**­­­­­­GRAND OCEANIC CIRCLES:**

**A GOBAL NETWORK OF HORIZONTALLY LINKED, SELF RELIANT RURBAN REPUBLICS**

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***ABSTRACT***

***A feeling that we are moving towards an ecological and cultural crisis based on historical experience and futuristic studies is gathering strength. This is the result of the awy humans have organised themselves-demanding ever increasing production of goods and services and competition. Unless we reorganize ourselves the future is bleak.***

***Socialism as experimented with in the past century cannot be the basis of reorganization. It suffers from many of the features of capitalism, especially the mistaken notion of abundance. A synthesis of Marx’s concept of ‘ending the contradiction between town and country’ with the Gandhian vision of ‘network of self reliant village republics’ in the form of ‘grand oceanic circles’ is perhaps the solution.***

***Such a network has to be built from the micro to macro. The new society has to germinate within the wombs of the old society, grow and finally transform the old society. This process of seeding should be done consciously. This essay delineates a probable protocol for the seeding process - ‘enterprise model for seeding social transformation’.***

***The Predicament***

1. We live in an era of globalized and aggressive neoliberal capitalism. Every day trillions of dollars wheeze around this world destabilising the economy of one part or another part of it.These instabilities can get amplified and affect the entire world. Nobody, even communities living in far off jungles, is free from these. Over decades, one can see a continuous increase in the frequency and amplitude of these instability waves. A feeling that we are moving toa disastrous crisis is gathering strength.
2. This results from a number of observations and experiences: resources are getting depleted; pollution load has gone beyond tolerance limits; greenhouse gas concentration in the atmosphere has crossed the tipping point of 400 ppm CO2 equivalent; major indicators of global warming and climate change such as increase in frequency and intensity of events like cyclones and storms are manifest; increasing loss of soil health world across, shrinking of glaciers; melting of polar ice cap; increasing scarcity of fresh water; increasing conflicts for control over resources; growth of individualism and loss of collectivism etc. All these can lead to some form of *species madness*if we do not take preventive action. In a world over-stocked with weapons of mass destruction such madness can lead to barbarism or even species extinction.
3. More than a hundred years age Rosa Luxemburg had written that “the *natural* end of capitalism is “barbarism” and not Socialism. Eric Hobsbawm had concluded his book *The Age of Extremes* with a warning that if we do not change our ways the result will be “total darkness”. The Club of Rome Report of 1972, *Limits to Growth,* carried out a simulation study, based on system theory, of the future of humans if it continues to move along its historical trajectory. The results were frightening. Some time by the second half of twenty first century the per-capita food availability will begin to come down drastically, death rate will increase, population will come down sharply - a collapse of human civilization. Even if we find new resources and develop better technologies the picture does not change. The only way to avoid this collapse is to change over to a sustainable development trajectory, from the present one of exponential growth. Almost all economists and politicians of both capitalist camp and socialist camp violently opposed this conclusion. They argued that humans are capable of solving all problems of development.
4. Four decades have gone by. In the meantime the authors of *Limits to Growth* repeated their studies twice again, in 1992 and 2002. They got the same picture in spite of all the decisions taken at the Earth Summit and later at Kyoto. Business has been going on the usual ways. A study doneat Melbourne University in 2014 showed that ­­the world has been moving very closely along the Business As Usual path depicted in the Report. More elaborate studies conducted later confirmed that, after all the authors of *Limits to Growth* were right. Even those economists who opposed it in 1972 agreed to this.
5. Today the entire human society lives under capitalism or under its influence. Growth Capital is its life. For this it has to continuously increase production and exchange of commodities. A large share of the income that reaches the rich gets converted to Capital- there are limits to theirconsumption. Those goods that reach the poor are immediately consumed. They do not get converted into Capital. Thus Capital growth demands that a larger share f the social product should reach the rich, thus, increase inequity*. Capitalism leads to increasing inequality within countries and between countries.*
6. Production of commodities requires assemblage of raw materials and labour power at one place. Locations of their availability are distributed. Raw materials and humans are to be transported to the place of production. The products are to be transported back to the distributed locations of consumption. With increasing scales of production, bothincrease. Both ‘Commodity-Miles’ and ‘Socially Necessary Passenger- Miles’ have been increasing. In spite of fantastic development in productive forces neither the socially necessary labour time nor traveltime has come down. Humans are increasingly becoming slaves of the system; they are getting increasingly alienated. *This forced alienation is inseparable from Capitalism.*
7. Production needs energy. Fossil fuels form the major source. They produce carbon dioxide and other green house gases. Nuclear power produces radioactive waste. A thousand megawatt nuclear station produces every day radioactive material equal to what is released by the Hiroshima bomb. This is what we are passing on to the next generation. Production of goods and services leads to other hazardous wastes too. *Capitalism destroys the future of humanity.*
8. There are limits to human needs. For capitalism to survive it has to constantly ‘manufacture needs’, in other words greed. This is the cardinal role of the media. Low life products, fast obsoleteness, throw away culture, infinite varieties of vanity goods, permanent state of conflict leading to the necessity of increasing production of weapons ad escalating defence expenditure, the growth of the ‘under world’ etc are all outcome of this necessity of Capitalism*. Capitalism has to manufacture pseudo-needs*
9. Finally in the present times Capital itself has become a commodity. Trade in Capital-shares- today far outstrips trade in physical commodities. Capital has lost its connection with production. It has becomea commodity for speculation. Capitalists have no more any control over speculative Capital. The crash in the real estate industry in USA during 2006-2008 is a typical example. It gave a rude shock to the global economy from which it has not yet recovered. Current stage of *Capitalism is respectfully called Finance Capitalism and more scientifically called Casino Capitalism*

*On contradictions.*

1. Mainstream Marxists speak of four Contradictions deciding the forward march of the society:
2. An epochal contradiction between Capitalism and Socialism. This is a far deeper concept than that between ‘Socialist’ countries and ‘capitalist’ countries.
3. Contradiction between Capital and Labour, between social production and private appropriation of products, within each country.
4. Contradiction between Capital and Capital resulting from competition and the need to survive and leading to mutual conflicts.
5. Contradiction between imperial powers and colony countries or today between the industrially advanced countries and the developing countries
6. These four contradictions are still operative. Resolution of the epochal contradiction between Capitalism and Socialism or rather Communism is a long drawn out process. It cannot take place in one single revolution through the capture of state power. The concept of an advanced vanguard of the working class leading a revolution, capturing State power and building socialism from top to bottom , has been proved false from the experience of the socialist experiments of the 20th century. In fact this was against Marx’s understanding of the genesis of a new society. According to him, the new society has to germinate within the wombs of the old society, grow within it and burst open the old society. Seeds of socialist societies are to be sown within capitalist societies, nurtured and multiplied. When the number and strength of such ‘socialistic’ societies become large enough a transition takes place. The remnants of capitalism will crumble down, but the crumbs will be *Capitalism is global. It cannot be replaced by Socialism in Nations*
7. The contradiction between capital and labour exists very much evennow. However the militancy of ‘organized’ labour has turned itself into share-grabbing in most of the countries. The degeneration of American trade union movement, the American Labour Federation had been poignantly depicted in Jack London’s famous novel *Iron Heel*- they share the loot of the capitalist who loots public natural resources. This leads us to another contradiction, pointed out by Marx and Engels earlier, but totally neglected by later mainstream Marxists the contradiction between Capital and Nature. Engels wrote in the famous essay on the *Role of Labour in the Transition from Ape to Man:* that ‘for every victory of man over nature it has taken its revenge’. Marx wrote that ‘we , all of us put together, are not owners of this Earth, but only its beneficiaries and are bound to pass it on to coming generations in better conditions’. Capital, he observed, degrades both the humans and the natureinits mad rush for profit. However even Marx could not have foreseen the pace at which this degradation has taking place.
8. Today the focal and decisive contradiction is that between Capital and Nature. As pointed out in the Club of Rome Report, we may not get time to resolve any of the above four contradictions before this contradictionbetween Capital and Nature leads us to a crisis, into barbarism or even species extinction. The situation was grave enough to demand an all out search for a way out. The 1992 Earth Summit at Rio-de-Janeiro was a starting point of such an enquiry. However the pious decisions taken at Rio or later at Kyoto, Copenhagen or Paris were not adhered to by any country. USA was never a partner to any of these decisions. George Bush, senior, boycotted Rio meeting and declared that the ‘American Way of Life Is Non-negotiable’.‘ There were *Skeptical Ecologists* like Bjorn Loomborg who argued that the environmentalists are exaggerating and even lying, that there is no crisis, that if we go along the existing trajectory of development children born today will have a healthier and happier life. The present President of USA, Mr. Trump holds the same opinion. It is ironical to note that even those who believe that there is a danger awaiting us are unable to change their course. The fact, however, is that they cannot by themselves change from the course of capitalism. Unless the seeds of a news society germinates and grows within, it will not change.
9. Human society is in need of a new ‘Grand Narrative’. Shouting from roof-to[s that Socialism is THE Alternative will not take us forward. The word connotes, today, only what happened in the 20th century in the name of socialism. We have to redefine Socialism for the 21st century. Several persons, like Marta Harneckar, Michael Lebbovitz, Michael Albert and many more, are attempting. The former President of Venezuela, Hugo Chavez wanted to build a 21st century, Bolivarian Socialist State in Venezuela. None of them had thought about the fundamental nature of capital-nature contradiction. Chavez or his advisers could not think about de- urbanizing Caracas, of dispersing industries into villages, or resolving the difference between towns and villages. They have not been able to free themselves from the glamour of affluence. Here in comes the relevance of Gandhi.

*Gandhi*

1. Capitalism has to be replaced by a new, sustainable society in order to resolve the Human (Capital) - Nature contradiction. This requires the acceptance of Need and Greed as two separate categories which the conventional Marxists fin difficult to digest.Defining greed demands defining several other categories like welfare value, vanity value, destructive value, physical quality of life, spiritual quality of life, happiness etc. It was Gandhi who declared that this earth has enough to satisfy everyone’s need but not their greed. Gandhi valued personal freedom more than anything. His concept of freedom, Swaraj or self- rule, is very much similar to Marx’s concept of ‘emancipation’. He argued that the machines or the system should not rule over the individual but the other way round. Gandhi conceived human society as an organic network of horizontally linked self reliant village republics. The following long quotation from *Harijan, 28-7-1946* make his ideas clear :
2. *“ Independence should begin at the bottom. Thus every village will be a republic or panchayath having full powers. It follows, therefore, that every village has to be self- sufficient and capable of managing its affairs even to the extent of defending itself against the whole world. It will be trained and prepared to perish in the attempt to defend itself against any onslaught from without.*
3. *“Thus ultimately it is the individual who is the unit. This does not exclude dependence on any willing help from neighbours or from the world. It will be free and voluntary play of mutual forces. Such a society is necessarily highly cultured in which every man and woman knows what he or she wants and, what more, knows that no one should want anything that others cannot have with equal amount of labour.*
4. *“In this structure composed of innumerable villages, there will be ever widening, never ascending circles. Life will not be a pyramid with the apex sustained by the bottom. But it will be an oceanic circle whose centre will be the individual, always ready to perish for the village, the latter ready to perish for the circle of villages until at last the whole becomes one life composed of individuals, never aggressive in their arrogance, but ever humble, sharing the beauty of oceanic circles of which they are integral units.*
5. *“Therefore the outermost circle will not wield powers to crush the inner circles, but will give strength to all within and derives its own strength from it. I may be taunted with the retort that all this is utopian and therefore not worth a single thought. If Euclid’s points, though incapable of being drawn by human agency, have imperishable value, my picture has its own for mankind to live. Let India live for this picture though never realizable in its completeness. We must have a proper picture of what we want before we can have something approaching it. If there ever is to be a republic of every village in India, then I claim verily for my picture in which the last is equal to the first or, in other words, no one is to be the first, and none the last” (Harijan, 28-7-1946)*
6. The Communist society of fully emancipated individuals which Marx dreamed of too is a utopia. The two have very much in common.Majority of Gandhi’s colleagues were, however enamoured by modernism of the west. Modernization meant, for them, industries and metropolitan cities. Villages were considered ugly and weak, cities beautiful and strong. Village Panchayaths were made apologies to Republics.
7. Human species evolved as collectives and not as individuals. Today individuals are considered supreme .A sort of collective or species madness of individualism has set in. Unless treated it can lead the species to extinction. The Gandhian model was never tried out seriously. Several aspects of the model were and are being tried out, here and there but never able to take roots. The model has to be re-interpreted in the context of the present times as is demanded of socialism.
8. Any new society, as noted earlier, has to germinate within the old society, grow against odds and prove its superiority. The seed has to be ‘sown’. If it grows healthily in large enough number of locations, it will spread further and ultimately replace the old society. A new ‘grand narrative’, a new steering wheel for the new society is required. The steering wheel of Capitalism is to be substituted with one of Humanism. Capitalism steers the world towards ever increasing production of goods and services- GNP of nations- leading to a possible eco-economic catastrophe whereas, Humanism steers it to ever increasing Global Human Happiness (GHH). The new society will be characterized by,
9. Wisdom to differentiate need from greed
10. Increasing equity, diversity, tolerance, sustainability, social leisure and quality of life or happiness
11. This new world will be a horizontally networked federation of Self-reliant Rurban Republics. ‘Rurban’, because it will be neither a rural village solely doing only agriculture no an urban town having no agriculture but only industries. Such a rurban structure had been suggested by Karl Marx in the *Communist Manifesto: “Combination of agriculture with manufacturing industries: gradual abolition of the distinction between the town and country, by a more equable distribution of population over the country*”. This is required to mend the rupture that has taken place in soil metabolism and to ensure continuous and cyclic flow of soil nutrients.
12. Gandhi declared, also, that for humans to be happy, they shall not become slaves of machines, but the other way round. Or in other words the productive forces shall not determine human relations, but human relations should guide the growth of productive forces. In the present society development of productive forces is directed purposefully to accelerate the growth of Capital, to increase concentration of powers and to destroy opponents. Instead, new productive forces are to be consciously developed to help co-operative and non-hierarchical production relations and decentralized production.

*Global Human Happiness*

1. Gross or Global Human Happiness is a concept different from GNP and Human Development Index. Nobody wants to be unhappy. Everybody wants to be happy. However, happiness is considered as a subjective concept and it was difficult to define it socially. Here we suggest one simple way to quantitatively define ‘social happiness’. Three essential pre-requisites for individual and social happiness are:
2. Long life and low morbidity,
3. Freedom to be self
4. Assuring this to their children and all succeeding generations - sustainability.
5. All these are measurable in numbers and any society can find out whether it is progressing or not, in time and in comparison with other societies, as a result of its planned activities. Ecological footprint can be taken as a good yardstick for sustainability. None of these can be enlarged indefinitely without reducing others. GHH can approach asymptotically to a limiting value; it cannot grow exponentially.
6. A self-reliant society has to produce all goods and services required to ensure health and to increase life expectation and reduce morbidity. It should refrain from producing such goods and services which can lead to the opposite situation. Secondly it should be able to produce these goods and services with least amount of labour and in a sustainable way.
7. Goods and services have three types of values: welfare value, vanity value and destruction value. There are limits to the demand for welfare values. No such limit exists to the other two values. Since capitalism cannot survive without a continuous increase in production and exchange of goods and services it has to produce larger and larger amount of vanity and destructive goods and services. This, naturally increases social labour time and reduces social leisure or freedom of all to do what they want to do- to be themselves. The new society will not waste its time and natural resources in the production of goods which don’t have any welfare value. Majority of goods and services advertised in media belong to this category.
8. Today humans are very much dependent on goods produced at places hundreds and thousands kilometres away from them and they have absolutely no control over them. These goods are to be hauled over very long distances. Global ton-kilometres of goods-transport had been increasing. The producers and the consumers are total strangers to each other. In an increasingly self reliant society more and more goods will be produced and consumed locally. Productive forces will be consciously developed to accelerate this process. For this, a large program to pool technologies available world over, to assimilate them and to develop appropriate local skills to utilise them has to be initiated. With this, local employment- within walking or cycling distance- will increase and necessity of long distance travel for livelihood purposes will come down. Necessity of private motor-vehicles toowill come down. Comfortable public vehicles can be made available cheaply. On the whole the society will spend lesser time and money on travel necessitated by livelihood concerns. Social leisure will increase, thus enhancing social happiness.
9. In these societies education and health care will no longer be commodities to be purchased by individuals at a price, high or low.. Primary Health Centres will be well equipped hospitals capable of handling most of the cases. It will be their responsibility to transfer the patients, if necessary, to more equipped and specialized hospitals.All health care will be free for everybody. Enough social resources will be set apart for this.
10. In this new society, knowledge is no longer a commodity. Commodity transaction is a ‘one *minus* one’ activity. The buyer gains the commodity, the seller loses it. This is not the case with knowledge. Those who give do not loose, but only gain, because every action of giving knowledge involves an element of learning too. Those who receive too gain. Thus it becomes a ‘one *plus* one’ transaction. Education in such a community cannot be a commodity to be purchased in the market.
11. The currently existing unjustifiably large inequalities in the value of labor-1:100 or more-will be reduced to 1:3 or even lesser, through consensus and, if necessary, through friendly persuasion. Social inequalities based on caste or creed, language or nationality too will come down progressively and finally vanish.

*Structural Details*

1. The physical size and population of a Rurban Republic will vary from place to place and region to region. A typical Rurban Republic in the state of Kerala, India, one of the most thickly populated areas in the world, can have an area of 25 to 50 sq.km and a population of 20,000 to 30,000 divided into a number of wards. The existing administrative boundaries can be re-fixed on a water shed basis. Each RR may have several micro-watersheds. Each such watershed can be divided into neighbourhoods of 30 t0 40 proximate house and are able to assemble within a short time. This is the basic unit of direct democracy in which every citizen participates. Each citizen will have to be a member of one or two or more development committees such as education, energy, cleanliness, health, roads, social security, culture, water management etc. In democracy every citizen has to participate in running the society.
2. Majority of development activities will be planned and executed by the Watershed Development Council - WDC. Each neighbourhood will, as far as possible, unanimously, or if not possible, through *open* election, select/elect two spokespersons- one male and one female. All the spokes persons in the watershed together will form the General Council of the WDC. Any neighbourhood can, at any time, recall and replace any of its spokesperson. The GC of the WDC will select/elect from within themselves 10 t0 12 Executive Members besides a President, a Vice-President and a Secretary to form the Executive Committee of the WDC to lead the various activities planned by the GC. There will be a number of subcommittees and each member will become a member of one another sub-committee. These sub- committees can co-opt outside experts if necessary. GC of the WDC will select/elect from among the citizens of the watershed, outside themselves one pair of spokespersons for each cluster of neighbourhoods having a population of about 2,000 will elect a pair of spokes-persons to form the Executive body of the Rurban Republic or Local Self Government. They will elect/select also, a President, Vice-president and a Secretary, as Executive Heads of the LSG.
3. Such an LSG is a Rurban Republic. This forms the first formal circle of the Grand Oceanic Circle Model of Gandhi. Within it are hundreds of neighbourhoods and thousands of families and individuals. The RR will be much more self sufficient than what they are today. It will be almost self sufficient in food, in energy and to a lesser degree in health care, in education etc. It will be economically self reliant but not fully materially self-sufficient. For many things it will have to depend on outer circles. The first outer circle will consist of a cluster of RRs, including present small towns. This may be equivalent to the present Community Development Blocks in India with boundaries re-adjusted to conform to the next higher order watershed. Economically and materially this circle helps the inner circles in areas which require larger scale and higher expertise such as in education, in health care, in energy, in selected industries etc. These enterprises will be managed by companies owned by the RRs in the cluster. This principle of smaller units controlling larger ones, consumers controlling production is to be extended to all the outer circles such as districts, states, country and all countries. Nations, without nationalism, will be re-defined people, on the basis of language, culture, agro-climatic factors and ecology.
4. This is the vision of *socialism of the 21stcentury* - a grand network of self-reliant sovereign Rurban Republics, with nations sans ‘nationalism’ restructured on the basis of language, culture and natural agro-climatic features. It is evident that we cannot begin to act from the outer circle and progress inwards and construct such a new world. That demands a global revolution first while the inner circles are not yet ready for such a change. That will fail as we have seen in the experiments in socialism during the 20th century. We have to begin from the innermost circle, the Rurban Republic.

*How to Get It Started?*

1. The starting points are economic experiments in primary sector at cluster levels, where it is easier to link consumers and producers. Such a start can be made even under existing conditions. This can be called: ‘enterprise model of seeding a revolutionary change’. There are a large number of industrial products necessary for a comfortable life, to reduce heavy manual work and to increase leisure. Most of these demand larger scales of production than what is possible at the RR – innermost circle - level. An extreme example is the case of ‘chips’ used in control, communication and computer industries. They are today made at global, the outermost, circle level and perhaps will continue to be so. However, even these global production units are to be controlled by their major clients. There are many which can be manufactured at the intermediate levels. There are few which can be manufactured even at local, RR, level. Their number will increase as local capability increases and technology improves to use local resources and to make ‘small powerful’. Some of these are:
2. Food, beverages and agro-processing industries
3. Soaps, cleaning agents and other toiletry items
4. All repair and service industries
5. All stitched garments

 There are many more which can be made at the second (block) and third (district) circle levels.

1. As mentioned earlier human society has to be freed from the clutches of capitalism. We want to establish an equitable, sustainable and plural society of emancipated individuals. The self reliant Rurban Republics are conceived as a step towards this. Knowledge and skills are required for self reliance. But in capitalist societies knowledge is considered as a property. This is absurd. A property is one which can be alienated. Knowledge cannot be a Property. We have to, however, bear in mind that almost all knowledge necessary at Rurban Republic level are outside the purview of IPR. There is vast e amount of such knowledge and skills available freely across the globe. We can set up a number of people’s institutions to collate them and make them readily available to all. We have under estimated the role of freely available technology.
2. We have to accept the fact that social revolution first and foremost is economic in nature. Let us plan - not only dream, but also plan- to set up‘One Million Enterprises’ to substitute products of global and national corporations with local products. To make them qualitatively comparable, much more knowledge and skills are required. Let us envisage a ‘ten year program’ to reach out for better technologies available in other countries, adapt them, assimilate them and produce far better goods than what we have today. Let us prepare for a head-on fight with the global giants at the rurban market level. Rurban India can do very well without Cadburys, Nestles, Colas, Levers, Kellogs, McDonalds, Colgates, Patanjalis and a hundred others. Surrendering to them means accepting the philosophy of consumerist capitalism, leading to total collapse of human civilization.
3. Indian governments both former and, all the more, the present are bent upon globalizing the country which, in effect, means selling the country’s natural resources to global corporations. In this the present government is smart. It engineers and nourishes caste and religious divides and creates the spectre of fascism, distracting the attention from fight against global sell out. The capitalists had been adopting this strategy of creating internal divisions and conflicts. We have to concentrate our energy on the fight against globalization which at the same time is also a fight against all forms of authoritarianism. This fight will help close the divides amongst the presently divided.
4. Symbolic actions will not suffice. Such actions smack of religious ceremonies. Actions should have results. Enemies should be weakened and friends should be strengthened. Such a social change is not the wok of one generation. A new generation committed to build a new society has to be nurtured. To nurture them a new genre of teachers are to be nurtured first.

*A Concrete Program for Action*

1. Recruit a large number of scientists, technologists and academicians concerned about the present state and the future of the human society. For this we have to consciously organize a few thousand in-depth discussions among them, on selected topics such as, growth and development, limits to growth, human happiness, climate change, globalization etc. These discussions should be conducted with utmost seriousness.
2. Collectively we can draw up a concrete plan to recruit more teachers and develop them as‘mentors of a new generation’, desirous and capable of building a new human society.
3. There are thousands and thousands of successful micro and small enterprises in the country. And there are millions which have failed. Let us collectively raise an army of Micro -Enterprise Consultants to help revive the failed ones and to set up new ones as a defence against the onslaught of global corporations. We can prepare a large volume of education and training materials, beside what already exists. Let us draw up an ambitious plan to strengthen rurban economy as a defence against the onslaught of global and national corporations.

PART TWO

OUTLINE FOR BUILDING A RURBAN REPUBLIC IN KERALA.

 The Kerala Sastra Sahitya Parishad is a People’s Science Movement working in Kerala for the past 55 yea under the banner of ‘Science for Social Revolution’. The revolution it had in mind was to transform the existing society into something similar to what was outlined above. What follows below is the essence we distilled out from our experience in enterprise building and promoting.

45. Madakkathara is a semi-urban or rurban panchayath adjoining Trissur Corporation in Trisssur district in Kerala. At present it has a population of 24,500 and an area of 2500 ha. Two decades ago the Integrated Rural Technology Centre, the Rand D wing of the Kerala Sastra Sahitya Parishad had conducted in this panchayath an Action Research Project named ‘Panchayath Level Development Planning with Peoples Participation’. One highlight of the program was a five day long ‘Collective Dreaming Session.’ About 60 activists and academics residing in the panchayath (the Kerala Agricultural University is situated in this panchayath) participated in this ‘collective dreaming’. They dreamed on steps required to make their panchayath a veritable paradise on this Earth. However, they could not realize even a fraction of their dream because they had to rely on politicians who were overpowered by ‘politickeers’.

46. In 2018 half a dozen of those who participated in the first dreaming session, having been convinced of the dire necessity of ‘seeding socialism’ of a new type sat together for months to prepare a multi-stage multi-front action plan for the same. The first step is to prepare the outline of a mutually consistent economic development plan satisfying conditions of increasing equity, quality of life, plurality and tolerance, self-reliance and sustainability. What follows is the result of this stage.

1. The strategy conceived essentially consisted of

a) strengthening local economy, especially in primary and secondary sectors,

b) strengthening self reliance and self-sufficiency, particularly in food, water and energy and

c) self imposed change in consumption pattern – substitution of corporate products with local products.

48. The next strategic step is to carry out a large number of Focus Group Discussions to convince the general public about the feasibility and necessity of changing the profit oriented development trajectory of capitalism to a social happiness oriented trajectory of humanism/ socialism. The questions raised in these discussions will help fine tune the proposed action plan

49. One important step is to close the cyber gaps, to make every one cyber literate and proficient and cyber-connected. The second step is to take control over trade by establishing a People’s Marketing Federation, to link local producers and traders with consumers. They studied Alternative Trading Systems attempted in other parts of the world, like Alternative or Local Currencies of Chiapas, Local Exchange and Trading Systems in Great Britain, Hours system in Ithaca etc. The entire population being cyber literate, they finally settled for an improved version of the bullet-board system of accounting as in GB. Both national currency and local ‘pass-book’ currency will be in use. The second step is production planning. Ensuring food, water, energy and livelihood security for all is the first objective. Activities contemplated for this will be described in detail later.

1. Proactive intervention in the class rooms will initiated from the very beginning. Teacher will be trained to transact the curriculum in a life related, environment oriented, activity based and child centered manner imparting them skills and values of equity, diversity, tolerance, democracy and above all sustainability. The students will be helped to internalize the truth that none of the goods advertised in the media- electronic and print media - has any welfare value , that they do not help improve their health or longevity, that they satisfy only our vanity and that make development unsustainable.
2. Beside agricultural products, they need several industrial products. Some of them, especially agro-industrial products- are already produced locally. These micro-enterprises will strengthened and brought under co-operatives, there production increased to satisfy the needs of the people, and several new ones will be started in a planned way in which producers, traders and consumers are all partners. They prepared, with the help of experts, DPRs for a large number of enterprise in industrial and other sectors. Some of them are given in the appendix. The general principle will be: *consumers control production*.
3. A Green Technology Centre to service these enterprises and to set up new ones willbe established. ‘Produce Local, Buy Local, Consume Local’ will be the central slogan. Branded products of national and multi-national corporations will be boycotted, as far as possible. Things which require larger scales of production will be produced at the next level.

*Primary Sector Plans*

1. The current land use in the panchayath is given below.

Total area 2500 ha

Forest 600 ha

Non agricultural use 450 ha

Agriculture 1450 ha

Coconut 600 ha

Rubber 300 ha

Paddy 200 ha

Arecanut 80 ha

Vegetable 80 ha

Banana 80 ha

Others 110 ha

1. The Panchayat had, five decades ago, 300 ha of regular paddy fields (double cropped) and 150 ha of single-crop fields on the fringes of garden land- a total of 750 ha of cropped area of paddy. From the middle of eighties they began to convert the garden land (*myaal or palliyal*) first to coconut and later to rubber which rapidly spread upwards into areas with non-descript trees. Rubber now occupies 300 ha. Paddy fields on the fringe of garden land were filled in and got converted to garden land. Several roads were built criss-crossing paddy fields. Housing plots (real estate) grew up on both sides (ribbon development) and fields were lost.
2. Still there remained about 200 ha of original paddy fields, distributed in several ‘paddy sheds’ - *elas*. However, a good part of it is either left fallow or cropped only once a year or used for tapioca or banana cultivation. The high level ponds of paddy fields, which never used to dry up, now dry up by December. Winter crop has become too risky, no question of summer crop. Wells on the fringe line began to dry up earlier than before leading to shortage of even drinking water.
3. Reduction in rainfall cannot be the reason for the shortage they are experiencing even in years of good monsoon. Neither could be excessive surface run off during monsoon. There is lesser flow in streams and rivers even during monsoon. After several rounds of discussions and studies they zeroed on one cause: change in land use pattern at hill slopes- the advent of rubber with very high evapo-transpiration rates. One ha of rubber require up to 20,000 cu.m of water, sufficient to support 3 ha of paddy fields or tapioca. Rubber plantations will not permit any infiltration of monsoon water. No ground water recharge takes place. No wonder that wells are drying up.
4. They made some simple calculations: one ha of rubber plantation gives 1.5 te of rubber valued at Rs 200,000. One cubic meter of water gives rubber worth eightrupees. One ha can easily give 40 te of tapioca valued at Rs. 600,000. One cubic meter of water gives forty rupees worth of products. They realized that what they are doing is astoundingly foolish. They decided to slaughter tap the rubber within two, three years, clean up the area and re-terrace.
5. The panchayath has about 5500 families, most of them members of the Panchayath Development Society. It entered into an agreement with the rubber growers: they rubber will do slaughter tapping of the entire area within two or three years and will not replant with rubber but will deposit the land with the PDS to cultivate tapioca, other tubers and food giving timber trees like jack, mango, breadfruit etc.
6. A total water balance study inclusive of ground water monitoring will be initiated. Water levels in selected 500 wells will be monitored at two week intervals for five years. A full-fledged weather station will be set up. Additional weirs will be constructed, both to store water and to measure the outflow.
7. Today agriculture in the panchayath is chaotic. There is no planning of crops or timings. Ownership being fragmented to organize collective operations the owners have to agree to abide b to some rules. Bilateral and group discussions will be held for any number of times till the majority of the owners agree to poll their lands into a common agricultural plan. The panchayath/watershed development society formed earlier will be revived. It will set up an Agri-Bank wherein owners will deposit their land for ten years or more. The interest/rent given will be in two parts: a basic rent equal to their net average income from their land and a supplementary rent based on the profit made by the Agrico Society who manages the entire land on professional enterprise mode.
8. The agrico is conceived as a federation 50 brigade each serving 100 to 120 households and managing 25 t0 35 ha of land. Each brigade will be an independent enterprise registered as a producer company. Each one of them will have the following divisions:
9. Dairy
10. Olariculture including fodder farming
11. Tree care: coconut, jack, mango, bred fruit and other trees
12. Aquaponics, aquaculture
13. Waste to wealth

 In all there will be 20 to 25 active members

1. The panchayath level Agrico will run a few central enterprises like:
2. A central piggery
3. A rabbit rearing unit
4. A goat rearing unit
5. A vet. Service unit
6. A milk processing unit
7. An engineering service unit
8. In the areas of food, energy, transport, education, health care, , Water supply and sanitation increasing self- sufficiency is accepted as the objective. The following steps are considered:
9. The panchayath will produce all necessary carbohydrates, proteins, fats, vitamins and minerals enough for a balanced diet of all its members.
10. It will produce all the electrical energy required to meet its internal demands and to supply to the grid the embedded energies it consumes.
11. It will take total care of the health of all its members. The chain includes roving health workers, Primary Health Centres, tertiary services and specialized services
12. Neighbourhood system of schooling will be adopted willingly because there is no special reason to be otherwise. Good quality public education will be assured. Children will walk or cycle to schools.
13. Safe cycling paths will be made. Motorised internal transport is reduced. Private cars will become unnecessary. An efficient public taxi system will be established
14. By providing local livelihood opportunities and producing food and other items locally travel and transportation will be considerably reduced.
15. The stabilised population will be about 25,000 to 26,000. Their annual food requirements are estimated as follows.
16. Cereals @400gms per capita per day 3900 te.
17. Proteins (20% pulses, 80% fish and meat)

 (Pulses - 50 te; lentils - green 200 te. Meat, 120 te, fish, 250 te)

1. Milk @ 300ml/d/p 3000 te
2. Vegetables and fruits @ 250g/p/d 2500 te.
3. Coconuts for curry and oil 3.5 million nuts

It is a fact that the panchayath has never been and can never be self-sufficient in rice. To be self-reliant more than 90% of carbohydrate requirements will have to be met from other sources- here tapioca.

1. The panchayath has got about 1450 ha for new crop planning. Of this about 1000 ha are occupied by perennial crops like coconut, rubber and fruit trees like mango and jack. The total coconut production is about five million nuts per year. The owners of the trees agreed to cull out all trees yielding less than 50 to 60 nuts per year and plant new, high yielding varieties. In place of 600 ha 200 ha can yield five million nuts. Coconut area can be easily brought down to 300 ha. They also decided to slaughter tap all rubber trees, after assuring the owner a base rent equal to their declared annual net profit. This releases another 300 ha. Thus the PDS gets at its command 1000 ha for planned cultivation
2. The panchayath has to produce 12,000 te of tapioca to substitute 3900 te of paddy. At current productivity levels this needs 300 ha. To produce 3000 te of milk annually 20,000 te of grass is required annually A minimum of 200 ha is required for this. The panchayath requires about 3000 te of fruits and vegetables annually. This needs 150 ha. The new cropping pattern will be:

 Coconut 300 ha 6-7 million nuts per year

 Tapioca 300 ha 12,000 te per year

 Vegetables 150 ha. 3,000 te per year

 Fodder grass 200 ha 40,000 te per year

 Paddy 100 ha. 400 te rice per year.

1. Each Agrico unit will have one or two aquaponic farm of 200 cu.m pond size and 600 sq. m vegetable area capable of producing 4 te of fish and 12 te of vegetables annually. The total production of fresh water fish in the panchayath could be 150 to 200 te. Vegetable production from these units will be about 6 00 te. The worker-owners of these Agricos will be trained and retrained in dairy, aquaponics, fodder farming, olariculture, coconut care, climbing trees etc .All these are skilled and technical jobs.

*Secondary Sector*

1. The PDS will set up a 10,000TPY tapioca processing plant to convert tapioca into more nutritious and delicious pasta, macaroni and other products such as rice-like pearls which can be cooked as ordinary rice.The PDS will set up, also, a full toiletry unit to produce soaps, detergents, lotions, cleaning agents; a pickle and other condiments unit; a tailoring and garment making unit , a bakery etc. etc. All products will bear the brand name of the panchayath and citizens are persuaded to buy their own products.
2. They had estimated the maximum electrical energy they need to achieve the highest quality of life is not more than 1500 units per person per year and that they will not be foolish to consume vanity goods or self-destructive goods. This much of energy will be produced locally. Each house will install solar power units capable of generating per year twice their annual consumption-2kw to 5kw or more; 30 to 40 MW in all. The panchayath produces annually about 6,000 te of burnable biomass capable of producing 4 million units of electricity.
3. Efficient use of solar water heaters, hot-boxes and planned cooking operations can reduce domestic heating energy. Or 30 to 40 million units. Adoption of LED lamps, DC fans and other DC equipment like washing machines, mixer-grinders, TV etc will avoid the necessity of large capacity inverters and storage batteries. Everyone is energy-conscious.
4. There are a large number of ‘industrial’ goods which they consume daily, such as processed foods, dairy products, toiletries, bakery products including high end ones such as chocolates, papads and other fryems, jams and pickles, ready to eat foods etc. Every one of these will be produced locally. Production units will be set up for all of them after assessing the market for each item. Repairs of all gadgets and vehicles will be done locally. All house-hold repairs too will be done by local home-repair shops.
5. The PDS will, as mentioned earlier, set up a Green Technology Center with the following mandate:
6. Install ‘state of art’ roof top SPV units, provide total maintenance, stock necessary spare parts;
7. Provide training services to upgrade the skills of artisans and mechanics;
8. Service Green Task Forces in the ‘waste to wealth’ program;
9. Provide entrepreneurship training for agricos, repair shops, toiletries, bakeries, integrated agriculture, aquaponics etc, etc.
10. Installation and operation of bio gas plants
11. All the enterprises will be under group ownership-as co-operatives or as producer companies. Shares are limited to workers and registered consumers and are non-negotiable. The citizens have, since long, realized that ‘shares’ have no real value except when involved in actual production of use values and that share market is merely a gambling den.
12. .With increased local employment and neighbourhood schooling, need for internal motorised travel can be brought down drastically. They have entrusted resident engineers to design an efficient network of footpaths and cycle-paths. The need for motorised vehicles will come down drastically. An efficient taxi-pool can reduce the need of private vehicle still further.
13. The PDS had set up a Panchayath Planning Board to take these ideas forward. Luckily the panchayath has experts in all fields. Besides the Panchayath office, the PPB too stocks all information, both current and historical, which can be easily retrieved. The PPB services all the standing committees of the panchayath.

PART THREE

Some Examples of Enterprises

**Integrated Milk and Vegetable Project for a Cluster of 2-3 Neighbourhoods**

Number of consumers 110-120 hh

Daily stable milk demand 110 -120 lit.

Annual Production 40,000 lit.

Total area owned by the households 30 ha.

Non-biomass growing area 6 ha

The remaining 24 ha are pooled into an agri-bank. An Agri-co is formed as a producer company or as a cooperative society. The agreement with land owners stipulates that standing trees continue to belong to the owner. Replanting will be done only with permission. The company will manage all seasonal and annual crops. The net area available for this is about 12 ha. The land owners will be given an annual rent split into two components: one part based on their past average net income from the land and the other as a share of the increased production

Available inter-crop area 12 ha.

Dairy- number of animals

Milking 16 (Annul average yield per cow: 2,500 l.)

Dry 4

Calves 8

Shed area 150 sq.m

Annual feed requirement

Grass@ 5kg per lit. 200 te.

Calves and dry cows 100 te

Total 300 te

Tender maize@2 kg/l. 80te.

Concentrate @ 0.5 kg/l. 20te.

Area required to grow feed 6 ha

Fertilizer requirement: Dung 150te

 Cow urine 20 te.

Availability Dung 250 te.

 Urine 120 te.

Availability for vegetables:

 Dung 100 te.

Urine 100 te.

Area available for fruit and Veg. 6- 8 ha.

 Conventional farming 6 ha.

Aquaponds, polyhouse etc farming 2 ha.

Annual production

 Vegetables, fruits 200 te.

 Milk 40 te.

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Human power:

Dairy 4

Agriculture 8

Biogas 2

Management 2

Total 16

ECONOMICS

Capital Investment:

Cowshed 150 sq.m Rs 15 lakhs

Cows -20x40,000 Rs. 8.0lakfs

Machinery -dairy Rs 2 lakhs

Vehicles Rs. 6 lakhs

Agro-machinery Rs. 6 lakhs

Working capital Rs 3.0 lakhs

Total Rs 40.0 lakhs

Annual fixed cost@ 20% Rs.8. lakhs

Recurring cost other than labour

 Solid feed 20te@Rs 24,000/te Rs.4.8 lakhs

 Health care and insurance Rs 1.2 lakhs

 Other costs Rs 2.0 lakhs

Human power Rs. 30 lakhs

Total Rs.46.0 lakhs

Annual Revenue:

 Milk 40 te Rs. 20 lakhs

Vegetables 200 te. Rs. 40 lakhs

 Total Rs. 60 lakhs

 Profit Rs. 14 lakhs

Existing homestead small units can be part of this or linked on dung-fodder exchange basis. 250 te of dung together with food and kitchen waste can supply all the cooking gas required for 50- 60 households. An additional income Rs 3.0 lakhs per year can be attributed to this. Bio-gas extraction reduces methane release to the atmosphere. An ecological value has to be attributed for this. In fact methane has to be extracted from allexcreta, both animal and human. Only the slurry to be used as fertilizer, through fertigation. Given below is the flow-diagram for this system. The panchayath will have about 40- 50 such units.

AQUAPONICS

Aquaponics is a system of integrated fish and vegetable farming with an internal closed loop nutrient recycling. Nutrient input is through fish feed and food output in the form of fish and vegetables. One sq.m of fish area (one mete deep) needs 1 to 3 sq. m of vegetable area to keep optimum water conditions for fish growth and can produce 20-30 kg of fish and 30 to 50 kg of vegetables annually. An ’on the envelope’ calculation of economic viability is given below:

Fish pond-10x 20 x 1.5 m tank:

Excavation-300 cu.m Rs 15,000

Lining with 1000 micron sheets Rs. 40,000

Crop area: 600 sq.m

Levelling Rs. 3,000

Lining Rs. 72,000’

Bed-200 cu.m of ½” metal Rs. 3,00,000

Pumps and piping Rs. 60,000

Others Rs. 40,000

Total Rs. 5,30,000

Annual expenses

Int. and dep.@20% Rs, 1,06,000

Planting material; 30,000 Rs. 30,000

Seed fish: 20,000 Rs. 1,00,000

Energy: 20,000 units Rs. 1,00,000

Fish feed: 8te. Rs 4,00,000

Human power Rs. 3,00,000

Misc. Rs. 1,00,000

TOTAL Rs. 11,36,000

Revenue

Fish 4,000 kg Rs. 8,00,000

Vegetable 12te. Rs. 3,60,000

Total Rs. 11,60,000

Profit Rs. 30,000