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LOCAL EXCHANGE SYSTEMS: DESIGNING COMMUNITY INCENTIVES





Local Exchange Systems – Designing Community Incentives

*A Discussion on Alternate Economics to Strengthen Local Economy and
Facilitate Sustainable Adaptation*



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Abstract: Economic Globalization in its current form is a centralising juggernaut which often causes large-scale resource depletion in remote eco-systems, unpredictable price variations in essential commodities and lead to macroeconomic upheaval. Coupled with this is the potential of widespread impacts of Climate Change which increases the vulnerability of human settlements especially the resource poor within. In context of the dual risks of economic globalization and climate change, *Localisation* appears to be the most systemic response mechanism. Localisation is the manifestation of a decentralised, democratised economy that allows communities to develop ecosystems based Climate Resilient Economies.

KeyWords: *Adaptation, Globalization, Localization, Economics, Climate Change.*

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Why this Paper?

This paper aims to inspire a discussion on the nature and practice of localization for sustainability in the developing world. It is by no means meant to serve as an operational guideline for implementation of development project. This paper provides a platform for discussion on the need for new and different economic thinking. It encourages scrutiny of its conceptual design, evaluation of its potential benefits; highlights risks and pursues possibilities of micro experiments on field.

The need for such a discussion emerged from WOTR's local money flow studies conducted in its various project villages. The results showed that more than 85% of the money, that entered the local economy as income of households and livelihoods, left the economy in great hurry. It provoked us to think on what could be the factors driving these leakages. We enhanced our scope of research to collect economic history of villages which reflected on how the economy opened up to modern markets and globalized products. Yet even with such high monetary leakages and penetration of modern goods the village was able to sustain and in fact grow. The studies failed to highlight or measure the factors that keep the rural economies alive. It was here that we began to consider the value of the intangibles, the non-monetary transaction which could well be the pillars of local economic strength. They are not monetized and are fast reaching extinction from rural landscape. Thus, we felt the need to estimate the value of these transactions through alternative mechanisms. There have been many diverse mechanisms which have been tried over the world. None of them provide the whole picture or provide a holistic solution, especially to the specific context of rural India. Lessons learnt from documentation of failures of such mechanisms add value to the discussion.

This paper is aimed to logically progress towards becoming a project proposal to attempt a different mechanism of economics which can incentivise local communities to adapt and build resilience against climate change and risks of economic globalisation.

However, as often it has been observed that today's problems were caused by yesterday's solutions. Thus, the response mechanism to current challenges, need to come from longterm and systemic thinking. This paper attempts to propose such thinking with which we stand a better chance of achieving immediate positive results and also sustaining them.

The concept and thinking used in this paper is built upon work done by others, well before anyone anticipated a remote need for it. Thus these times of uncertainty and complexity are the true inspiration behind this paper and forthcoming efforts. Through this discussion we are merely initiating a metamorphic journey.

The Premise – Globalization is a centralising force responsible for large-scale resource depletion (especially in remote eco-systems), divergent economic oscillations (growth, recession cycle) and high carbon emissions advancing Climate Variation. This makes the resource poor progressively more vulnerable to climate variability and economic risks.

The Position¹ – Localisation is the manifestation of a decentralised, democratised process that adapts the economic activity to the diversity of local ecosystems, restoring cultural and biological diversity and allows communities to develop and self-implement strategies for Adaptive Sustainable Development.

Living in Contradictions

The globalized world rests on the so called abundant resources like Oil, Coal, Gas, Minerals, Water, Air, Soil, Forest, Timber etc. These resources make the fabric of life. But, these resources are finite or they cannot regenerate themselves within timeframes useful for human consumption. Thus at the base of this Globalized world, on one side we have finite resources being used at unsustainable pace causing resource depletion and on the other side we have waste being created which is deteriorating the Biosphere. Both are interlinked, increase in industrial use of natural resources increases emissions, create waste which pollutes the Biosphere and makes it unfit for human survival. This waste is mainly responsible for Climate Change.

Resource Depletion and Climate Change have become the two ends of a rubber band. Global economic growth is stretching it. There could be only two possible outcomes. One, the rubber band will break. Two, it would create a spasm. Under both the circumstances the base of globalized world would tremble and put the global economy into a tail spin. The problem, when seen systemically, is not just of resource depletion or climate change but of the prevailing paradigm.

Infinite Growth against Finite Resources

Earth's resources are spread over large geographical areas, but they are not distributed equitably. This creates resource inequity across geographic areas. However through industrialization human activities have rearranged the geological distribution of resources. This gap in distribution, accessibility and availability of resources is reduced to an extent, albeit disproportionately. The resources; energy, water, minerals, wood, food etc. have been successfully traded and bartered across large spatial boundaries, but they have arrived at a great cost: Resource Depletion, Climate Variation and Economic inequity. Globalization holds the central stage in this dance of change.

Globalization refers to “the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa²” This implies that the global cause and effect are distant in time as well as space leading to large invisible delays from the origin to end outcome. These delays make people blinded towards the possible impacts their consumption or production patterns can have on the environment at distant places. This very often leads to unsustainable behaviour practices.

¹Adapted from Economics Of Happiness, www.theeconomicsofhappiness.org

²Giddens (1990:64)

This situation calls for a different approach - a Paradigm Shift. One such shift had happened in 1987 when a new phrase was coined, Sustainable Development.

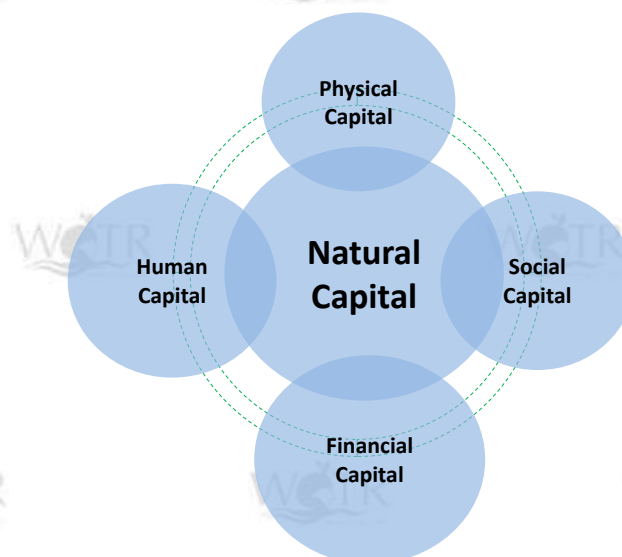
Sustainable Development

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- the concept of **needs**, in particular the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of **limitations** imposed by the state of technology and social organization on the environment's ability to meet present and future needs."³








In order to adapt to the interlinked challenges of Resource Depletion, Climate Change and Risks of Globalization we need to see Sustainable Development in the sphere of Adaptation. Thus, the framework within which this development takes place should seek to enhance (and balance) the 5 capitals; Natural, Human, Physical, Social and Financial. These five capitals are interlinked, interdependent and interrelated; Natural Capital forms the base for other capitals to evolve and form a structure. Their mutual interaction seeks to fulfill a purpose. This purpose has been changed in the industrial era and Humans have redefined it. Their mutual interaction now is geared up towards the growth of economy, human population and physical infrastructure (including technology). In this dance of change, the capitals have grown and some have depleted. Let us take a look at each capital and its state of transition in the last 200 years.

Figure 1 The 5 Capitals, Ideal State



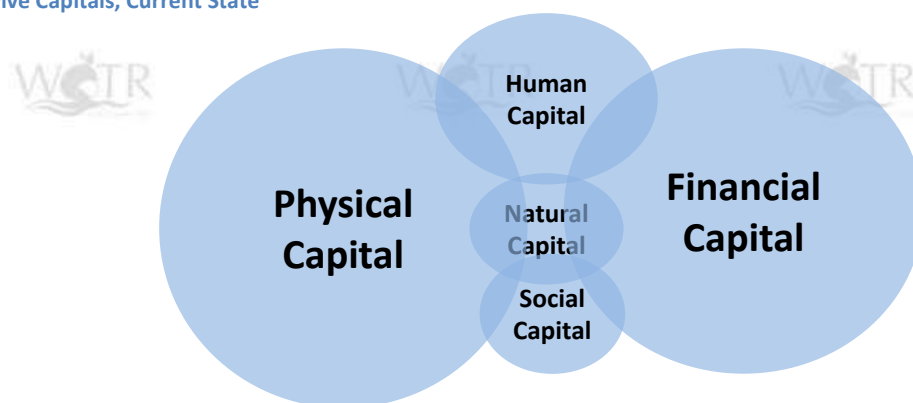
³World Commission on Environment and Development (WCED). *Our common future*. Oxford: Oxford University Press, 1987 p. 43, 04-01-2011

Transitions in Five Capitals

Capitals	What is this Capital	What Has Happened
Natural 	It is the stock and flow of Nature, Natural Resources and Ecosystem services of the Earth which makes for the fabric of life.	Substantially Eroded.
		Is considered to be infinite under conventional economic paradigm
Financial 	It is the stock and flow of Money in an Economy.	Substantially grown.
	It is a medium of exchange which in itself has no intrinsic value.	Has created an illusion of having intrinsic value. Perceived as modern day's fabric of life.
Physical 	It is the stock of Man Made/Built up resource on Earth.	Substantially grown.
	It is derived out of Natural Resources and mainly used to meet anthropogenic ends.	It is considered central for development and modern day living.
Human  	It is the stock and flow of human resources (and skills) available on Earth.	Substantially grown in quantity
	It helps convert the means into ends	Has gone up in terms of education but lacks holistic thinking and environment sensitivity
Social  	It is the quality of interrelationship, interdependency and interconnectedness of human beings.	Has moved from Localized to Globalized culture
	It forms the base of society, culture and civilizations	Increased interaction due to advancement in communication, where global market driven culture has taken precedent over diverse local cultures

Through the above mentioned transitions, these capitals have been exchanged to an extent and lost their balance. A sample theoretical representation of how the capitals now appear is given below.

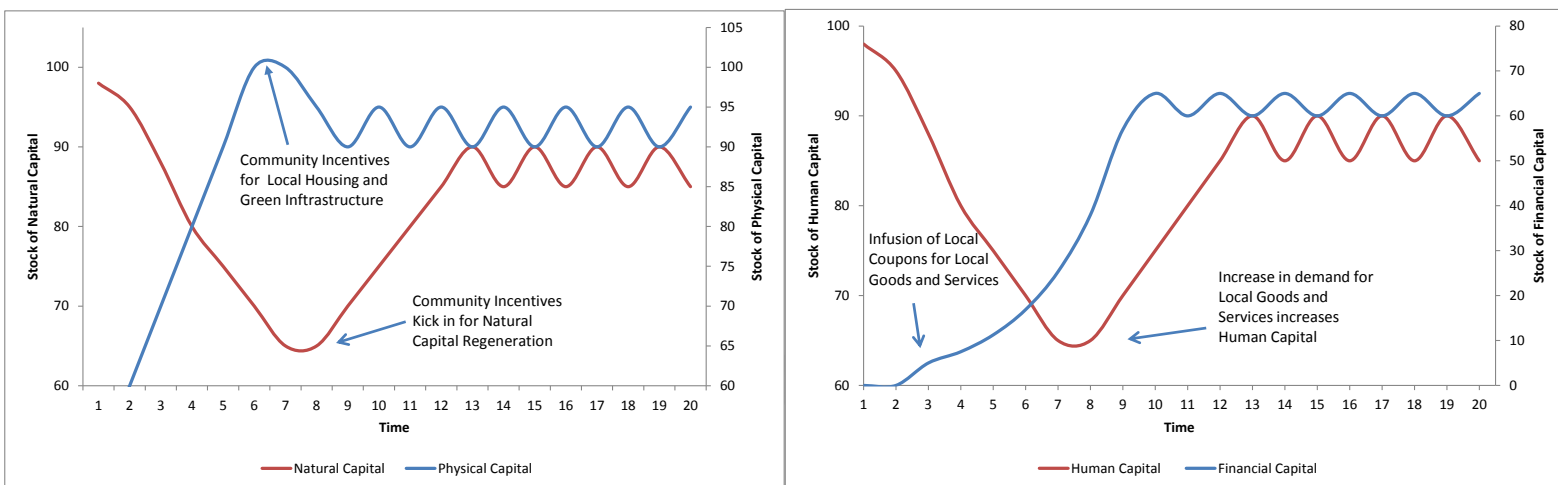
Figure 2 The Five Capitals, Current State



In order to restore their balance, any form of development should facilitate harmonious increase of all these 5 capitals. Instantaneous and real time simultaneous growth of all 5 capitals is not possible. Hence, each capital would grow at the cost of another, but they have to remain in a dynamic equilibrium⁴. This restoration process can happen if immediate incentives are given for sustainable consumption and ecosystem regeneration. These incentives can be in form of local vouchers, coupons, token or favors which can be used to buy local goods and services. In this context- coupons would ensure that consumers are able to purchase only the designated goods and services that are locally produced and climate friendly. This drives consumption of these goods and services and heightens local to local exchange.

Examples of such systems exist around the world and some are presented in the forthcoming section. A sample simulation of how incentives would influence the change of stock of these capitals over time is presented below.

Figure 3 Sample simulation of Capitals



As we understand infinite growth is not possible, infinite growth of these 5 capitals is also not possible. But, since Earth's resources have been heavily depleted, they first need to increase till they reach a basic threshold. What follows then is a *decentralised, democratised development that adapts the economic activity to the diversity of local ecosystems, restoring cultural, biological diversity and keeping the 5 capitals in a dynamic equilibrium. This can be called the process of Adaptive Sustainable Development.*

Changing the Game: Localization

Economics is defined as a "social science that studies how individuals, governments, firms and nations make choices on allocating scarce resources to satisfy their unlimited wants, Economics can generally be broken down into: macroeconomics, which concentrates on the behaviour of the aggregate economy; and microeconomics, which focuses on individual consumers"⁵.

As the above definition suggests, economics is to do with behaviour of aggregate economy as well as people. This implies that the most important factor which dictates the choice of people and industry

⁴A state of balance between changing processes

⁵<http://www.investopedia.com/terms/e/economics.asp>, accessed on 09-02-2014

is economy, especially in context of globalization. Thus, role of economics is fundamental to enable a systemic transition from global unsustainable industrial culture to sustainable local exchange systems. Localisation seems to be the most strategic way of handling the economic, social and ecological issue on hand.

The central principles⁶ of the localisation transition are:

- Diversification and decentralisation of economic activity.
- Strengthen human-scale business — especially for basic needs such as food, water, and energy, but also in housing, local finance and healthcare.
- Rely more on human labour and skill and depend less on fossil energy and modern technology.
- Manage with less transportation, less packaging, and less processing, thereby reducing waste, pollution and fossil fuel use.
- Adapt economic activity to the diversity of ecosystems, restoring cultural and biological diversity.
- Rebuild social interdependence and cohesion, providing a more secure sense of identity and belonging, which in turn is a prerequisite for peaceful coexistence.
- Facilitate reclaiming and regenerating diverse knowledge systems, languages, aesthetics and wisdom traditions through livelihoods.

Movements for Localization

At the grassroots, a powerful localisation movement is emerging worldwide. In some parts this is represented by influential people's movements. As in the global south Via Campesina's⁷ work in Brazil advocate the decentralization of generation and ownership of energy under local community control by using renewable sources of energy.

In other parts of the Western world, the need to recover lost crops or manufacturing systems, encourage genetic diversification of crops and skill versatility locally, reduce transportation time and packaging for low carbon footprint goods especially foods, to support the local economy especially the farming economy etc. for increased employment opportunities has driven a consumer movement for locally produced goods. This is more commonly seen in the area of food.

In the area of transactions there is a drive to ensure that purchases for raw materials and finished goods sold far away from the source of growing or processing are purchased or proceed with full consent and fairness to those at the bottom of the supply chain. The decentralized Fair trade⁸ movement is famous for labelling and selling of goods produced and sold at a premium which is to recover all costs incurred by the producers and not simply the rate determined by the market at the time of purchase or sale. The system also includes accounts for a sum, paid in addition to fair trade prices, called a social premium. These funds help establish scholarships, health care programs, better sanitation and small-business loans in some impoverished area toward the improvement of local conditions, especially in cases where labourers have no ownership in production.

The countless initiatives already underway are:

⁶ Adapted from Helena Norberg-Hodge, Economics Of Happiness, www.theeconomicsofhappiness.org

⁷ <http://viacampesina.org/en/index.php/actions-and-events-mainmenu-26/world-social-forum-mainmenu-34/1405-to-reclaim-our-future-we-must-change-the-present-our-proposal-for-changing-the-system-and-not-the-climate>

⁸ http://www.fairtrade.org.uk/what_is_fairtrade/fairtrade_foundation.aspx

Local banking, Alternative currencies and local bartering, Time Banking, Local stock markets, 'Gift economies', Ecovillages, Community gardens, Non-school education, Eco-building, Biodiversity economics 'Counter-development' etc.

The New Economics Foundation as pioneers of the Local Economic Trade Systems (LETS) has advocated localization for the power of local trade to strengthen the local economy.⁹ Through the development and inflow of alternative currency schemes they have motivated people to think about where they spend their money, support local traders who are under threat from large retail/supply chain, and claim that money spent among local independent businesses circulates within the local economy up to three times longer than money spent in large retail chains. This currency system help to maintain community livelihoods by ensuring a stronger economy, supports diversity and resilience with the community in the recession conditions, encourages and facilitates a self-help spirit to protect social and financial futures of the residents and finally as the new currency supports local businesses in sourcing more goods and services locally, reducing their carbon footprint. The Bristol Pound in Bristol, The Brixton Pound in London, The Demakkie Reward Scheme, East district of Amsterdam and Bolster in the North Netherlands are the demonstration projects in community currency NEF has developed with the above mentioned objectives in different regions.

Aside from these, in 2000 European LIFE-demonstration supported a project by the municipality of Rotterdam, the Rabobank and Qoin (named Barataria at that time) for what was called the Nu-spaarpas (NOW-incentive card) was an experimental incentive program. It involved over 10,000 inhabitants of Rotterdam. They earned NU-points by separating their waste, shopping at one of the 100 participating local shops and by buying green and fair trade products. The NU-points could be redeemed for sustainable goods and services, public transport tickets and culture. The target groups were mainstream consumers, shops and governmental services.¹⁰ This system was run on smart cards under the name of NOW- said to be the "first technologically advanced incentive system for sustainable behaviour and sustainable consumption".

Another effort to focus on the power of community exchanges to strengthen local wealth generation is time banking.¹¹ "Time banking is primarily used to provide incentives and rewards for work such as mentoring children, caring for the elderly, being neighbourly—work usually done on a volunteer basis—which a pure market system devalues. Essentially, the "time" one spends providing these types of community services earns "time" that one can spend to receive services.¹² It is a pattern of reciprocal service exchange that uses units of time as currency and is structured like a complementary monetary system. Time banking is a tool to strengthen intra-community relationships and exchange in the process of building social capital within the group.

Rural economies, which are more informal in nature, rely on barter trades and exchange services which are non-monetary. They don't get reflected in conventional economic indicators but add value to the local economy. This form of barter exchange also exists in some parts of rural India, it may not be a coupon based exchange system but it still qualifies as a Local Exchange System which goes un-measured. Some such examples from India exist and have been documented and reflected below.

⁹<http://brixtonpound.org/why-use-b-2/b-vision/>

¹⁰<http://qoin.org/nu-spaarpas-now-incentive-card-2/>

¹¹<http://www.timebanking.org/about/what-is-a-timebank/>

¹²Dr. Seyfang, Gill. "Time banks: rewarding community self-help in the inner city?" *Community Development Journal* 39.1 (January 2004): 63.

Indian Experiences with Localization

India itself has a rich history of innovation and activism. An older more famous localization movement is the famed Gandhian framework which advocates a vision for a nation state which includes a confederation of self-governing, self-reliant, self-employed people living in village communities, deriving their right livelihood from the products of their homesteads. This vision foresaw that maximum economic and political power - including the power to decide what could be imported into or exported from the village - would remain in the hands of the village assemblies of low technology and peaceable exchanges between harmonious communities.¹³

Based on these principles the Mendha Lekha village in Gadchiroli, Maharashtra is a socially unprivileged but strongly united and motivated community which is following the path of non-violence (ahimsa), learning to be informed (adhyayan), and self-rule (swaraj). The village has had some major achievements¹⁴:

1. Establishing fair and just management systems for the forests around the village which are legally under the jurisdiction of the state government.
2. Resolving conflicts with neighbours not keen to follow the established rules, through continuous dialogues
3. Helping to reach a political stage within their taluka (administrative unit constituting a cluster of a few villages), where governance by elected representatives has been replaced by selection of a deserving candidate based on their achievements.
4. Ensuring year round livelihood options for themselves

The other more current attempts to drive localization movement are focusing on strengthening local economies and community livelihoods through civil society groups. They address food security, creating local livelihoods or advocating organic cropping etc. These all contribute to increasing economic resilience and advocate and incentivise low carbon or sustainable purchase or consumption. They are all operating at multiple levels and aid the resistance against the endemic control of the market on the lives of communities to some degree and drive adaption to lifestyles that minimize vulnerability to the risks of climate change.

These isolated efforts can collectively be seen as indications of emerging bottom up adaptation response towards market uncertainty and varying risks of climate change.

Operationalising localisation in the rural informal economy would be complex. Hence, it is prudent to begin small through a two pronged strategy and then scale up based on indications of success emerging from diverse set of small experiments.

Initiation Ideas: The Two Pronged Strategy

In order to strengthen the local economy and facilitate adaptation there can be a two pronged strategy.

¹³ Satish Kumar, The Case Against the Global Economy - and for a turn toward the local; edited by Jerry Mander and Edward Goldsmith.

¹⁴ Neema Pathak and Erica Taraporewala, Towards Self-Rule And Forest Conservation In Mendha-Lekha Village, Gadchiroli Case Study, July 2008

- Incentivize community, household, individual and enterprises to buy local goods and services from within the economy.
- Incentivize community, household, individual and enterprise's behaviour to facilitate sustainable consumption, production and ecosystem regeneration.

These incentives or favours could be in form of coupons, vouchers, tokens etc. The following would be some of their key features:

- All local coupons/vouchers/tokens will be issued or infused only through income or rewards or bought against national currencies.
- All local coupons/vouchers/tokens will be convertible to national currencies (fixed buy and sell exchange rate).
- All local coupons/vouchers/tokens will be non-interest bearing.
- All local coupons/vouchers/tokens can be used only for trade and service exchange.
- All local coupons/vouchers/tokens can be used only for locally produced goods and services.
- All local coupons/vouchers/tokens will be governed by the protocols established through participatory processes.

These incentives will circulate in local economy (along with national currency) to develop and support local economic and social activity in such a way that they develop local production, support local businesses, create local jobs and lead sustainable consumption via localization of production activities.¹⁵

Some potential benefits of local exchange systems:

- It would revive the traditional and local livelihoods
- It would incentivize ecosystem restoration since it forms base for local livelihoods
- It would strengthen informal/non monetary exchanges in the community
- It would assign a measurable value to the non-monetary/informal exchanges thereby increase awareness
- It would value unpaid, non marketed work (especially done by women)
- It would improve the local money flow and transfer of purchasing power
- It would increase market share of sustainable products
- It would increase the public support for sustainability
- It would increase the visibility of the range of sustainable products in market

Coupon Exchange Rate Mechanism

All coupons would be issued against national currency. Thus, they will be backed by national currency and would be fully convertible anytime the bearer wants it to be encashed. If the coupons are being bought against national currency the exchange rate would be fixed for buying and selling. However, the exchange rate mechanism is a subject which requires some more level of research and reviews of good practices documented from previous such experiments.

One approach is called the Incentive Rate. In order to promote the exchange an incentive rate is applied. Here the coupons are issued in excess as against the amount of money given. Eg. One gets

¹⁵ Adapted from A SYSTEM DYNAMICS MODEL OF A LOCAL ECONOMY WITH BI-CURRENCY SYSTEM by AYŞEN EREN, *The Institute of Environmental Sciences*

1000 coupons against a deposit of Rs. 950 whereas when they redeem 1000 coupons they are given Rs. 950 back. This in builds a 5% discount on all local goods and services purchases for the buyer.

Local coupon regulators would hold key to regulate the issuance and redemption of the coupons. These local regulators could be managed by CBOs, NGOs, CSOs, VDCs or newly formed governance bodies. Till the time when the system is in its embryonic stage it would require external help and expertise to govern and manage the coupon flows.

Sample LES Examples

Local businesses can get coupons from two sources; as business income or by purchasing it directly from Local Coupon Regulator. Then they can use it in their trade transactions in local economy. The following example takes the case of livelihoods earning these coupons through business income

Community Based Tourism

In order to infuse coupons into the economy one entry point could be community based tourism. Here an external agency (NGO, CBO, CSO etc.) does marketing and gets tourist footfalls. Each tourist pays the fee per day or as per the package. Out of this fee a certain % is returned to them in form of local coupons which can be spent in the village for buying local goods and/or availing local services. A menu of all available local goods and services is provided to the tourists alongwith their respective tariffs in local coupons.

Suppose the fee is Rs. 1000 per day and two tourists visit the place for 3 days. The total fee is Rs. 6000/- against which coupons worth Rs. 3000/- are given to them which can be spent on the following:

Figure 4 Sample list of Local Goods and Services

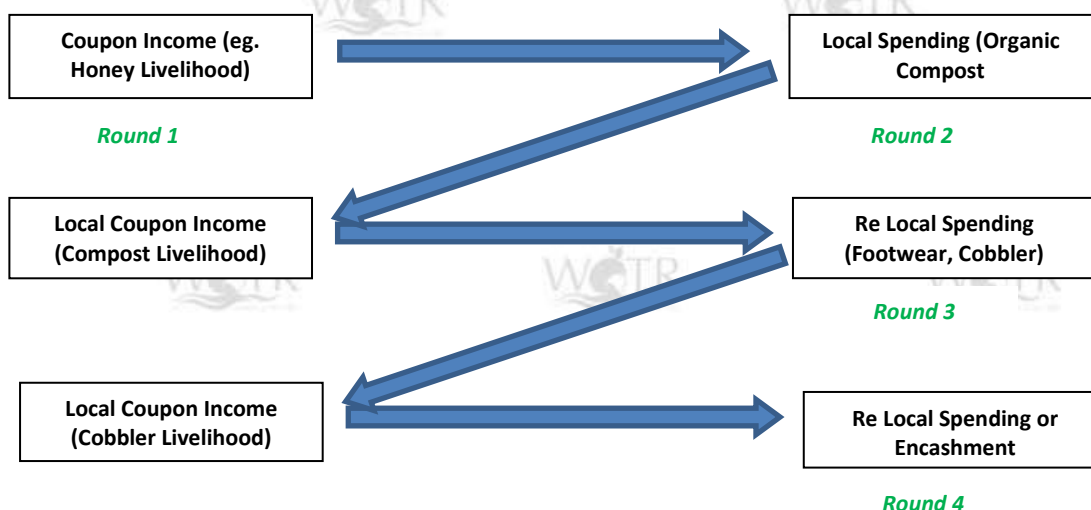
Sr. No.	Particulars	Nature	Price in Coupons	Unit
1	Forest Honey	Product	300	kg
2	Indigenous Rice	Product	50	kg
3	Milk	Product	30	litre
4	Ghee	Product	300	kg
5	Pickle	Product	150	kg
6	Saplings from Nursery	Product	30	Sapling
7	Self Portrait	Service	100	One Portrait
8	Footwear made by local cobbler	Product	300	One Pair
9	Pottery made by local potter	Product	200	One Pot
10	Hats made from Grass	Product	50	One hat
11	Toys made from wood	Product	200	Set of Toys
12	Bird Watching	Service	500	Half day
13	Star Gazing	Service	300	2 hours night time
14	Forest Trails	Service	300	1 day
15	Bullock Ride	Service	300	2 hours
16	Local Folk Performance	Service	500	3 hours
17	Organic Compost	Product	100	kg

18	Indigenous Chicken (lunch, dinner)	Service	100	Per Person
19	Solar Charging Station and Lights	Service	20	Hours
20	Local Healer	Service	100	Session

At the end of their stay if the tourists have spent coupons worth Rs. 2000/- then there has been an infusion of local coupons in the economy. Now since these coupons cannot be spent outside the economy and on non local goods and services the receivers of the coupons have two options. Either they use them to purchase goods and services as mentioned above or they encash it from the CBO, NGO, CSO etc. who had issued them. Worst case scenario if the bearers encash these coupons immediately then also it results into an infusion of income through the use of coupons which motivated the tourists to do local spending at no extra cost.

While if they are able to re-spend the coupons to buy local goods and services then it creates a local to local exchange which generates more purchasing power and increases the local money flow.

Figure 5 Sample Flow of Coupons



Rewarding Ecosystem Regeneration

The above example works well to strengthen the local money flow and develop local livelihoods. Thus, in the two pronged strategy its role is to *“Incentivize community, household, individual and enterprises to buy local goods and services from within the economy.”*

However, in order to *“Incentivize community, household, individual and enterprise’s behaviour to facilitate sustainable consumption, production and ecosystem regeneration”* there is a need to pair coupon infusion mechanism and also provide coupons for ecosystem regeneration activities. Here is another example to facilitate this.

Rural areas have forest land or common property resources which are degraded or becoming barren. A collective effort towards regenerating this can be incentivized through local coupons. Suppose a 100 acre patch of adjoining forest land or CPR is taken for regeneration. Each local villager who comes to do plantation or soil water conservation work gets paid in coupons instead of money. This infuses coupons into the economy through rewarding ecosystem regeneration work. Similarly, records of biodiversity in the people’s biodiversity register can be rewarded with coupons; use of

solar parabolic for community or school cooking can also attract coupons. Through a set of such reward systems an overall movement towards ecosystem regeneration and carbon sequestration can be initiated. Once coupons are infused into the economy, they can be used by the bearers to purchase local goods and services (similar to the tourism example) and/or for encashment into national currency against which they were issued.

Challenges and Opportunities

Sr. No	Challenges/Limitations	Opportunities/Solutions
1	Relies heavily on local governance and community consensus	Participatory development of the protocols and operational mechanism
2	Requires some use of communication technology eg. Community radio, smart card system, computer data logs etc. which may not always be possible in rural areas	Explore and implement all feasible forms of local technology and build capacity of community to operate it. eg. Towers for intranet, intranet kiosks, community radio, tablets for data logs etc.
3	A lot depends on how the exchange system is designed and (that) leaves very little scope for mid-course correction	Use Systems Thinking and Dynamic Modelling to test the structures/policies of local exchanges, identify leverage points and avoid archetypal errors.
4	The price discovery for goods and services can be fuzzy and become manipulative	Start with Pico experiments. Eg. Select one hamlet/community and begin with 25-30 households and 5 livelihoods. Deploy safe fail probes.
5	The system can become threatening for state and national governments if it grows in scale of trade and competes with national currencies	If experiments are found successful, involve government line departments and have multi stakeholder exercises to create a shared vision and consensus. As much as possible eliminate fear of competing currencies.
6	Potential local hoarding of coupons to create artificial scarcity	Monitoring of the coupon flows and account checks through use of logs, records of transactions done.
7	Potential of Middlemen (within the economy/villages) emerging in local trades and formal exchanges	Promote over the counter exchanges between consumer and producer. Also, as much as possible, the producer should be the supplier/seller of goods and services
8	The Local price discovery of goods and services can remain ambiguous	Explore and test if over the counter price negotiation between individuals or community leads to a fair price discovery mechanism consistent with local priorities

Annexure

Figure 6 Review of Community Exchange Systems, by Dr. Gill Seyfang – Community Currencies

Sustainable Consumption Indicator		LETS		Time Banks		NU
Localisation	👍	Economic tool, locally-bounded money to boost local multiplier, employment and self-reliance.	👎	Community self-help is primarily locally-based anyway, so no net localisation.	👍	Rewards buying from local businesses.
Reducing Ecological Footprint	👉	Some evidence of reducing resource use: sharing facilities, recycling, localisation cuts transport costs (eg food miles).	👉	Time banking concentrates on services, not material consumption. Some developments in rewarding recycling etc.	👍	Incentivises recycling, public transport, local, organic and fair trade products and energy efficiency.
Community-building	👍	Large social and community benefits, boosting social cohesion and inclusion.	👍	Very large social and community benefits: boosting social inclusion and social capital.	👎	Individualistic tool. But inclusive (not dependent upon spending money).
Collective Action	👎	Individualistic rather than collective action tool. Promoted by local government to mitigate poverty and unemployment.	👍	Promoted by central government to build capacity in voluntary sector and deliver public services. Could be basis for 'co-production' model of public service provision, and reward active citizenship.	👉	Individualistic tool, but promoted by local government. Influences public sector action in transport and waste.
New Social Institutions	👍	Some egalitarian measures eg minimising wage disparities. Capacity to value non-marketed work. Abundant medium of exchange. Localised monetary design.	👍	Central principle of valuing all types of work equally, rewarding unpaid community efforts. Reciprocity and mutuality.	👍	Points system adjusts relative prices to incentivise sustainable consumption. Anticipates internalisation of social and environmental costs and benefits.

Source: As published by Dr. Gill Seyfang in *Community Currencies – A new tool for sustainable consumption*, pg 8

Bibliography

1. Dr. Gill Seyfang, Community Currencies: A New Tool for Sustainable Consumption? CSERGE Working Paper EDM 06-09
2. AYŞEN EREN, A SYSTEM DYNAMICS MODEL OF A LOCAL ECONOMY WITH BI-CURRENCY SYSTEM
3. Paul van Sambeek and Edgar Kampers - NU-spaarpas, the sustainable incentive card scheme - January 2004
4. Helene Norberg-Hodge, The Economics of Happiness Film, Economics Of Happiness Conference 2014 - Concept Note, www.economicsofhappiness.org
5. Sarah Hepworth, Local Exchange Trading Systems and Impact Assessment – Application Guidance Notes
6. Bernie Ward and Julie Lewis, Plugging the Leaks Making the most of every pound that enters your local economy, New Economics Foundation
7. Via Campesina, To Reclaim Our Future, We Must Change the Present: Our Proposal for Changing the System and not the Climate, 2013, Found at <http://viacampesina.org/en/index.php/>
8. Ian Hudson, Mark Hudson and Mara Fridell, Fair Trade, Sustainability and Social Change, International Political Economy Series, Published by Palgrave Macmillian 2013
9. Fair Trade website:
http://www.fairtrade.org.uk/what_is_fairtrade/fairtrade_foundation.aspx
10. Brixton Pound, <http://brixtonpound.org/why-use-b-2/b-benefits/>
11. Bristol Pound, <http://bristolpound.org/faqs>
12. Dr. Gill Seyfang, Time banks: rewarding community self-help in the inner city? Community Development Journal. 39(1) pp. 62–71, 2004
13. Dr. Gill Seyfang, J, Working Outside the Box: Community Currencies, Time Banks and Social Inclusion. Journal of Social Policy. 33(1) pp. 49–71, 2004
14. Satish Kumar, The Case Against the Global Economy - and for a turn toward the local; edited by Jerry Mander and Edward Goldsmith.
15. Beatrice Lorge Rogers and Jennifer Coates, Food-Based Safety Nets and Related Programs, Social Protection Discussion Paper Series- 0225, Social Protection Unit, Human Development Network, The World Bank, September 2002
16. Neema Pathak and Erica Taraporewala, Towards Self-Rule And Forest Conservation In Mendha-Lekha Village, Gadchiroli Case Study, July 2008
17. Aparna Pallavi, Mendha Lekha residents gift all their farms to gram sabha, Down to Earth, Sept 2013
18. Sacred Economics, by Charles Eisenstein
19. Creating Wealth – Growing Local Economies with Local Currencies, by Gwendolyn Hallsmith and Bernard Lietar
20. Bazaars, Conversation and Freedom – for a market culture beyond greed and fear, by Rajni Bakshi