

Natural and human resources vary from area to area, hence each locality should develop its own separate developmental plans. It may initially prove useful to start a Local Planning Body at the county level, or the town level for this purpose. The local planning body would be responsible for preparing a plan for the development of the SEU and implementing the local development program accordingly.

In time, we can create regional and national level planning bodies that can synthesize and coordinate planning for larger areas of production. It must be remembered, however, that planning should be of an ascending order, *starting at the local level*. It is often too easy for people's plans and programs to be co-opted at higher levels by powerful people who have other interests to serve.

Localities are currently demarcated on the basis of political boundaries. Yet the well-being of the local people may not be maximally served by using such strict limitations. Local planning should take account of such factors as the physical features of the area (including river valleys, varying climatic conditions, topography, the nature of the soil, the type of flora and fauna, etc.), the socio-economic requirements and problems of the people, and the existence of nearby markets and resources. These may cross political boundaries. Thus, over time, "localities" should be rationally and systematically defined on the basis of efficient decentralized economic planning.

When planning is prepared for the all-round growth of a single locality exclusively, we may call it "intra-locality planning". Each locality must have its own Master Plan. However, there are problems which traverse local boundaries and cannot be tackled or solved by one locality alone, such as flood control, river valley projects, communication systems, higher educational institutions, afforestation projects, the environmental impact of development, the establishment of key industries, soil erosion, water supply, power generation, the establishment of an organized market system, etc.

So, cooperation among localities is necessary. Planning among localities is called "inter-locality planning". The purpose of inter-locality planning is to organize and harmonize socio-economic development in adjoining localities through mutual coordination and cooperation.

At each and every level of planning, there should be short-term and long-term planning. It makes sense that the maximum time limit for short-term planning would be six months, and the maximum time limit for long-term planning would be three years. Short-term and long-term plans should be drafted in such a way that they complement each other. The major goals of planning at each level are to guarantee the minimum requirements of the local people, eliminate unemployment, increase purchasing capacity and make socio-economic units self-reliant.

The overall well-being of society is the ultimate goal of a permaculture economy. Because we are presently still operating under the tenants and structures of economic globalization, many of these principles and guidelines can not be presently implemented. Nonetheless, they should be used by permaculture designers to guide our endeavors to bring abundance to local economies and contribute to the security of the local people.

## **D. GETTING STARTED**

The idea of creating an entirely different economy than the status quo seems overwhelming. In truth, it is not. What is required is a team of leaders who have the vision and the organizing capacity to reach out to local people. Many people long for ways to increase their self-reliance, mutual support, and a greater feeling of community. This section focuses on four projects that can be used to create the permaculture leadership necessary to implement socio-economic units.

These projects should be organized and implemented at the local level, but it would be a great benefit if permaculture workers at the global, national, regional and local levels would cooperate to develop the basic course curricula, materials and models to guide the ground forces in the permaculture socio-economic movement. These projects are 1) the Permacorp, 2) the Team Leader Training Course, 3) the Community Leader Training Course, and 4) the Permaculture Land Base. It is the goal of the Kinstone Academy of Applied Permaculture to spearhead these projects in its effort to promote a strong movement of applied permaculture experts in the United States.

### **Permacorp**

A Permacorp is a network of permaculture experts and advanced students whose mission is to increase expertise in the planning, design and implementation of socio-economic units. These units are built by members through maximizing the utility of local resources at the household and community levels and using savings from efficiencies to continue to expand the system of meeting the basic needs of local people.

Experts and students who have completed a basic Permaculture Design Course, the Team Leader Course or the Community Leader Course offered by the Kinstone Academy of Applied Permaculture, or who have been chosen by experts or advanced students to work on SEU projects are eligible to join the Permacorp.

Membership dues in the Permacorp should be collected to give the Permacorp resources to do its work. Membership benefits might include: 1) a 10 percent savings on future Permaculture Courses offered by

Permacorp members. 2) access to locally specific data bases of Permacorp members on the “members only” section of the Permacorp website. 3) access to news and project reports from members that are posted on the private Blog on the Permacorp website, 4) access to special papers written by members and experts on the theory and practice of permaculture socio-economic units, 5) access to specially prepared curricula, ie the Team Leader Course, or the Community Leadership Course that can be used to raise funds and train local participants, 6) access to clothing, badges, chevrons etc that indicate memberships and accomplishments within the Corp, 7) invitations to the Permacorp’s annual conference.

### **Team Leader Training Course**

The purpose of the Team Leader Course is to train local activists who have the know-how and skills to meet basic needs at the household level. The course consists of 5 modules. These are 1) *Managing the small-scale food system*. Skills learned are making compost, making organic fertilizer, saving seeds and identifying open pollinated seeds, starting plants in a home or greenhouse, garden bed preparation, garden planning and record keeping, weeding, pest control, watering, harvesting, preserving, storing and eating. 2) *Saving energy and using renewable energy*. Skills learned are how to winterize a shelter, how to add heat and light through passive solar projects, how to use home-generated renewable energy to supplement the grid, how to save water etc. 3) *Health care*. Skills learned are how to determine whether food is nutritious, what constitutes a balanced diet, how to plant medicinal herbs, how to make medicine from medicinal herbs, 4) *Emergency preparedness*. Skills learned in this module address the individual supplies required to get through a disaster, as well as provide information on what emergency supplies are needed for first aid and for household preparedness. 5) *Recruiting and training skills*. This module addresses how to set up a recruiting event, the recruiting process, holding training sessions, the training materials used, taking action and reporting.

The Team Leader will organize a team of local activists from 4 to 6 households. Members of the Team will design a plan and work together to help each household implement self-reliance projects in the areas of food, energy, medicine, emergency preparedness and community building. Gardens can be collectivized or the Team can help each household develop its own garden. This experience will increase the sense of self worth and build trust among team members. The know-how, skills and experience will provide an example for others in the community and develop opportunities to build larger teams.

The training course will be developed by Permaculture activists and be approved by PINA.

### **Community Leader Training Course**

Once team members have hands-on experience in household permaculture and have broadened their membership base to 8 -12 members, they are eligible to take the Community Leadership Training Course. This course is geared to providing participants with the knowledge and skills required to plan, design and implement a permaculture socio-economic unit. A SEU is comprised of participants who want to share their resources and labor to develop a shared economy with each other.

Its planners observe and analyze the Team’s economic activity and develop a Master Plan to optimize the use of resources and labor to create a nucleus of an economic base within the larger community.

Members of an SEU will share goods and services with each other. This may be done informally, or through the use of barter, cash or other means. This will keep wealth within the SEU. As the SEU develops in membership, it will benefit greatly by creating its own local currency that can be used internally to augment the US dollar. The use of a local currency saves participants from having to spend US dollars and therefore allows dollars to be exchanged with the outside community for necessary resources. The use of a local currency will also expand the local market by allowing local people to purchase SEU goods and services at a savings of dollars.

The Community Leadership Training Course will be composed of 5 modules: 1) Understanding Individual Motivation and Social Psychology, 2) Principles and Guidelines for Planning an SEU, 3) What to Observe and Assess in the Development of a Master Plan, 4) How to Organize an SEU Beyond the Initial Team, and 5) How to Create a Local Currency.

Permaculturists trained in Community Leadership will have the title Platoon Leader or Captain.

The course curriculum will be developed by the Prout Institute and be approved by PINA.

## **The Permaculture Land Base**

A Permaculture Land Base will be a requirement in the formation of each SEU. The purpose of the Base is to serve as a model as well as a laboratory and training facility for local participants. It will also serve the local community by providing resources like seeds, medicine and education in emergency situations. The viability of projects to meet the basic needs of local people must be tested in order to optimize the use of resources and ensure fundamental know-how and skills.

The elements of a Permaculture Land Base consist of:

Gardens – fruit, vegetable, legume, grains, herbs, seeds

Animals – chickens, sheep, goats for meat, milk and cheese

Bees – honey, wax, the need for pollinators

Structures – a building for food processing and storage, a shop, equipment shed, a place for meetings and classes, residencies, emergency shelters

Forest – food, building materials, firewood, natural resources, animal sanctuary

Pond – irrigation, recreation, fishing

Composting Operation – to revitalize the soil

Vermicompost Operation – to create fertilizer

Greenhouse – plant starts, drying, winter garden

Cottage industries

Facilities for children and homeless

Research Lab

The land base may also include such projects as methane digesters for fuel, perennial nurseries, a bakery, fiber plants, a health clinic etc.

Kinstone and Proutists will develop a PDC to teach activists how to set up a Permaculture Land Base. The course will be approved by PINA

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