**NEW WORLD-NEW KERALA**

 ***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 Luxumberg had written that “ the *natural* end of capitalism is “barbarism” and not Socialism. Eric Hobsbaum had concluded his book *The Age of Extremes* with a warning that if 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 resource and develop better technologies the picture does not change. The only way to avoid this collapse is to change over to a sustainabledevelopmenttrajectory,fromthe 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 ofte income that reaches the rich gets converted to Capital- there are limits to theirconsumption. Those products that reach the poor are consumed. They do not get converted into Capital. Thus Capital growth demands that a larger share of 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 formthe 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 ofvanity 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 SpeculativeCapitalism*

 *On contradictions.*

1. Main stream Marxists speak of Four Contradictions deciding the forward march of the society:
2. An epochal contradiction between Capitalism and Sociaiism. 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 tomutualconflicts.
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. *Capitalism is global. It cannot be replaced bySocialist Nations- Nation States will have to be replaced by a global network of rurban republics*
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 , allof 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 outright 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-tops that “Socialism is THE Alternative” will not take us forward. The word connotes, today, only what happened in the 20th century under 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 de-urbanizig, toresolve the contradiction between towns and villages. They have not been able to free themselves from the glamour of affluence or consumerism. 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 distinct 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 index 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.Hisconcept 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* makes 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 theindividual 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 Iclaim 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, 28-7-194*
6. The Communist Society of fully emancipated individuals, which Marx dreamed of, too is an utopia. The two have very much in common.Majority of Gandhi’s colleagues were, however enamoured by the 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 accepted to appease Gandhi and were made apologies to Republics.
7. Human species evolved as collectives and not as individuals. Today, however, individualism prevails. A sort of collective or species madness of individualism has set in. Unless treated it can lead the species to extinction. Gandhi’s 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 out 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).

 *Features of the New Society*

1. The new society will be characterized by,
2. Wisdom to differentiate need from greed,
3. Increasing equity, sustainability, diversityand tolerance and
4. Increasing societal leisure and quality of life or happiness
5. 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.
6. 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 isa concept different from GNP and Human Development Index. Nobody wants to be unhappy. Everybody wants to be happy. However, happiness is considered as a very subjective concept and difficult to define it socially. Here we suggest one simple way to quantitatively define ‘societal happiness’. Three essential pre-requisites for individual and societal happiness are:
2. Long life and low morbidity,
3. Freedom to be self
4. Assuring these to their children and all succeeding generations
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 compromising 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 societal labour time and reduces societal 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 localskills to utilise them has to be initiated.
9. 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.
10. 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.Allhealth care will be free for everybody. Enough social resources will be set apart for this.
11. 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 givingknowledge involvesan 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.
12. 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 nationaity too will come down progressively and finally vanish.

 *Structure of the New Society*

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. The existing administrative boundaries can be re-fixed on a water shed basis.
2. 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.
3. 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.
4. 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 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.
5. 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.
6. 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.
7. 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
8. This is the vision of *socialism of the 21stcentury*- a grand network of self-reliant sovereignRurban 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 mode 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 – the 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.
2. There are many which can be manufactured at the intermediate levels. There are few which can be manufactured even at local, RR, level. This number will increase as local capability increases and technology improves to use local resources and to make ‘small powerful’. Some of these are:
3. Food, beverages and agro-processing industries
4. Soaps, cleaning agents and other toiletry items
5. All repair and service industries
6. 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 –reliantRurban 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 civiliation.
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 hadbeen 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 andthousands 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.

 *Enterprise Mode*

*52*. Conditions for sustainability of Enterprises:

1. Should be run on professional enterprise mode
2. Should follow good practices
3. Firm market-consumer- linkage established
4. Consumer education on the political economy of the enterprise- mode of fight against Global Corporations and also of the reduction in ecological foot print of the region.
5. An assured income of, say, Rs. 150 K/Y , at 2018 price-level,for a person

1. *Possible integration chains*:
2. Food wastes plus fruit, vegetable fish and slaughter house wastes fully processed and distributed to piggeries, fisheries, chicken farms etc. as appropriate feeds.
3. Dairy-milk-products-dung –biogas-energy- slurry – fodder plus vegetables and cattle feed-cow- calves- beef
4. All human and animal excreta to biogas-slurry for fertigation- sludge - composting –to soil: total soil nutrient recycling
5. Compost all biodegradable waste that cannot be converted to animal feed - back to soil to enrich the soil with nutrients and more importantly carbon- enhancing soil fertility and sequestering carbon, providing negative carbon footprint.
6. Setting up and maintaining terrace, kitchen, portico, small area fruit and vegetable as well as flower gardens.
7. Coconut and arecanut complexes-all services to them such as harvesting, de-husking- purchase of excess nuts, to retail sellers- oil mills- servicing trees- felling poor yielding trees- timber, non-timber parts to local thermal power stations, including fronts and other parts as well as twigs and fuel logs from other trees- replanting etc.
8. Orchard husbandry-mango trees, jack trees, tamarind trees, bread fruit trees etc. as well as timber and non-timber trees: nurturing, felling if necessary of non- yielding fruit trees, harvesting, planting new trees etc. – develop them as food forests based on agro-ecological principles
9. Paddy brigades: to make maximum productive use of paddy fields- to dig tail-ponds to conserve water wherever necessary and possible- optimise crop composition-paddy, vegetable, banana, cassava, fodder grass combinations to yield maximum calories and proteins as well as income.
10. Agro-processing units—various products and their local markets- tie-up with consumers- unit size optimization- jack fruit preservation
11. A medium size Cassava Processing Centre –flour- bread- peals-pasta- macaroni- rice pearls etc.- collection centres - assured support price- annual cassava production in a typical panchayath: 200ha x40 te= 8,000 te- to begin with a pilot plant of 10 tpd raw cassava capacity for a cluster of 2 or 3 panchayaths.
12. The individual enterprises can be run as co-operatives or as producer companies. Project outlines given below are to be fine tuned on the basis of the actual feld conditions.
13. *Waste to food*

Wastes: vegetable including food waste, slaughter house waste, chicken farm waste, fish waste-all collected daily The Collected waste is autoclaved, part dried , powdered and pelletaized, part ground to form a thick slurry to feed pigs in an associated piggery. Both will be housed in the campus of the waste treatment plant

An ‘On the Envelop’ Calculation fora

panchayth of 25,000 population:

 Food, fruit and vegetable wastes 10 tpd

 Wastesof animal origin: 200 Kg per day.

Both will be autoclaved or cooked to make them safe for animals. Daily 2 te will be converted to pig feed for a piggery of 50 animals. The rest will be dried, powdered and processed as chicken and fish feed. The total daily meat and fish production could be a more than one tonne.

 For example in Kunnamkulam one can set up a piggery of 20 to 30 animals to begin with. A plant to process half a ton of clean food-waste/fruit-waste/ slaughter house waste daily, as animal feed too can be installed. A bio-gas plant to produce steam for the autoclave/cooking drum too can be installed.

 Detailed cost-benefit analysis has to be worked out

1. *Milk-biogas- fodder- vegetable cycle*

A cluster oh 4-5 neighbourhoods or 150 to 200 houses- total land holding: 50 ha. Distributed within an area of about one kilometre square.

Firm milk demand 100 lpd.

A dairy of 12 wet and 3 dry animals as well as 8 to 10 calves at any time.

Green fodder (including for silage): 1 tpd or 360 tpy

Land requirement 3.0 ha.

Shed area requirement 15o sq.m

Area available for Intercropping, portico and kitchen gardens, terrace culture and cultivable fallow: 12 ha

Of this land cultivated for/by owners: 4 ha.

40 terrace, , 80 kitchen and 120 portico gardens-

all food crops- Total area: 2 ha

Small plots of 5 to 20 cents: 2 ha

Land leased in by the Company: 8 ha.

Area under vegetable cultivation: 4 ha

Area under fodder crops: 3 ha

Area under fiish farming: 1 ha

Annual land rent per ha: Rs. 25,000

1. Costing

Capital:

 Sheds Rs. 20 lakh

 Cows 8 lakhs

 Machinery 15 lakhs

 Working capital 7 lakhs

 Total Rs 50 lakhs

Operating cost

 Feed- other than fodder and silage Rs 5 lakhs

 Insurance and health care Rs. 3 lakh

 Land rent Rs. 2 lakhs

 Electricity and misc. expenses Rs . 5 lakhs

Interest and depreciation @ 20 % Rs 10 lakhs

Salaries and other benefits Rs 20 lakhs

Total Rs. 45 lakhs

 Revenue

Milk sale 40,000 l. @ Rs50 Rs 20 lakh

 Vegetable sales 80 te @Rs 30,000 24 lakhs

Bio-gas service 3 lakhs

Gardeng service 6 lakhs

Total Rs 53 lakhs

Gross profit Rs 8 lakhs

1. A team of 10 to 12 educated (plus two level) and unemployed boys and girls from the cluster of 200 households can start this enterprise. Instead of spending lakhs to become unemployable graduates they can learn dairy and agriculture in vocational schools or elsewhere and be their own masters.
2. The dairy component and the agriculture component can be separated with linkages only through fodder purchase and dung and urine sales. The economics such units are worked out below
3. Dairy Unit: A shed of 150 sq.m is taken on rent

15 cows x60,000 at 8% interest Rs 72,000

Rent of shed @ Rs. 10,000 per month Rs 120,000

Interest and depreciation of machinery Rs 30,000

Insurance and health care Rs. 100,000

Electricity and misc. charges Rs 240,0o0

Feed @ Rs. 100 per day per cow Rs.730,000

Salary and wages for six persons Rs.1,200,000

 Total Rs. 2,492,000

Returns

Milk sales 40,000 x 50 Rs 2,000,000

Dung and urine sales Rs1,000,000

Total RS 3,000,000

Gross profit RS 508,000

1. Fodder Unit

Land rent for 4 ha Rs 100,000

 Int. and dep. on machieryRs. 100,000

Fuel and repair and misc. Rs. 200,000 Dung and urine Rs.1,000,000

Salary and wages Rs.1, 200,000

Total Rs. 2,600,000

Sales

Fodder Rs,1,000,000

Vegetable 60 te x Rs.30,000 Rs.1,800,00

Total Rs. 2,500,00

Gross profit Rs. 200,000

1. The group can be expanded to eight, take one more activity-aquaponics

Five units of, 20 M3 fish tank and 60M2 of plant area each

Capital cost Rs 400,000

Interest and depreciation @ 20% Rs. 80,000

 Seed fish 10,000x5 Rs 50,000

Plant seedlings 30,000Rs 30,000

Electricity, 10,000 units Rs. 50,000

 Fish feed 5,000 kg Rs 200,000

Salary 2x150,000Rs 300,000

Total Rs.710,000

Revenue

Fish: 2.5 tonnes Rs. 500,000

Vegetable –lettuse 10 te Rs.300,000

Total Rs 800,000

Gross surplus Rs. 90,000

1. Excreta to food:This is not a direct activity. It envisages conversion of human and animal excreta into fertilizers, through methaination to grow food.The septic tanks and soak pits are to be progressively converted into biogas plants withadditional feed ofkitchen waste and cow-dung. The slurry after on-line treatment to destroy pathogens can be used for fertigation. The sludge too will be used for methanation and the remaining sludge will be composted. The idea is to prevent ground water contamination through total isolation of excreta. Goat droppings and poultry droppings will be directly used as manure.
2. Excreta from modern piggeries with wash water will directly go to an in-situ biogas plant. The gas is used for heating water and to produce steam. The slurry will fertigate the surrounding gardens and agricultural land, which is part of the piggery unit. This is more a cultural and health activity than an economic one. The pigs will be fed on food, fruit, vegetable and meat waste-cooked and processed.
3. Those who have homestead chicken farms can resort to pipe composting of their food and vegetable waste or resort to vermin-composting, both to ‘rear worms’ which are delicious food to poultry.Soil nutrients travel to plants, thence to animals and humans and through their waste, back to soil. The cycle is complete. There is no new knowledge in this except the realization that if we do not resort to meticulous soil nutrient recycling ( as well as careful use of water) we may not be able to survive as a species for long.
4. Waste to wealth

The state generates about 12,00te of organic waste per day.Of this, say, 10,000 te( 4000 at domestic level and 6000 at community level) can be composted per day. This requires 2,000 te of coir pith or saw-dust to carry the inoculum and to adjust moisture.

1. The state produces 6,000 million coconuts per year, or 17million nuts per day. oone thousand husks give 90 kg of fibre and 200 kg of pith – so about 3,400 te pith per day. Two third of this will suffice to compost the 10,000 te of waste per day. The daily compost production will be about 4,000 te or an annual production of 1.5 million te.
2. To process 4000 te of urban waste we can set up 500 urban composting facilities to compost 5 to 10 per day. This can give employment to about 9,000 persons. Of the rural waste 75% will be processed at the house hold level. About 2000 te will have to be processed at the community level. For this we can set up 1000 units, each of one to five ton per day capacity. This can give employment to 4000 persons.
3. The capital requirement is about Rs 15 to 20 lakhs per tonne of processing capaciy. This will come to Rs 600 crores for urbam areas and Rs. 400 crores for rural areas. A total of Rs 1000 crore for entire Kerala.
4. One worker can process 12 te of waste per month and produce 4.5te of compost. The total cost will come to about Rs 9000 per tonne of compost of which about Rs.3500 is labour component. The monthly emoluments per worker will come to Rs 14000.
5. Alternatively domestic composting units, can be set up by waste collectors, each servicing 200 to 250 houses. Each house will be provided with a green bin for bio-degradable wastes and packet of inoculumwhich is to spread over the waste every morning or evening. The bin will be collected once in a week and replaced by a clean bin and another packet of inoculum. The collector will collect about 30 t0 440 bins per day or 120 to 150 kg of waswte. A 12’x15’ shed will suffice to compost 120 kg of waste per day

Capital cost: shed, tools, shelves, trays, sieves etc. Rs 1.5 lakh

 Annual cost-int. and dep. Rs. 15,000

 Inoculum for 40 te of waste Rs 80,000

 Current charges Rs.15,000

Total Rs.110,000

Revenue:

Compost – regular 15 tex Rs.12,000Rs 180,000

 Compost-vermin 2 te.x 40,000 Rs. 80,000 Savings : wage for own labour per year Rs 150,000

1. Agri-service company Eachpanchayath can promote a number of dairy –vegetable complex of 10 to12 cows and 6 to 8 ha of fallow- intercrop land. Each such complex can meet the milk and vegetable needs of 150 to 200 households. The panchayath can promo 30 to 40 such complexes. This will yield lively-hood to 150-200 families and exhaust most of the intercrop and fallow areas. Leaving land used for non- agricultural purposes, an average panchayath can have about 200 ha of paddy land and 1300 ha of garden land occupied by coconut, arecanaut , fruit trees and other trees. This composition can vary widely and the type of services they need too. More than 80% of the owners will need agricultural labour to maintain their land and crops. An **Agri-labour Society** having about 500 to 600 members can provide all the services. This society can attract besides the existing labourers a new set of educated and trained youth (both boys and girls) too. They will take available land on lease and for the rest will provide necessary services on request. The charges will be fixed by the Society either per day ( six hours plus one hour rest) or per hour. The output will be guarantee by the Society. The members are not wage workers but salaried employees of their own company with all usual benefits- all are agro-techs. Their knowledge and skill levels will be upgraded continuously by the Society. Use of appropriate machinery will reduce their physical strain.
2. The Society will provide services to set up and maintain terrace gardens, portico gardens, kitchen gardens, poly houses etc. to those who want them. A family with 4-5 cents of area that can set apart for this can get about 300 kilo of vegetables valued at Rs. 10,000 to 12,000 annually. The Society can charge, say, Rs. 500 -700 per cent annually. An average panchayath can have about 20 ha of land under such activities. The Society can charge the clients @ Rs.750 per day or Rs 150 per hour for labour. The rate for harvesting tall trees likearecanut, coconut, mango, jack tree etc. will be fixed separately. The members will have to put in at least 2000 hours of service per year and will receive a salary of Rs. 150 K per year plus 12 k as bonus, leave salary, ESI, PF and six months of maternity leave. The Society will be fully self-sustaining.
3. *Cost Analysis*.

 Salary 1.5x500= 750 lakhs

 Bonus 0.12 x 500 = 60 lakhs

 PF, Esi etc. = 150 lakhs

 Total 960 lakhs.

Income:

The Panchayth has one lakh coconut trees and 10,000 other trees like jack, mango, tamarind etc.

Coconut tree servicing including harvesting once in 45 days can be charged @ Rs 400 per plant. To take care of one lakh 120 person-years are needed

 Jack, mango etc. can be charged @ Rs. 200 to 1500 per year including harvesting. The average can be taken as Rs. 800 per year. Full time services of 40 persons are required for this.

1. To look after 1600 homestead gardens we need full time services of about 20 persons. Balance of 360 persons are available for other activities.

Income from coconut services Rs 400 lakks

Income from sevicing fruit trees Rs 80 lakhs.

Income from home garden servicing Rs. 20 lakhs

Income from other services 360x250x700 Rs. 630 lakhs

Total Rs. 1130 lakhs

Less 10% Rs 1017 lakh

Surplus Rs 57 lakhs

We can start with a team 100 persons, servicing about 600 ha of garden land. A detailed list of activities that this team carry out shall be prepared.

1. Agro-industrie

A large variety of them. A consumption survey- item-wise and brand-wise can be made. Outside products can be substituted by local, better quality, guaranteed products. Existing individual micro enterprises can brought together under their own leadership to form one or more local enterprises. The broad categories are: pickles; jams; sauces; kctchups; squashes; powders; flours; dried items; pappads;bakery items; ready to fry itms; ready to cook items; ready to eat food; catering; eating places etc. Over- production should be avoided, limiting it to agreed quotas. Only speciality items need to be exported.

76. Assuming that the average consumption of all these items comes to Rs. 1,000 per month per family annual turnover in a panchayath of 6,000 h/h will come to Rs 60 million.The cost of material inputs will be around 60 to 65 %. The value of labour comes to about Rs. 18 to207 million- 120 persons @ Rs. 150,000 per year

77. Soaps and other toiletry items

Bathing soaps, washing soaps, detergents, floor cleaners, toilet cleaners, hand wash, dish wash, dis-infectants etc. come under this category. Limited number of corporate giants control the market, The aim is to wrest more than 60% of this from them- 20% through those who make their own soaps and 40% through soaps made at a cluster level, of two or three panchayaths. The approximate annual turnover will be:

1200 h/@ Rs. 1000/y Rs. 1.2 million

24oo h/h @ Rs 2000/y Rs. 4.8 million

 Buying local products means limiting the sale of corporate products. There is politics in it as well as economics and ecology.

  *The New Panchayath: A Futuristic Dream*

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1. Madakkatharais a semi-urban or rubanpanchayath adjoining Trissur Corporation in Trisssurdistrict 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 R and D wing of the Kerala Sastra SahityaParishad 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’
2. 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.
3. 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.
4. 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
5. 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 Currencie of Chiapass, 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.Ensuringfood, water, energy and livelihood security for all is the first objective. Activities contemplated for this will be described in detail later.
6. .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 andchildcentered 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 printmsdis-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.

1. Beside agricultural products, they need several industrial products. Some of them, especially agro-industrial products- are alreadyproduced 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*.
2. 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 givn below.

Total area 2500 ha

Forest 600 ha

Nonagricultural use 450 ha

Agriculture1450 ha

Coconut 600 ha

Rubber 300 ha

 Paddy 200 ha

Arecanut80 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 gardenland (*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, agood 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 t 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 willbe 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 tmes till thee majority of the owners agree to poll their lands into a commo agricultural plan. The panchayath/watershed development society formed earlier will be revived. It will set up an Agri-Bankwherein 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 t0 120 house holds and managing 25 t0 35 ha of land. Each brigade will be an independent enterprise registered as a producer company. Each one ofthem will have the following divisions:
9. Dairy
10. Olariculture including fodder farming
11. Tree care:coconut, jack, mango, bredfruit 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 afew 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, protiens, 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 a follows.
16. Cerals @400gms per capita per day 3900 te.
17. Protiens(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 3.5million nuts
4. 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.
5. 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 50to 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
6. 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 panchayathrequires about 3000 te of fryuits and vegetables annaually. 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 ha40 ,000te per year

 Paddy 100 ha. 400 te rice per year.

1. Each Agrico unit will have one or twoaquaponic farm of 2oo 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 indairy, 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 panchayathproduces annually about 6,000 te of burnable biomasscapable 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 otherDCequipments 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, toiletteries, 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 lacal home-repair shops.
5. The PDS will, as mentioned earlier, set up a Green Technology Center with the following mandte:
6. Install ‘state of art’ roof top SPV units, provide total mainainacce, 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, aquaponicsetc, 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 ndeighbourhood 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.Thee need for motorised vehicles will come down drastically. An efficient taxi-pool can reduce the need of provate 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 Panchayh 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.

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 *Education*

1. Education is purposeful process to
2. Bring out the best in the child and help develop it to the fullest extent.
3. Enable the child acquire the knowledge and skills so that it can carry outthe duties necessary for the sustenance and progress of the society of which it is a member.
4. Realize and overcome the forces obstructing the progress of the society.
5. Education today does not fulfil these objectives. It moulds a minority to compete globally and not to serve locally. It does not provide any knowledge or skills necessary for the development of the society.
6. The local society has absolutely no control over the system which is maintained at its expense. It guarantees every child 12 years of‘free’ education to every child as well as 6 years of Early Childhood Care-ECC. Education has a ‘universal’ content and, much more, a local content.
7. To plan good education the planners should have control over the system. In kerala a panchayth has enough expertise to plan and provide ‘good’ education for all. To enable this both financial ( plan and non-plan) and human resources should be under it. The KER, which gives, undue rights and very little duties which can be enforced.
8. There is a stipulation that every government servant has to live within 8 kilometers from the place of duty. Only by enforcing this that the working time can be preponed, from 7.30 AM to 2.30 PM. There are many more. While economic planning can be done, to a great extent, without hindrance from state or national governments,education and health care are not so. If the local governments are able to wrest real control over schools and primary health care it can be improved considerably.
9. In the case of education the important changes to be effected in policy and rules are:
10. Teachers and non-teaching staff have to reside within easy cycling distance- 6 to 8 kilo-meters- from the school.
11. They have to work a minimum of 2,000 hour a year.
12. between grant-in-aue schools and government schools will be abolished.
13. All new recruitments will be done to all schools by the PEC-Panchayath Educatioin Council- as per new PSR – Panchayath Servise Regulations- applicable to all who receive salary from public funds.
14. Today the government employees take away a very large share of the Gross Social Product.

The average salary of a teacher in USA is equal to its per capita income 0rtwo times that of pverty line. That of a teacher in Kerala it is 5 to 6 times of per capita income and 10 to 12 times that of poverty line.

1. A family of four can live very comfortably with Rs. 25,000 a month. This fact will be taken into account while fixing the salaries of all panchayth employees. The maximum to minimum ratio will not more than 3. Excess income forces unnecessary consumption, wasteful expenditure of natural resources, wasteful construction, increased number of private vehicles etc. All these issues are to be resolved before we can address the real issue of education.
2. The average birth rate in a panchayth of 25, 000 population will be about 300. This will require 1500 to 1600 class rooms minimum with a maximum strength of 30 per class. Each school should also have lab, library and other facilities too. Most pancayaths have this. Today they are used unscientifically.
3. Adopting the neighbourhood system of schooling and restricting the strength of schools to two divisions per class, many of these problems can be solved.
4. Self-financing institutions will not be forced to close down. But they will become unattractive to the majority except to a vainglorious minority. The facilities of public schools will be much better and academic standards much higher.
5. Every child already has an Ankanawadi within 500 metrs fromtheir home. Every child except a fw, has a LP school within700 to 1000 meters from their residence and a UP school within1.5 km. No school bus is required for them. Parents can walk them to the school within 15 to 30 minutes. This will be good for the health of both. Students (both boys and girls) can cycle to the school and back. Safe footpaths and cycling paths will have to be provided everywhere.
6. The PEC will, with help of best eductionists, draw up a scheme to impart real education, based on the state text books. By ‘real’ education we mean a system,
7. which does not rob childhood from them,
8. which imparts values of equality, sustainability, diversity, solidarity, tolerance and democracy.
9. Which enables the student to understand greed and need and that the resources on this planet will not suffice to satisfy our greed
10. Which gives the child ample opportunities to the children to develop its innate intelligence and abilities,
11. Which adopts a child centred, activity based, environment oriented and life related learning process
12. Which imparts all the skills required ti=o live in the modern world,
13. Which imparts all knowledge appropriate to its chosen profession besides all the basic knowledge necessary to enable to think creatively and to generate new knowledge and
14. Which helps the child to grow into a humane, fearless adult.
15. The vocational higher secondary courses will be diversified scientifically to cater to the needs of productive sector such as agriculture, dairy, animal husbandry, pisciculture, agro-industries, gadget repairs etc.
16. In the academic stream they will be able to compete with students from conventional streams and win.
17. The annual number of children born in Kerala is about 4 lakhs. 12 lakh children will have to be provided play schools, kindergartens, nurseries, balawadis, ankanawadis et-c. We have more than that nearly 45,000 sufficient for 13-14 lakhs. In a an average panchayatrh we need ECC facility for 800 t0 900 childre within their neighbourhood. Yhis mostly exist.
18. Schooling facility required for 3000 t0 35000 children too exist with some marginal adjustments. Restricting the size of a class room to a maximum of 30 children ad adhering to the distance criteria weneed 12-13 LP schools, 6-7 UP schools with two divisions for each class, and 2 HS/HSS with 3 divisions for each class and one vocational HSS with all the vocations needed by the area.
19. The vocational higher secondary schools will be modelled after the NTTF schools. Importance will be given to vocations require by the primary and secondary sector. Such as agriculture, dairy, animal husbandry, fish farming, integrated operations, agro- industries, production of consumer goods like toiletries, stationary, repair of various gadgets and equipment, trade like carpentry, plumbing, masonry, electrician, painting etc. No course will be run indefinitely. After meeting the societal requirements they will be wound till the need arises again. Admission to these VHSS will be restricted through aptitude tests.
20. The panchayath will employ abou 250 to 300 persons in the educational sector-200 220 teachers and 80-100 others.. The salary bill to them will come to about Rs. 100 to 120 millio

 HEALTH CARE

1. The quality of life (QL) or the happiness index ( HI ) of a people is best defined by two parameters:
2. Morbidity free longevity and
3. Leisure with freedom.

 The first defines a Physical Quality of Life and the second a Spiritual Quality of Life. Freedom from morbidity and high longevity depend on many factors of which food, education, and health care are critical. Food and education help prevent onset of morbidity. Preventive action in healthcare too contribute to prevent morbidity. This is the first task of health care. The second task is treatment of morbid conditions developed in spite of preventive measures.

Nutritiousfood, pure drinking wate, clean air, clean environment, exercise and specific measures like inoculation and vaccination are the important elements contributing to the reduction of morbidity. The specific measures come under the purview of ‘health care service’.

1. The health care service of the State consists of several layers or tiers. The primary health centres at panchayath form the skeletal network. Under each PHC we have several sub-centres. Above it we have Community health Centres. Then we have taluk hospitals, District Hospitals, General Hospitals, Medical College Hospitals , Specialty Hospitals and Super Specialiy Hospitals. Most of the later are in private sector, which spreads across the spectrum.
2. The Primary Health Centre and its sub-cetrnes are under the Panchayath. It shall upgrade the Centre into a full-fledged hospital on par with and better than the present CHC or taluk hospital. The State government can upgrade the taluk hospital to the level of district hospital and district hospital to the grade of medical college hospitals.
3. The Panchayath Hospital and its sub- centres together should have one doctor, inclusive of ayurveduc and homoepathic physicians, for 1000 population. Doctors in the private sector will be over and above this. Every individual resident in the panchayth will be provided with a health card and a personal identity number. This is for systematic record keeping and easy retrieval.
4. Every sub-centre will have two health inspectors/assistants/workers who will visit every household as frequently as necessary for health surveillance. One doctor will be available at the sub-centre every day.
5. The PH will have at least 50 beds with sections for paediatric care, geriatric care and gynecology. 95% 0f disease can be handled at the PH itself. Those requiring specialized treatment such as cancer, cardiac problemsetc. will be transferred to higher level hospitals. This will be done by the PH if the patient wish so. A doctor or health inspector will accompany the patient with all documents , will carry out all the formalities and entrust her/ him to the care of the specialist.
6. The entire staff of the PH will have to be under the control of the Panchayath Health Council. Besides the non-plan and plan funds transferred from the State Government the Panchayath will have to raise its own resources. This will be required not only forhealth care, but also for education and many other developmental activities The Panchayath should have the right to impose cesses for this up to a maximum of 30% of the income, above a certain level, of all households.

 *Governance*

1. We have more than two decades of decentralized governance controlled from above. It is high time to transfer the controls to the people who are sovereign in a democracy. It is already too late. Certain measures are suggested:
2. Local ‘Self’ Governments should have authority to govern ‘self’. All government servants from ALL departments working at Panchayath level should become ‘servants’ of the panchayath, not of the state or of the departments. The benefits of existing staff will be protected. They will be required to live within a specified distance from their office so that travel should not become a hindrance to duties. New staff will be recruited according to new set of Panchayath Service Rules- PSR.
3. The excess staff so freed from state level will be transferred to the Panchayaths of their choice. The size of the Secretariat emplyeeswill be reduced to less than 30% 0f the present and their special privileges abrogated. Employees are servants and not masters of the people.
4. The StateGovernment will transfer a larger amount, more than 50% of plan funds and all the non-plan funds to the Local Governments together with responsibilities. The local governments will prepare its budget with people’s participation on lines with PB in Porto Alegre. The people will directly elect a Panchayath Planning Committee of 7 to 9 experts. They will also elect a Judicial Ombudsman as well as a team of concurrent auditors. On behalf of the people their spokes persons from Neighbourhoods will exercise the power to elect.
5. All elected persons can be recalled and substituted through a process similar to that of election.
6. The panchayath roads and electricity distribution system will be maintained by panchayath. The panchayth has absolu rights to allow or disallow shops including alcohol shops and impose prohibition. Toddy will be brought out of excise. However it will impose a tax on every tree that is tapped and share the tax with state government. This can more than compensate the loss in revenue from excise duties.
7. In every panchayath Panchayath Development Societies will be revived and new ones registered. The general body of this will consist of:
8. The spokespersons of all neighbourhoods in the panchayath elcted as pairs of men and women.
9. The ward members.
10. The Panchayath Secretary
11. Oficers in charge of agriculture, animal husbandry, fishery, helth care, education, social security etc.
12. 8-10 experts- members of the Panchayath Planning Committee.
13. The Panchayath President will be the ex-officio President of the PDS. All other office bearers will be elected by the general body.
14. This PDS will function as Special Purpose Vehicle to receive grants for various development projects and also to implement funds from funding agencies as well as the projects funded by the State and Central governments