



पंचायत



PEOPLE'S EFFORT BRINGS SUSTAINABILITY

Vol. XIV No. I

Year 2011

Role of Panchayat in “Sustainable Consumption”



Published by :
ENVIS Centre on Panchayati Raj and Environment
Indian Environmental Society

Sponsored by :
Ministry of Environment and Forests
Government of India



The views expressed in the articles are of the writers and not of the IES. Your views are solicited as a feedback, I.E.S. would be pleased to solve your queries.

CONTENTS

• Editorial	3
• Introduction: Sustainable Consumption & its Requirement	4
• What is sustainable consumption	5
• Issues related to sustainable consumption	6
• Promoting sustainable consumption	7
• Probable sector for sustainable consumption	8
• Action framework for sustainable consumption	9
• Tips for sustainable consumption	10
• What government can do?	10
• Sustainable local development	11
• Grassroots initiatives	11
• Conclusion	12
• From Print Media	12-14
• Messages	15
• Forthcoming publications of our ENVIS centre and forthcoming Events of Indian Environmental Society	16



- *The major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries". An environmental program of sustainable consumption is one that causes humans to flourish along with the ecosystems.*
- *Sustainable consumption can be understood as a situation where consumer needs and demands are fulfilled in an as efficient and resource lean way as possible, resulting in a minimized negative environmental, social and economic impact.*
- *The ultimate goal sustainable consumption is improved quality of life for all consumers.*
- *Sustainable consumption is a significant element in sustainable development and is an important strategy to adopt for any country, regardless of the social and economic conditions.*
- *It fosters humans' well-being and quality of life, along with environmental quality.*
- *Sustainable consumption implies that the consumption of current generations as well as future generations improves in quality. Such a concept of consumption requires the optimization of consumption subject to maintaining services and quality of resources and the environment over time.*
- *There are three different, but complementary, ways to achieve these objectives: eco-efficiency, de-commoditization and sufficiency.*
- *Sustainable production and consumption involves business, government, communities and households contributing to environmental quality through the efficient production and use of natural resources, the minimization of wastes, and the optimization of products and services.*
- *Governments and other stakeholders can be motivated and supported to promote sustainable consumption if they are properly informed and provided with practical hands-on examples of how the concept may be adopted.*
- *Promoting sustainable consumption and production are important aspects of sustainable development, which depends on achieving long-term economic growth that is consistent with environmental and social needs.*
- *Despite considerable knowledge about the unsustainability of current consumption patterns and numerous initiatives in the field of consumer information, a general trend towards sustainable consumption has yet to develop.*
- *Thus, promoting sustainable consumption and production are important aspects of sustainable development, which depends on achieving long-term economic growth that is consistent with environmental and social needs.*

Articles are invited on the topic of **“Role of Panchayat in Biodiversity Conservation”** for the next issue of this Newsletter **“PANCHAYAT”**

Editorial

Over recent decades the Asia and Pacific region has witnessed unprecedented levels of economic growth. This rapid economic growth has produced a significant rise in real wages and has increased the levels of consumption in many countries in the region. However, much of this increased economic growth and increased consumption has been based on environmentally unsustainable, high carbon growth patterns, the effects of which are now ever-more apparent in terms of environmental degradation and climate change. Increased consumption requires increased production, which often leads to the increased depletion of natural resources, more pollution and more waste generation. The effects on the environment have been compounded by continuing population growth and rapid urbanization throughout the region.

If the conventional economic growth pattern is continued, it is believed that the region will not be able to sustain these levels of economic growth without compromising environmental sustainability. Thus, it is imperative that economic growth be harmonized with environmental sustainability as one of the most important goals for policymakers in the region. Consumption patterns will become increasingly more important over the coming years as the prices of natural resources rise.

Consumption and production patterns are the driving forces behind any economy and play a significant role in shaping the sustainability of future economic growth. It is important to bear in mind that sustainable consumption does not automatically mean less consumption but rather a more efficient, better informed and less resource intensive consumption. An underlying principle is the need to reduce the ecological impact of consumer patterns and to improve the quality of consumption rather than reduce the quantity of consumption. Sustainable consumption should therefore be understood as a situation where consumer needs and demands are fulfilled in an as efficient and resource lean way as possible.

At present, the low awareness and understanding of sustainable consumption in the region is hampering this progress towards improving sustainability. Sustainable consumption is not only about meeting the needs of consumers while being environmentally conscious; it is also an important strategy for poverty alleviation, economic growth, health, education and environmental protection. Therefore, sustainable consumption is often not a prescription for how to consume less, but how to meet the consumers' needs in a more intelligent manner.

The present issue of the newsletter "PANCHAYAT" aims to highlight the challenge of sustainable consumption and to explore the contributions businesses and their multiple stakeholders can make to meet the challenge.

Dr. Desh Bandhu
President

INTRODUCTION: Sustainable Consumption & its Requirement

On the key environmental issues of our day, progress depends on enabling people to act together. The key now is to take action that enables people to take up the more sustainable habits and choices that they want. The focus needs to be on creating a supportive framework for collective progress, rather than exhorting individuals to go against the grain. It is possible to make sustainable habits and choices easier to take up, by drawing on insights about consumer behavior and using people's preferences for purchasing. People, business and government – the three groups at the corners of our 'triangle of change' – will play a key part in bringing sustainability. The right policy approach will focus on positive solutions that work with the grain of people's aspirations rather than against them. And it will put consumer lifestyles, and the everyday products and services that people use.

To achieve a sustainable future, the best way is opening people's minds to the impacts of their actions and demonstrating alternatives. They can also help build the space for more mandatory policies to tackle the most difficult issues. In our discussions, we focus primarily on the environmental dimensions of sustainability, while testing the implications of our recommendations for social justice. We can view the challenge of sustainable consumption as a variety. A simple technological intervention – a mini wind turbine on the roof, or a big cut in standby power requirements for TVs and set-top boxes, for example – could have a very positive environmental impact.

So, 'Living within ecological limits is the non-negotiable basis for our social and economic development.'

We live in a consumer society, with unprecedented individual comfort, convenience and choice. What we buy may come from shops and businesses that in turn may buy from factories and farms. All these supply chains start in the same place – nature. The connections between how we live and the natural systems of the planet are made unclear by the complexity of today's economy. From water conservation to climate change, the solutions range from simple to complex, but a common theme is collaborative action. We cannot expect business or the government to do it alone; but they can enable people to take part.

The challenge of sustainable consumption is about ways of living that can achieve both principles. The opportunity we explore is whether we can update our lifestyles, and get smarter about how to do this. This has an irreducible international dimension. Sustainable consumption is not a luxury concept for the rich to worry about, while it is a necessity for all. Another hugely important lesson for sustainable consumption is that, what to

consume and what not to consume, people often find themselves 'locked in' to consumption patterns that are unsustainable.

It is government, at all levels, that is best placed to co-ordinate a collective approach to change, through an enabling policy framework. People, business and government each occupy a corner in a triangle of change. No one, or even two groups, can lead on sustainable consumption alone. Different corners lead at different times by doing what they can do best. The products and services people use, and the infrastructure available, link government with business and people. So it makes sense to start from how people understand their own lives, and the connections to the world around them.



People acknowledge that it does not take them long to adjust to new habits, even when they were averse to change before it happened.

(Source- Sustainable Consumption, Dr. Desh Bandhu, President, Indian Environmental Society, Delhi)

The three 'E's – Exemplify, Enable, and Encourage – which the government signed up to in its 2005 Sustainable Development Strategy: helping people make better choices. The fourth 'E' is Engage. As Securing the Future recognizes, engagement is not just a one-way process of communicating at people or relying on conventional 'above-the-line' opinion. It requires a real

commitment to community action, deliberative processes and involving people in change on their own terms.

The four 'E's are a theoretical framework. The challenge is to put them into practice. One practical approach, which is gathering momentum internationally, is 'social marketing'.

It is easy to become sidelined into promoting behaviors that are easy to achieve but trivial in terms of environmental benefit. Equally, it makes little sense to focus efforts on behaviors that are worthy and important, but have no chance of taking off in the immediate term across the mainstream. Some forms of behavior bring knock-on benefits.

For example, people can act in symbolic ways that bring psychological or social benefits that extend beyond the immediately measurable environmental ones. With the right focus on behavior, and its nature and drivers, the next step is to build an in-depth understanding of where people are starting from. Starting from where people are, and choosing the right mix of interventions can make sustainable habits for people easier to achieve and more attractive to do.

(Source- United Nations Environment Programme)

WHAT IS SUSTAINABLE CONSUMPTION

The Sustainable Consumption is the use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations.

This definition is seen as a good one because it links sustainable consumption closely with sustainable production - by dealing with both the production and disposal phases of the product life-cycle as well as the transport, retailing and consumption of goods and services. It also assumes a two-way process of social change through which producers can influence consumption through product designs and marketing with consumers, in turn, influencing production through their market choices.

However, at least three cautionary points may be made about this definition.

- It is idealistic.
- It does not emphasize social justice issues sufficiently.
- It over-emphasizes personal lifestyle choice.



COMMON FEATURES IN SUSTAINABLE CONSUMPTION

Common Features in Sustainable Consumption includes:-

- Satisfying basic human needs.
- Favoring quality of life over material standards of living.
- Minimizing resource use, waste and pollution.
- Taking a life-cycle perspective in consumer decision-making.
- Acting with concern for future generations.

Sustainable consumption is not only about meeting the needs of consumers at the same time as protecting the environment, but is also an important strategy for achieving poverty alleviation. The lack of access to basic services, such as water, energy and health services, is in itself a key barrier for economic development for many poor people.



A few examples of how sustainable consumption can help remove that barrier are:

- Avoid depletion of water reserves by applying water usage plans, by minimizing distribution losses and pollution of water reserves, and by promoting technologies using less water (in industry and households).
- Provide access to safe and affordable transport, by giving preference to public transport systems for medium distances, and non-motorized transport systems for short distances.
- Ensure secure food items by applying a labeling system, supported by independent testing/verification of product features.
- Avoid littering and illegal waste dumping by promoting sustainable product design and by establishing a recycling system supported by economic incentives.
- Establish markets for sustainable products, such as organic food, by adopting green procurement policies.

It is therefore essential to recognize that governments do not only have an interest in promoting sustainable consumption, but are also well positioned to create conditions that would influence the

individual consumer to adopt more sustainable consumption habits.

At the same time it is also important to acknowledge the considerable force that “consumer demand” exercises on political decision-making. Few decision makers would be willing to support sustainable consumption if it implied limiting the opportunities for consumers to eat the food they like, to wear the clothes they prefer or to travel in the mode they want. While sustainable consumption may indeed have this implication in some areas, it first and foremost seeks to balance the demands of the individual consumer with the needs of the society as a whole (including avoiding depleting natural resources for future generations).

This may be exemplified by the use of the private car. Today the car is in many countries one of the great icons of wealth and status, in addition to filling the practical purpose of transport. The real need is access to transport. If public transport can be developed to an adequate level, the actual need for a private automobile will be reduced for many people. The desire to own and drive your own car may nevertheless still be with the consumer. Cars that are more efficient, less resource consuming and less polluting are therefore still important to develop.

(Source- United Nations Environment Programme)

ISSUES RELATED TO SUSTAINABLE CONSUMPTION

Issues related to Sustainable Consumption are as follows:-

- **Environmental damage:** The extraction, production, use and disposal of many goods and services cause serious environmental problems such as resource depletion, energy wastage, pollution of the air, water and land, and growth in the levels of solid, toxic and hazardous wastes.
- **Poverty:** While many people around the world, especially in the North, over a billion people still lack access to supplies of safe water.
- **Health:** The productions of many consumer goods cause extensive damage to human health through air and water pollution. While pollution is a major cause of premature death in the South, many diseases in the North are now considered 'lifestyle' diseases.
- **Economic efficiency:** Conventional development models have sought to compensate for the above problems by attempting to incorporate more people into consumer economy through economic growth. This has often been at the expense of changes in the distribution and pattern of consumption, which can be more cost-effective and resource efficient.
- **Global environmental change:** Industrial, commercial and domestic energy use, especially in the transport sector, is the major source of greenhouse gases while air-conditioning and refrigeration are significant causes of ozone depletion. These global environmental threats can be addressed by changes in the design and construction of buildings and transport systems.
- **Quality of life:** Increasing material comfort does not necessarily lead to a better quality of life due to the degradation of the human environment and the erosion of social relationships.

WHAT CAN SUSTAINABLE CONSUMPTION DO?

- Reduce the direct environmental burden of producing, using and disposing goods and services.
- Meet basic needs for key consumption goods and services, such as food, water, health, education and shelter.
- Maximize opportunities for sustainable livelihoods.
- Consume goods and services that contribute positively to the health and well-being of women and children.
- Increase the development and adoption of energy and water efficient appliances, public transport and other demand-side measures.
- Enable the production and sale of new goods and services to adapt for global environmental constraints and
- Place greater value on social cohesion, local traditions and non-material values.

HOW CAN WE CHANGE CONSUMPTION PATTERN?

- By focusing on unsustainable patterns of production & consumption.
- By developing national policies and strategies to encourage changes in unsustainable consumption patterns.
- Encouraging greater efficiency in the use of energy and resources.
- Minimizing the generation of wastes
- Assisting individuals and households to make environmentally sound purchasing decisions.
- Exercising leadership through government purchasing.
- Moving towards environmentally sound pricing.
- Reinforcing values that support sustainable consumption.

PROMOTING SUSTAINABLE CONSUMPTION

Promoting sustainable consumption and production are important aspects of sustainable development, which depends on achieving long-term economic growth that is consistent with environmental and social needs. Most government policies in this area focus on stemming the environmental impacts of unsustainable industrial production practices, primarily through regulations and taxes. Promoting sustainable consumption is equally important to limit negative environmental and social externalities as well as to provide markets for sustainable products. The trend towards considering the social dimensions of sustainable consumption has led to more attention to how products are produced. Consumers are increasingly concerned with not only the polluting or health effects of the consumption of products, but also the impacts which that consumption may have on the factors of production, including workers and resources. As a result, sustainable consumption policies and initiatives are broadening to take into account the effects of processes as well as products and the provision of services as well as goods. Increasingly sophisticated approaches are being used by governments to target policies to consumer groups based on better understanding of social and economic behavior.

(Source-Sustainable Consumption, Dr. Desh Bandhu, President, Indian Environmental Society, Delhi)

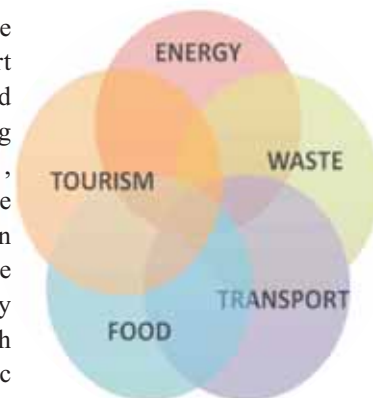
FACTORS FOR PROMOTING SUSTAINABLE CONSUMPTION

- Standards and Mandatory Labels
- Taxes and Charges
- Communications Campaigns
- Education
- Voluntary Labeling
- Corporate Reporting
- Advertising
- Public Procurement
- Understanding Consumer Behaviour
- Price and income
- Personal biases
- Age
- Gender

PROBABLE SECTOR FOR SUSTAINABLE CONSUMPTION

- **Energy:** In the case of improving the energy efficiency of household appliances, labels are accompanied by minimum energy performance standards. Driven by these standards, the consumers and manufacturers moved towards more eco-designs and efficiency gains. The less efficient machines, although often cheaper, should gradually take off the market. However, energy efficiency labels alone have not been generally effective in promoting more sustainable purchases. In many countries, providing information failed to get more than a minority of people to buy energy-efficient dishwashers, refrigerators and washing machines, even when labels highlighted savings on operating costs. Households facing higher costs tend to purchase energy-efficient appliances. Many countries are now considering taxes and standards to accompany labels for light bulbs to close the price gap between traditional tungsten and more energy efficient models.
- **Waste:** Different approaches have been adopted in various countries for reducing household waste, mainly waste disposal charges combined with recycling schemes. Waste collection charges are an effective approach to reducing the quantity of waste and increasing recycling. Rather than flat fees, these charges should vary with the amount of waste and be combined with a recycling program. Decreasing water wastage may also call for more than one approach. Given widespread water scarcities, most countries now charge for water supplied to households and add additional levies for consumption over given thresholds as well as special restrictions.
- **Transport:** Personal transport decisions are strongly influenced by cost, which makes financial penalties and incentives the instruments of choice. As consumers buy more and bigger cars, countries are adopting a mix of

measures to encourage sustainable transport choices. Taxes and charges, including petrol taxes, differential vehicle taxes and congestion charges, can be effective particularly when combined with investments in public transport



- **Food:** The characteristics of shifts to sustainability in the food sector differ from the key drivers for other goods and services. Concern for animal welfare is behind the trend to dolphin-friendly tuna and free range eggs, while concern for human welfare as well as environment has prompted purchases of Fair-trade and Rainforest goods. Low-cost certification methods and labeling schemes that appeal to health and welfare are promoting more sustainable choices in these areas. However, some governments reinforce these instruments by providing financial support and mounting communications campaigns for Fair-trade and other labeling promotions.
- **Tourism:** Promoting sustainability may depend on more than one policy tool owing to good consumer intentions combined with labeling confusion and lack of awareness. The major task on Sustainable Tourism is examining a package of measures including communications campaigns and labeling, certification and verification of sustainable destinations and tours, fines for unsustainable activities, and subsidies for sustainable energy, wastewater and waste treatment as well as recyclable buildings in tourism locales.

(Source- United Nations Educational, Scientific and Cultural Organization)

SUSTAINABLE CONSUMPTION PROGRAMMES

Sustainable consumption programmes can promote coherence and realize synergies across a range of policies: consumer, education, economic, social, environmental, etc. In the absence of an integrated strategy, disconnected initiatives not only lack cohesion but also the full force of a range of government ministries and their policy tools. Without sound approaches to sustainable consumption in terms of sectors (food, energy), actors (households, women, youth) and instruments (regulations,

taxes, communications), initiatives may have inconsistencies or significant gaps and be generally ineffective.

UNEP has developed Guidelines for National Programmes on Sustainable Consumption and Production in 2008, which address many of these issues. Countries that have overall strategies for sustainable consumption and production include Austria, Czech Republic, Finland, France, Korea, Norway, Poland, Sweden and the United Kingdom. Hungary, Germany and Greece are in the

process of developing national sustainable consumption and production strategies. The Swedish programme on sustainable consumption (Think Twice! An Action Plan for Sustainable Household Consumption) was developed in 2006 by the Swedish Consumer Agency and contains specific proposals in the areas of food, energy-efficient households and travel.

The UK sustainable consumption action plan targets behaviour groups and purchasing patterns with a mix of policy interventions in the areas of energy efficiency, waste and recycling, water usage, personal transport and food. The United Kingdom established ten “road maps” for promoting Sustainable Consumption in 2004. The Finnish Getting More from fewer programmes was formulated by a multi-stakeholder advisory

group. In Germany, the Federal Environment Ministry (BMU) started a national process on sustainable consumption and production in 2004 which involves all relevant stakeholders. In this context, consumer policy agencies are particularly important. Understanding the social and economic aspects of consumer behavior is central to designing effective approaches. Consumer agencies have direct links to market behavior in dealing with regulations, standardization and codes of conduct as well as maintaining basic access to goods and services.

(Source- *Planning for Change: Guidelines for National Programmes on Sustainable Consumption and Production*, UNEP, 2008; *Sustainable Consumption*, Dr. Desh Bandhu, President, Indian Environmental Society, Delhi)

ACTION FRAMEWORK FOR SUSTAINABLE CONSUMPTION

The Sustainable Consumption Action Framework is based on five elements:

- Use the mandate for action- Without a mandate, government can do little to change the people behavior. But now, people do appear ready and willing to see new policies introduced that will help them in changing their behavior in the face of challenges such as climate change and global poverty. They are looking to government to make it easier for them to do the right thing.
- Focus on behavior- The goal for policy action is to enable people to live sustainable lifestyles. Therefore, there is a need to identify, and set priorities around, the behaviors that need to be encouraged or sustained. This does not mean that the emphasis for policy action is about waiting for a lead from ordinary people. But any policy action needs to be rooted in an understanding and awareness of consumer behavior.

(Source-*Sustainable Consumption*, Dr. Desh Bandhu, President, Indian Environmental Society, Delhi)

To bring the issues of sustainable consumption alive, for example, people need to see symbolic, effective solutions in their everyday lives. Some actions act as catalysts – creating a deeper commitment to sustainability than the action itself. The effects of these interventions ripple outwards by opening people’s minds to ways of doing things differently.

- **Put products and services at the centre-** Collaborative partnerships between business and government hold the key to making sustainable products and service the norm in our



lives. This means harnessing enterprise, rather than shackling it. The key to achieving this is for policy-makers to set long-term sustainability ‘product roadmaps’ for key products and services.

- **Build collective action-** In a consumer society and a market economy, the role of government is to facilitate collective responses to collective problems that cannot be solved by individual choice. Sustainable consumption falls directly in this camp. It is extremely hard for any one individual or business to deviate widely from the collective norms. Only

the minority that seeks to define their identity around sustainability will do so. So we will need to move together.

- **Widen the mandate-** These are practical steps. As they progress, there will be a need to deepen the change and foster a mandate for further action through appropriate pauses for reflection. After all, there are many tensions, trade-offs and dilemmas at the heart of a complex challenge such as sustainable consumption. The right process can help

to acknowledge these, to bring them out into the open and sometimes resolve them, allowing society as a whole to move further along the spectrum of change required for a sustainable future.

(Source-(Sustainable Consumption, Brij Kishore (RETD. IAS), Visiting professor, School of Planning and Architecture, New Delhi)

TIPS FOR SUSTAINABLE CONSUMPTION

Take the ecological footprint test so you know where to start. Then try implementing a few of these simple strategies into your everyday lifestyle:

Choice editing for sustainability is about shifting the field of choice for mainstream consumers: cutting out unnecessarily damaging products and getting real sustainable choices on the shelves. In the context of high consumer concern, the idea of integrating the most convincing issues of sustainable development through choice editing makes sense. Consumers benefit from the assurance that the issues they care about are considered, rather than facing the demand that they struggle with those complexities themselves.

(Source-Sustainable Consumption, Dr. Desh Bandhu, President, Indian Environmental Society, Delhi)

-  1. RAISE THE NUMBER OF PEOPLE SWITCHING TO ALL-RENEWABLE GREEN ENERGY TARIFFS.
-  2. PROMOTE KEY ENERGY-EFFICIENT HABITS, Such as the installation of home insulation and sensible use of high-efficiency, energy using household products.
-  3. CUT DOWN ON EXCESS USE OF MEAT AND DAIRY PRODUCTS.
-  4. INCREASE THE CONSUMPTION OF MORE IN-SEASON PRODUCTS.
-  6. INCREASE THE PERCENTAGE OF COMMUTERS THAT WORK FROM HOME, CAR-SHARE OR OPT FOR CYCLING, THE BUS OR TRAIN.
-  7. RAISE THE NUMBER OF PEOPLE OFFSETTING CARBON EMISSIONS.

WHAT GOVERNMENT CAN DO?

A Sustainable Consumption Action Framework is a guide to policy, rather than a rigid set of rules. It recognizes the complexity, as well as the possibility, of behavior change. It also views the sustainable consumption challenge as a spectrum. A simple technological intervention – a mini wind turbine on the roof, or a big cut in standby power requirements for TVs and set-top boxes, for example – could have a very positive environmental impact. Such a change would require changes in the market and changes in business practices. But with appropriate 'choice editing' it demands very little in the way of active change from people.

In the centre of the spectrum, there are more deep-seated changes to habits and routines, like restoring a sense of seasonality to what we eat, turning off lights and opting to walk or cycle in the neighborhood rather than taking the car. Even in this middle ground, supportive policies and investments are essential in order to encourage, enable, and engage people in the required changes. And it is critical that government sets an example. At the far end of the spectrum are innovations and measures that require people to change their behaviors significantly and perhaps even to find new ways of expressing their underlying aspirations.

SUSTAINABLE LOCAL DEVELOPMENT: SUSTAINABLE DEVELOPMENT IN LOCAL CONTEXT

- At the local level, sustainable development requires that local economic development supports community life and power, using the talents and resources of local residents
- To distribute the benefits of development equitably, and to sustain these benefits for all social groups over the long term
- This can only be achieved by preventing the waste of ecological wealth and the degradation of ecosystems by economic activities
- Economic development imperatives favor market expansion, externalization of costs, and sustained private profit
- Imperatives of community development are to meet basic human needs, increase economic and social equity, and create community self-reliance.
- Imperatives of ecological development require Humans' support by limiting the consumption of natural resources to a rate that allows nature to regenerate resources and by reducing the production of wastes to levels that can be absorbed by natural processes.

HOW PANCHAYATS CAN FACILITATE SUSTAINABLE DEVELOPMENT

- Managing & utilizing the natural resources.
- Maintaining the basic infrastructure for economic activities.
- Implementing of government development programs: providing housing sanitation facilities, etc.
- People participation: reservation for weaker classes in decision making process.
- Collecting information and monitoring the implementation of developmental plans.
- Raising awareness among villagers about global and health issues.

GRASSROOTS INITIATIVES OF CENTRAL AND PROVINCIAL GOVERNMENTS

- **National Rural Employment Guarantee Act:** Developmental programs are intended to ensure sustainable local development. Panchayats are given central role in planning and implementation of development work with village assembly.
- **Watershed Management Mission:** To create community level water security and improvement of land resources through people committee.
- **Joint Forest Management Mission:** Management of forest through people committee
- **Education Guarantee Scheme:** Provide school to every community within one km range. The scheme worked through tripartite partnership between local community, local government and State government
- **Padhna Badhna Andolan:** Adult literacy mission. Works through partnership of state government and local community.
- **Rogi Kalyan Samiti:** Providing health education in rural areas, managed by people's committee and local government.
- **Energy Efficient Street Lighting:** Reduced energy consumption from street lighting by 30-40 per cent.

RECOMMENDATIONS FOR IMPLEMENTING THE FRAMEWORK

Quality and success, in terms of behavior change, might appear at present to be variable. We recommend that they would be better co-ordinated within a framework of a government social marketing strategy designed to promote key behavior change goals. As part of this, government should set a limited number of priorities for promoting lifestyle changes. We encourage a new focus on food and diet and on the need to find positive ways to reduce the impact of meat and dairy products. Action on these, and other priorities, could be taken forward through 'delivery coalitions' of non-profit organizations, consumer groups and

business. To control the scope for choice editing in relation to these, government should collaborate with the new Sustainable Consumption and Production Business Task Force, and other business champions, to plot ten 'product roadmaps' by 2008 for rapid change in priority high-impact products. Road maps for mainstreaming low-carbon cars, energy-efficient lighting, low carbon domestic cooling systems, consumer electronics with low standby consumption, and more sustainable fish, are all possible examples that could be developed.

CONCLUSION

- Due to diverse and complex nature of problems, grassroots initiatives are key to deal with local as well as global challenges.
- The successful cases have clearly shown that it has been possible to identify at the local level the right kind of activities and suitable technologies for environmental regeneration and livelihood protection of the poor. The achievements in terms of awareness generation, organization of people, their education etc. have been considerable.
- It has been also possible to involve people in these activities not only in implementation, but also in planning, decision making and management of assets. The successful case studies do suggest that the poor at the bottom have benefited by micro interventions.
- There has been good success in terms of generation of short-term employment for people while regenerating environmental resources. Though, the employment generated has not been enough to meet the needs of the poor, the case studies do indicate that it is possible to generate more employment with larger funds and higher scale of activities.

From Print Media

Instead of talking about global warming, let's take simple and practical steps to counter it

Notwithstanding the IPCC's role in creating cynicism about the global warming debate, the issue is real and alive. Simply, the laws of physics can be used to assess the partial trapping of infrared radiations emitted by the Earth's surface from constituents present in atmosphere. The main concern is increasing atmospheric concentration of carbon dioxide, an end-product of energy use in any form. Wishing a cap on emissions by countries is, at best, a fantasy immersed in a black hole of convoluted discussions to no end. One casualty of never-ending parleys – within countries, between countries and diverse interest groups – has been the search for alternate solutions to cool the planet's temperature.

Almost all incoming solar radiation, known as short-wave

radiation, passes through the atmosphere and reaches the Earth's surface. The bulk atmospheric constituents (99 percent) – nitrogen and oxygen – are transparent to short-wave solar radiation. On reaching surface, short-wave radiations undergo reflection and absorption. 'Fractionation' between these two is associated with the nature of the surface. This is the surface composition's texture and colour determine what fraction of incident radiation gets reflected and goes back.

The characteristics of short-wave solar radiation do not change when reflected, and essentially the atmosphere remains transparent on its return journey too. Albedo, or surface reflectivity, determines the fraction of radiation absorbed by the surface, and thus its temperature. Low albedo implies a larger fraction will be retained. In short, tinkering with the albedo of surfaces can help lower surface temperature by reflecting a larger fraction of incident solar short-wave radiation back.

COULD I BE THIS EASY?

Take the example of the surfaces amenable to albedo tinkering in a large city like Delhi. About 64 sq. km (12.5 percent of the city's total area) is occupied by roads made of asphalt. When freshly laid, the colour is black and the albedo 0.05. With time, the colour changes to grayish black and the albedo to 0.15. In the first case, the black surface will only reflect 5 per cent of the incident solar radiation and absorb 95 per cent. Later, the grey reflects 15 per cent and absorbs 85 per cent.

“Wishing a cap on emission by countries is a fantasy. One casualty of never-ending parleys has been the search for alternate solutions to cool the planet's temperature”

Now, if instead of asphalt the road surface is made of cement and albedo jumps to between 0.3 and 0.4, implying that additional short-wave solar radiation can be sent back (30 to 40 per cent). In the middle of June in Delhi, mid-day asphalt road surface temperature can be about 65 degrees centigrade, much higher than the Met department's daily record, where the maximum temperature is never more than 45 degrees as it is measured in the shade at a height of about four feet.

Short-wave radiation absorbed during the day transforms into heat, and this heat is sent back into the atmosphere as infra-red radiation partially trapped by green house gases, the essence of the global warming problem. This area is large enough to alter the albedo substantially by bouncing a large chunk of short-wave solar radiation back. By the simple expedient of raising the albedo from 0.15 to 0.4, an additional 25 per cent of the short-wave radiation can be reflected away from the Earth's surface, lowering the city's overall average temperature by about 2 degree Celsius. This decrease would send less infra-red radiation back to be trapped by green house gases.

Almost 90 sq. km. area of Delhi is covered by high and low density dwelling units. If even 50 percent of the roof area of these

buildings is appropriated for change in albedo by painting roof surfaces white (an all-weather exterior coat), and additional 40 per cent of short-wave solar radiation will be reflected back. The results can be so substantial as to be startling. A roof that is cooler prevents conduction of heat to rooms of the floor below, ensuring a decrease in power requirements for cooling. This measure alone would lower the entire city's temperature by 2.5 degrees Celsius.

Planting trees along roads would also help lower temperature by reflecting a major fraction of short-wave solar radiation spectrum back. Plants are green because they reflect this range of radiation. Almost 12 per cent of incoming solar short-wave radiation energy comprising this fraction. The efficacy of this step will depend on the number of trees planted and their canopy size but, in any case, the cooling effect is assured.

If these steps are taken rough calculations indicate that the average reduction in city temperature can be between 3 to 5 degrees Celsius. Given the direct correlation between power consumption and higher day-time temperatures during summer, summertime energy consumption will be considerably lowered. Lower power consumption implies less emission of dreaded carbon dioxide, or a saving of precious carbon credits.

This seems a simple, logical way to counter global warming: introducing measures based on established scientific facts, thus transforming large cities into the first frontier of the battle against global warming, without imposing carbon dioxide emission caps on nations. Or we could continue to think nations will somehow agree to decrease emissions of global warming gases, a dream indeed.

The writer is professor, atmospheric chemistry, School of Environmental Science, JNU.

कैसे मिले हर भारतीय को भोजन

कृषि भूमि में विस्तार की संभावना नहीं, लिहाजा उत्पादकता बढ़ाकर ही पूरी होगी खाद्यान्त की बढ़ती मांग

— देश में खाने पीने की चीजों की मंहगाई से आम जनता काफी परेशान है। नवीनतम आंकड़ों के मुताबिक खाद्य पदार्थों की मंहगाई का सूचकांक 16.35 प्रतिशत पर है। सरकार कह रही है कि इस मंहगाई में जल्द ही कमी आ सकती है, क्योंकि रबी की बढ़िया फसल की उम्मीद है। पर सवाल यह है कि क्या एक बढ़िया फसल देश में मंहगाई पर अंकुश लगा सकती है ?

खाद्य पदार्थों की मंहगाई का कोई एक कारक नहीं है। भारत में इसके लिए कई कारण जिम्मेदार हैं। जैसे इसका सबसे बड़ा कारण खाद्यान्त के

मामले में देश में प्रति हेक्टेयर कम उत्पादन होना है। देश में 14.6 करोड़ हेक्टेयर कृषि भूमि है जिससे 10.8 करोड़ टन अनाज का औसत उत्पादन होता है। हमारी तुलना में चीन में मात्र 10 करोड़ हेक्टेयर कृषि भूमि है, पर वहां 4.0 टन का औसत उत्पादन होता है।

अनिश्चित मानसून—

भारत में अनाज उत्पादन कम होने की सबसे अहम वजह मानसून की अनिश्चिता है। पिछले साल देश में सूखे की स्थितियां थीं। इस कारण 2008-09 में खाद्यान्त उत्पादन में 1.8 करोड़ टन की कमी आ गई। अनाज उत्पादन कम होने से जमाखोरी और कालाबाजारी भी बढ़ गई और इसके फलस्वरूप मुद्रास्फीति में भी तेज इजाफा हुआ। साफ है कि देश में कृषि भूमि में और विस्तार नहीं किया जा सकता। ऐसे में बढ़ती

मांग से मुकाबला करने का एक ही उपाय है उत्पादकता बढ़ाना। उत्पादकता बढ़ाने के लिए कृषि में सार्थक निवेश की आवश्यकता है। वाशिंगटन स्थित अंतर्राष्ट्रीय कृषि नीति अनुसंधान की एक रिपोर्ट के अनुसार अगर एक भारतीय की औसत वार्षिक आय 3.7 प्रतिशत की दर से बढ़ती है तो 2020 तक देश में 3.6 से 6.4 करोड़ टन अनाज की कमी हो सकती है। खाद्यान्त की बढ़ती मांग की पूर्ति के लिए देश में 2010 तक चावल के उत्पादन में 32 प्रतिशत, फलों में 72 प्रतिशत और सब्जियों में 53 प्रतिशत वृद्धि करने की आवश्यकता है। वर्ष 2020 तक इसमें दो गुना बढ़ोत्तरी की जरूरत होगी।

बदल रहा है खानपान

यह भी ध्यान में रखने वाली बात है कि बढ़ती जनसंख्या के साथ-साथ लोगों की खानपान की आदतें भी बदल रही हैं। आज गरीब तबके के लोग उपभोग अधिक कर पा रहे हैं, क्योंकि राष्ट्रीय ग्रामीण रोजगार गारंटी योजना के जरिए उन्हें नियमित मजदूरी मिल रही है। मध्यमवर्ग के लोगों में दूध, अंडा, मांस, फल और सब्जियों का उपभोग बढ़ रहा है जिससे परीक्षा रूप से खाद्यान्त उत्पादन पर दबाव बढ़ता ही जा रहा है।

देश में कभी हरित क्रांति से खाद्यान्त क्षेत्र में काफी क्रांतिकारी बदलाव आए थे। आज उसी तरह की एक और हरित क्रांति की जरूरत है जिसमें गेहूँ, चावल, ज्वार, बाजरा, मक्का, दलहनी फसलों, तिलहनों की ऐसी प्रजातियां विकसित की जाएं जिन्हें सूखे इलाकों में कम पानी और कम खाद देने पर भी उगाया जा सके। बायो टेक्नोलॉजी और मालेक्यूलर बायोलॉजी में इतना आगे बढ़े हुए देश में ऐसी प्रजातियां विकसित करना कोई मुश्किल काम नहीं है। ऐसी प्रजातियों के विकास से उत्पादन लागत में कमी आएगी तो उत्पादकता अपने आप बढ़ जाएगी। मौजूदा खाद्यान्त संकट का एक हल प्रधानमंत्री की आर्थिक सलाहकार परिषद ने बीटी काटन का उदाहरण देते हुए जीएम फसलों के रूप में भी सुझाया है। परिषद ने इस बात पर बल दिया है कि सरकार को ऐसी फसलों के लिए एक स्पष्ट नीति तैयार करनी चाहिए संबंधित संस्थाओं को इन फसलों की परीक्षा खेतों में जाकर करनी चाहिए। साथ ही वातावरण पर इनके प्रभाव और खाद्य सुरक्षा जैसे पहलुओं को जल्द से जल्द सार्वजनिक करना चाहिए।

खेतों से मंडी और वहां से उपभोक्ता तक पहुंचने के दौरान खाद्यान्तों और खाद्य पदार्थों का काफी नुकसान होता है। एक आकलन के अनुसार इस तरह लगभग 30 प्रतिशत खाद्यान्त बर्बाद हो जाते हैं। इसकी वजह है देश में भंडारण, परिवहन, कोल्ड चेन जैसी बुनियादी सुविधाएं उपलब्ध न होगी। यह बर्बादी भंडारण और सप्लाय चेन में सबसे अधिक है। इस संबंध में कृषि में निवेश एक बड़ा मसला है। हाल में, प्रधानमंत्री आर्थिक सलाहकार परिषद ने सुझाव दिया है कि उत्पादकता की चुनौतियों का सामना करने के लिए कृषि अनुसंधान और विकास पर व्यय को बढ़ाना पड़े। परिषद के सुझाव के अनुसार वर्तमान में इसे जीडीपी के 0.7 प्रतिशत

से बढ़ाकर 1 प्रतिशत करना होगा। पर यहां पर भी ध्यान में रखना होगा कि कृषि में निवेश का मामला अकेले केन्द्र अथवा राज्य सरकारों के बूते की बात नहीं है। इसमें निजी और विदेशी दोनों क्षेत्रों की भागीदारी की जरूरी है। दुनिया के कई मुल्कों में कृषि बाजारों में ठेके पर खेती जैसे उदारीकरण के मॉडल अपनाए गए हैं, जिसमें निजी और सहकारी क्षेत्र बराबर भागिल हैं। ऐसी ही नीति बनाकर भारत में खाद्यान्त, प्रसंस्करण, रिटेल चेन और उपभोक्ताओं के बीच एक मजबूत कड़ी बनानी होगी।

घटना मार्जिन-

पर इसकी अनदेखी नहीं हो सकती कि खेती के व्यवसाय में घटते मार्जिन, सूखा और बाढ़ का प्रकोप, कृषि उत्पादों के भीघ्र खराब होने से खेती के लिए पूंजी जुटाने की किसानों की क्षमता में कमी आई है। कुछ लोग रिटेल क्षेत्र में प्रत्यक्ष विदेशी निवेश का विरोध कर रहे हैं, पर उनकी आंखें खाद्य पदार्थों की बढ़ती मुद्रास्फीति से खुलनी चाहिए। पोस्ट हार्वेस्ट फार्मिंग को प्राथमिकता क्षेत्र घोषित किए जाने के बावजूद इसमें अपेक्षित पूंजी का निवेश नहीं हुआ। इसलिए कृषि को संकट से उबारने के लिए एक तरफ तो निजी क्षेत्रों को निवेश के लिए बढ़ावा देना होगा तो दूसरी ओर प्रत्यक्ष विदेशी निवेश लाना होगा। तभी किसानों को खुशहाल बनया जा सकता है। तभी किसानों को खुशहाल बनाया जा सकता है। इस बारे में अंतर्राष्ट्रीय रिटेल चेन वालमार्ट के अनुभव के आधार पर कहा जा सकता है कि अगर किसानों के साथ फसल बेचने पर मिलने वाले मूल्य के बारे में पहले से करार हो तो इससे किसानों की खेती में दिलचस्पी बढ़ती है और वे उसमें निवेश बढ़ाने को प्रेरित होते हैं। ऐसे उपायों से देश खाद्यान्त उत्पादन में पूरी तरह आत्मनिर्भर हो सकता है।

ग्रीन एनर्जी से निकलेंगे एक करोड़ रोजगार

भविष्य की ऊर्जा जरूरतों को पूरा करने के लिए देश ग्रीन एनर्जी (अक्षय ऊर्जा) क्षेत्र की ओर तेजी से कदम बढ़ा रहा है। इसमें न केवल ऊर्जा जरूरतों को पूरा किया जा सकेगा, बल्कि जलवायु परिवर्तन की चुनौतियों से भी निपटने में मदद मिलेगी। इतना ही नहीं इससे इस क्षेत्र में बड़ी संख्या में रोजगार पैदा होने की भी संभावना है। ग्लोबल क्लाइमेट नेटवर्क (जीसीएन) की मानें तो भारत सरकार के नेशनल ऐक्शन प्लान आन क्लाइमेट चेंज (एनएपीसीसी) के क्रियान्वयन से पवन, सौर और जैव ईंधन के जरिए बिजली उत्पादन में बढ़ोत्तरी होगी। साथ ही रोजगार के 1.05 करोड़ प्रत्यक्ष अवसर भी पैदा होंगे। 'लो कार्बन जाब्स इन ए इंटरकनेक्टेड वर्ल्ड' शीर्षक से प्रकाशित रिपोर्ट में कहा गया है कि पवन ऊर्जा तकनीकी के क्षेत्र में भारत अहम देश है। इस क्षेत्र में भारतीय कंपनियां अंतर्राष्ट्रीय बाजार में 10 प्रतिशत हिस्सेदारी हासिल कर सकती हैं। इससे अकेले इसी 2 लाख 88 हजार 500 लोगों को रोजगार मिलेगा। इस रिपोर्ट को जीसीएन और द एनर्जी रिसोर्सेस इंस्टीट्यूट (टेरी) ने मिलकर तैयार किया है। रिपोर्ट में कार्बन उत्सर्जन घटने में अंतर्राष्ट्रीय सहयोग का समर्थन किया गया है।

Messages

The journal is very useful for farming and agriculture development.

MR. K. Balakrishna Moorthy, *General Secretary, People's action for Social Service, Tirupathi.*

Panchayat Newsletter is very useful to aware about the environment's various aspect to the common people.

Mr. Deep Kumar Pandey, *Secretary Chandra Shekhar Azad Sewa Samiti, Achalganj, UP*

This journal is a quite useful tool to the scientists/students/research workers of this agricultural university for improving the sustainable agriculture along with development.

Mrs. Malika Nag, *Periodical section, University Library, H.P. Krishi Vishvavidyalaya, Palapur*

Panchayat magazine gives knowledge about environment forest development, pollution control, social development and welfare.

Dr. Ayodhya Prasad Misra, *President, All India weaker Welfare Society, Lucknow*

This magazine is very useful for social workers, write ups are informative.

Dr. B. C. Srivastava, *Secretary, Shohratgarh Environmental Society, Siddharthnagar U.P*

यह पत्रिका समाज के लिए उपयोगी है, जिससे पर्यावरण के बारे में जानकारी प्राप्त होती है।

विमला देवी, *अध्यक्ष, रानी अवन्ती बाई ग्राम उद्योग समिति*

इस पंचायत पत्रिका से पर्यावरण के विभिन्न समस्याओं एवं समाधान सम्बंधित जानकारी उपलब्ध हो रही है।

अभया यादव, *हरीश चंद सिंह स्मारक सेवा समिति*

Role of Panchayats in Environmental Management

ENVIS Newsletter

Glimpse of the Website

www.iesenvis.nic.in

ENVIS CENTRE ON ROLE OF PANCHAYATS IN ENVIRONMENTAL MANAGEMENT

The website has compiled all the relevant data and comprehensive information on different components of Panchayati Raj and Environment. The website contains information on databases developed; geographical distribution of Panchayats; success stories, areas of Panchayati Raj co-operation; elections, finance, query services; bibliography; resource repository etc.

We hope that the information contained in the website will suffice your requirements.

We would appreciate your comments & suggestion about the website so that we can update it as per the requirements of our browsers.

Wish you a Happy browsing on www.iesenvis.nic.in

The Centre invites for Publications :

- Reports on Panchayati Raj (specially related to environment) and rural development
- Short report on seminars/workshops on the related topics are also invited. Those found suitable will be published in the newsletter.
- Articles for the newsletter "Panchayat" are invited.

Forthcoming Events

- **GLOBE Teacher's Training Program**, at Conference Room, Delhi Secretariat, Delhi during February 17-19, 2011.
- **Celebration of World Forestry Day**, on March 21, 2011
- **Celebration of World Water Day 2011**, on March 22, 2011
- **GLOBE Teacher's Training Program**, at Conference Room, Delhi Secretariat, Delhi during April 18-20, 2011.
- **GLOBE Teacher's Training Program**, at Shimla, Himachal Pradesh during May 2011.
- **Celebration of World Environment Day**, on June 5, 2011
- **Second Ecology Learning Expedition to Kathmandu**, Nepal, Kathmandu, Nepal during June 9-12, 2011.
- **Conference on Earth Science and Climate Change Research**, at the International Centre, Goa, India during September 25-28, 2011.
- **Train the Trainer Workshop on Carbon Cycle**, at Delhi during August 17-19, 2011

Book Post

Please return, if undelivered :

Indian Environmental Society

U-112 (3rd Floor) Vidhata House

Vikas Marg, Shakarpur

Delhi - 110092 INDIA

Phone : 22450749, 22046823, 22046824 Fax : 22523311

E-mail : iesenro@vsnl.com

Website : www.iesglobal.org • www.iesenvis.nic.in

To
