IJIRR

International Journal of Information Research and Review
Vol. 03, Issue, 10, pp. 2879-2886, October, 2016

ResearchArticle

ENVIRONMENTAL CONCERNS AT GLOBAL LEVEL AND REQUISITE ORIENTATION IN KNOWLEDGE AND TECHNOLOGY SECTOR

[1,*]Dr.Pratibha Rai and [2]Ms. Saumya Shukla

[1]Associate Professor, Maharaja Agrasen College, University of Delhi, India
[2]Assistant Professor, Maharaja Agrasen College, University of Delhi, India

ARTICLE INFOABSTRACT

Article History:

Received 25th July 2016
Received in revised form
26th August 2016
Accepted 16th September 2016
Published online 31st October 2016

Keywords:

Liberalization,
UNFCCC,
Spiritual Ecology,
Globalization,
Technological Diffusion.

The lack of internalization of environmental cost at all levels, be it at individual, societal, national or at global level in the production processes has led to unsustainable development. Increasing concerns about climate change brought the nations together in Rio Earth Summit in 1992. This land mark summit took place under United Nations Framework Convention on Climate Change (UNFCCC). This gave way to culmination of Kyoto protocol in December 1997 with the aim of reducing green house gases. Since then, under 21 Conference of Parties, the agreement has been taken forward but concrete consensus on cooperative intervention has not crystallized in these agreements since Kyoto Protocol. The 2014 Environmental Performance Index (EPI) has ranked 178 countries in total. Among them, India is placed at the 155th position, with an index score of 31.23 points which is quite disturbing. Its rank is also much lower than BRICS peers. All these indicators and efforts are indicative of definite shifts required in the development strategy. In the next 25 -30 years the wheels of change can be expected to lead to increased use of renewable sources for meeting global energy requirements. How these technological shifts are likely to impact the nations and bring changes at global level is the subject of interest and query in this paper. This paper used an exploratory orientation to emphasize that each nation needs a unique combination in terms of technology adoption and adaptation to produce goods and services, keeping in view diversity of resources each region is bestowed with, and thereby maintain the native ecosystems of the region. Identification and maintenance of that unique mix of technology with natural resource base can be better looked into with spiritual ecological orientation and developing this orientation should be the objective of education policy.

INTRODUCTION

Failure of multilateral organization like World Trade Organisation, International Monetary Fund and the World Bank in meeting theirlong-term objectives of promoting sustainable inclusive growth around the world is indicative of the fact that such issues should have glocal orientation. Environmental agreements (in Conference of Partiesunder the UNFCCC) have also met with very little success to promote inclusive growth with minimum damage to the world environmental resources around the globe. The reverse, in fact, has been the trend.Attempts to arrest the deterioration in the world climate due to anthropogenic interference havemotivated pertinent searches for alternatives to the current modes of globalization and the current world economic order. Governance structure ofWorld Bank and IMF are dominated by industrialised countries.

****Corresponding author: Dr.Pratibha Rai,***
Associate Professor, Maharaja Agrasen College, University of Delhi, India.

Decisions are made and policies implemented by leading industrialised countries, the G7, because they represent the largest donors, without much consultation with poor and developing countries.The inequalities, trade imbalances, lopsided development and balance of payment problems faced by the less developed nations still persist. These institutions have not been able to meet the objectives with which they were set up, specifically with respect to developing and underdeveloped countries.Trade liberalisation was expected to bring many political and economic benefits, but it is seen that the WTO has had limited success in these areas. There has been failure to confront ethical issues, failure to tackle environmental issues, and failure to promote multilateralism. WTO takes too long to arbitrate i.e. has a lengthy dispute settlement mechanism and favours the powerful.It is necessary for any future trading system that it is grounded in the will of the people of the countries which it is made up of, and where members are able to exercise their will through a collective and democratic decision-making process.

Such a system is needed as the current WTO system, centered on profitable accumulation and entirely void of concept of the public good, is both morally and theoretically unsustainable. One of the important outcomes of the Rio Earth Summit in 1992wasthe United Nations Framework Convention on Climate Change (UNFCCC).[1]The Convention aimed at stabilising the concentration of heat-trapping greenhouse gases at a level that couldstop dangerous interference with the climate system. Developed nations were to take the initiative and lead, by bringing emissions to 1990 levels by 2000, and by providing finance, technology, and capacity building for developing nations.The Convention was strengthened with Kyoto Protocol, five years later, in1997, where developed nations adopted legally binding obligations to cut down their emissions by 5.2% below 1990 levels by 2008-2012 on an average as the first step.Much larger emission cuts were targetedforthe future. Per capita emissions of developing countries were just a fraction of those in the rich and advanced countries. Hence developing countries did not get binding emission reduction obligations.

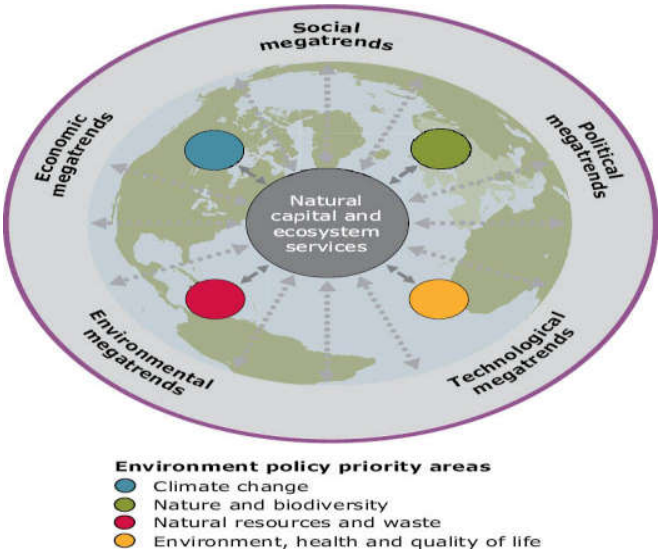
Unfortunately, even after twenty years we are nowhere close to achieving the objective of the Convention, and the concerns that are being shared and negotiated at the UNFCCC will no longer play a significant role at the Rio+20 summit although many other related informal discussions will take place in the corridors. There has been about 40% increase in the Carbon dioxide (CO_2) emissions and atmospheric CO_2 concentrations have not been at this level in millions of years. Global mean temperature has risen by 0.4°C and oceans have also become 0.28°C warmer. CO_2 gets dissolved in seawater and makes oceans more acidic to a degree and at a speed not witnessed in last 60 to 300 million years. This is threatening marine life. Distressing impacts can be seen in the form of the Arctic Sea ice which is melting at a faster pace. This has resulted in apocalyptic forest fires in Russia and record droughts in the Amazon within a short span of 6 years. Global emissions are continuously growing and the speed of growth has accelerated in the decade 2000-2010.

Governments hadcome to an agreement to keep warming under 2°C as compared to pre-industrial levels. This requires global emissions to peakin the next few years and then declinerapidly after that to be very close to zero by mid-century. The countries' existingpledges of emission reduction for 2020 at best can get us half way.

At this rate we will have 2.5 to 5°C warming by the end of the century. This might result in drastic changes in the world. About 3 million years agothe earth was 2^0 to 3^0C warmer and level of the sea was 25 to 35 meters higher than what it is today. So far governments have failed to arrest the dangerous climate change.We cannot deny the fact that the situation would have been worse if UNFCCC was not there. The cominginto force of the Kyoto Protocol was a major achievement in international diplomacy. Kyoto Protocol can be considered as a major achievement. But much more needs to be done. It would be a delusion to expect that a group of corporate lobbyists and government bureaucrats will alone give us a path to solve the greatest challenge that humanity is facing today.

Major global megatrends

- Global divergence in population trends are increasing: populations are ageing, growing and migrating
- Urban world is increasing: cities are spreading,resulting inescalating consumption
- Patterns of global disease burdens are changing and there is risk of new pandemics
- Accelerating growth in technologies that are racing into the unknown
- Continued economic growth
- Shifts in Global power: from a uni-polar to a multi-polar world
- Deepened global competition for resources
- Shrinking stocks of natural resources
- Consequences of climate change are becoming increasingly severe



Source: European Environment Agency

- Increasingly unsustainable load of environmental pollution

[1] http://www.homeworkmarket.com/sites/default/files/qx/15/02/03/02/unfcc_0.docx

- Global governance and regulation: rising fragmentation, but converging outcomes.

Global megatrends:are cutting across economic, technological, social, and even environmental dimensions.Key developments or mega trends include fast changing demographic patterns orincreasing rates of urbanisation, deepening market integration, faster changes in technology, economic power shifts and the changing climate. Biodiversity has been declining globally in spite ofincreased policy action and a few encouraging achievements(Hirst and Thompson, 1999, Scholte, 2000)[2]. The global species extinction rate is rising and is at present estimated to be approximately thousand times the natural rate. There is considerable evidence that critical ecosystem services are under great pressure globally.According to one estimate approximately one quarter of the net primary production has been changed by humans, either through land-use-induced productivity changes (40%), direct cropping (53%), or human-induced fires (7%)(Scholte,2000).

While thesefigures do give a clue of the considerable impact of humans on natural ecosystems, nevertheless these estimates should be considered with caution. Extraction of resources and their use is continuing to increase in absolute terms while gains in resource efficiencyare not increasing in same proportion. Hence precise information on resource development cannot be inferred from such indicators. Global water systems, food andenergy resourcesseem to be fragile and more vulnerable now than thought in the recent past.Supply instabilities that have increased demand and decreased supplyconditions are the factors responsible for this vulnerable situation. Over-use and degradation of resourcesand soil-loss are pertinent concerns in this regard. This may all sound like doom and gloom but there is a need for clarity on why we're in this situation. In purely practical terms, it is perfectly realistic for an agreement to be made that is both fair and effective. It is political determination that is missing, particularly amongst the principal emitters like the US. This problem is primarily due to the huge influence of high-carbon industries in the corridors of power in these nations.

Review of Literature

On Technology

The focus in this section is to understand the emerging trends in technology due to adverse impact of climate change on planet earth.The human centric development paradigm has led to several rounds of continuous deliberation at various national and international forums to address the issue. The geopolitical shifts after the oil price crash and slow-down ofChinese economy are worthy of close consideration. It would be a mistake to anticipate that price of oil will reach its erstwhile levels. Oil prices are going to oscillate for next few years. The next positive shock will come from clean energy. Use of wind energy and solar energy are moving forward on exponential curves. Rates of solar installations are doubling and costs of photovoltaic modules are declining. Costs of solar installations will halve by 2022 despite the fact that governments are phasing-out subsidies. 100 percent of the present needs of energy will be provided by solar power, which is expected to be almost free by 2035.

This prediction may not seem likely to hold true as less than one percent of current energy needs are provided by solar energy. However, experience of technologists tells us that the advances in exponential technologies are always of this nature.China's recovery, as of now, appears difficult. Growth in the manufacturing sector, which has contributed the most towards the industrial growth of China, is going to be stalled, causing ripple effects all through the Chinese economy. The trend of manufacturing inputs flooding into China from Europe and United States is slowing down. This is due to rising shipping costs and rising labour costs in China, and partly due to increased automation in the West. Robotic manufacturing is likely to tilt the balance further. Robots were unable to cooperate with human workers to do circuit board assembly of sophisticated nature. But with the new generation of Rethink Robotics' Sawyer and ABB's 'Yumi', this would be possible. China is aware of the robotic advancement and will not be behind in swapping robots with humans. There is a plan to construct zerolabour-factor zone in Guangdong province to do manufacturing in response to increasing labor costs. The planned replacement ratio of robots to humans would be 1:2 in the zone. The problem of concern is that the robots in China are not more productive than their counterpart in the West. They consume the same amount of energy and cost almost the same as in western countries. Hence,very soon it will not be worthwhile for western countries to bear the high transportation cost and get the goods assembled in China.However, companies of the West will take couple of years to build automated factories, learn the complexities of manufacturing to be done by robots. These companies will also take time to handle challenges of supply chain and train the workers. These surmountable problems will be overcome by the western world in six to seven years. There is likelihood that manufacturing will become a local industry.

Digital manufacturing appears to be another technology revolution in the west. 3D printers can already create medical implants, physical mechanical devices, clothing, and even jewelry. These 3D printers use plastic droplets, powered metals and many other materials very similar to the toner cartridges that are used in laser printers. Based on 3D models, successive layers of materials are melted to produce the parts, very much unlike conventional manufacturing. This is also heading for a change. We mighthave stylish low priced printers to print household goods and toys by early 2020. Labour intensive craft items and goods will be produced by businesses using 3D printers. There is a possibility of having 3D printed electronics and buildings by the next decade which will be as fast and efficient as laser printers of today. These geopolitical propositions of changes are worrisome and exciting at the same time. America, which is spearheading the boom in technology, will reinvent itselfas it does in a span of every 30-40 years.To distract their population, China and Russia might stir up unrest. There is likelihood of unrest and instability in the Middle East.

[2]Hirst, P. Q. and Thompson, G. F. (1999) Globalization in Question: The International Economy and the Possibilities of Governance, 2nd edn (1st edn 1996). Cambridge: Polity Press.
Scholte J. A, 2000 Globalization: A Critical Introduction, St. Martin's Press, 2000

Oil producing countries like Venezuela might soon be bankrupt.

Hypotheses

The current developments in the world economy have lent the hypothesis for our research. The futuristic technologies can be made more environment-friendly if the education system is governed by principles of spiritual ecology.

- Technological changes in the last couple of decades have been governed by anthropocentric orientation.
- Replacement of non-renewable sources by renewable sources would be the focus of future technological changes.
- The orientation of development should have a local ecosystem approach to have sustainable future.

METHODOLOGY

The framework of the study is built by observing the general mega trends of development that have taken place across nations, and particularly the state of developing countries (being the fulcrum of our analysis) with total disregard and lack of concern for assessing the impact on the planet earth or the natural resources of the country as a result of mindless consumption and production that is happening globally.Analysis of futuristic trend in technological innovationsand the consequent geo-political shifts based on literature review is the focus. The direction of geo-political shifts as given by researchers will be analysed to strengthen our call to shift the focus to build democratic institutions and strengthen democratic processes.

Results-in the form of perspectives arising out of the exploratory research

Significance of science and art in technological development

Innovation is not merely a technical issue but rather one of comprehending how people and the societies they live in work, what they require, and what they want. America will not dictate the 21st century by manufacturing cheaper computer chips but by constantly reimagining how computers and other new technologies interact with human beings and the resource base they live in. These new technologies should be diverse and should be customized to bring development in consonancewith the local native environment in order to jack up the employment opportunities all over and not in a few centers only. These should be so diffused that it promotes balanced development across the different parts of the country in particular, and different parts of the globe in general. The DNA of the technology should be such that it weds with humanity and marries with liberal art so that it gives way to solving the problems that humanity is facing. Current education system prevalent amongst most Asian nations is oriented more or less towards test taking and memorization. This may have its own strength but it does not induce creativity, stir thinking abilities or promote problem solving. As per Jack Ma who is founder of Alibaba, even Chinese education system does not nourish complete intelligence of students. Insights beyond technology come through innovations in business. The case of Facebook can serve as a good example. As a student of liberal arts,Mark Zuckerberg passionately pursued his keen interest in computers. He majored in psychology in his undergraduate programme and had studied ancient Greek intensively in high-school.We observe that Facebook's innovations have a lot to do with psychology. Zuckerberg had deep understanding of computers and that is the reason why he could use great coders to convert his ideas into practice, but as he has put it, Facebook is "as much psychology and sociology as it is technology."

Any educational program that includes a significant portion of the sciences is definitely broad based. Engineers, scientists and mathematicians develop "critical thinking" skills. They just need to be more perceptive about the impact of technology on bio diversity as a whole. There are no disciplines that demand more thinking skills than the sciences. But study of liberal arts is equally important. Inter-linkages in the study of all these subjects are vital for technology development.

A Radical Alternative is emerging

Economic globalization has a clear end goal- maximum trade and money flows for maximum profit. From this goal comes a clear set of policies and trade rules supporting this approach. The adverse effects of this economic priority have become increasingly evident and include growing global inequality, job insecurity and adverse environmental effects (Lang and Hines 1993)[3].There is now growing support for a radical alternative, that of localization (Hines, 2000)[4]. This has at its heart the protection and rebuilding of local economies rather than gearing them to ruthlessly out-compete each other internationally. Depending on the context, the 'local' is predominantly defined as part of the nation state, although it can be the nation state itself or occasionally a regional grouping of nation states. Everything that can sensibly be produced within a nation or a region should be. Long-distance trade is then reduced to supplying what could not come from within one country or geographical grouping of countries, the historic role of such trade.Localisation is not about restricting the flow of information, technology, management and legal structures, but it is about a different end goal for such activities. The idea is to maximise use of locally available resources, both raw material and factors of production. This would not only reduce the problem of cross-haulage but also help in creating employment.Localisation can be expected to ensure a more secure,equitableand environmentally sustainable future. Localization can be achieved by following a set of interrelated and self-reinforcing policies. Reintroduction of tariff and quotas as safeguards for domestic economies is important. A policy of producing goods and services demanded anywhere in the same locality and reinvestment of any profits from such production in local units is imperative. Economic and political interference of the government to control emergence of local monopolies and contain environmental damages is recommended. A system of trade rules, taxes and penalties needs to be evolved to administer such policies of the government, to encourage diversity in the locality and to ensure

[3]Lang, T. and Hines, C. (1993) The new protectionism. Protecting the future against free
trade.

[4]Hines (2000),Localization**:** A Global Manifesto;Protect the local globally-A route to localization, Chapter 6. (pg 62-67)

sustainability.In order to ensure re-localisation of the world economy, government policies should be used to undo the instability and insecurity created by liberalisation. The essence is that the local governments, communities and nations should be equipped to command and control their local economies so that they are in a position to make them diverse and are able to restore stability into community life. This does not imply recourse to state control that is overpowering but simplyadvocates a policy framework provided by the governments that allows businesses and people to re-diversify their local economies by ensuring proper administration of the existing laws and rules.A transition from the present situation to one where products and services are provided locally is required. Reducing service miles in procurement of goods isone of the environmental goals. There should be a positive bias in favour of the local.

A more cooperative better-your-neighbour localization is preferable to beggar your neighbour globalization. Governments have limited choice and will have to return to protective tariff -barriers in response to their restless and insecure populations. A channel for this change could be explained by the collapse of the colonial delusion that the futuristic jobs in rich countries lie in the dominationof the global high tech sector. This ignores the reality that India and China are fast developing and highly-skilled, but have low-cost proficiency of their own in the high value added domains of production that the west was supposed to dominate.Localization as an alternative does not occupy a prominent placein the thought process of most leading politicians. However, increasingly adverse effects of globalization are likely to garner massive public support for those political parties that would offer security and protection from globalization and substitute it with the rebuilding of local economies. It is time to do a radical thinking so as to ensure the emergence of a fairer and a more environmentally sustainable world where everyone's most basic hopes are met.

There is not much left to gain from towing the line of 'globalisation'. It is high time for realization that the waves of globalisation have subsided. They have nothing to offer to the developing world any more. The failure of WTO, IMF and World Bank points towards a need for an alternative route. Since the early 1980s, for achieving economic prosperity developing countries have been following an approach that emphasizes policy measures like fiscal discipline, trade and financial liberalization, privatization, deregulation, and minimal government intervention. The convergence of adherence to these policies and the lack of progress among the developing world over the last two decades have been remarkable. The structural adjustment programmesused to transmit these policies have been widely and heavily criticized. For a large number of people, Washington Consensus policies have resulted in continuing poverty and rising inequality. This has resulted in the lowering of credibilityand support forthe development agenda.This is discernable from theapparent collapse of World Trade Organization (WTO) talks. The dwindling support for these policies isclear. Since the early 1980s, for achieving economicprosperitydeveloping countries have been following an approach that emphasizes policy measures like fiscal discipline, trade and financial liberalization, privatization, deregulation, and minimal government intervention. The convergence of adherence to these policies and the lack of progress among the developing world over the last two decades have been remarkable.

Before attempting a re-evaluation,we would like to first reflect on reasons for the failure of Washington Consensus and why it could not succeed by generating the necessary support.A failure to actively involve people in the decisions and processes important for their development and their exclusion from governance can be one reason for this failure. Washington Consensus has promoted concentration of economic power in private hands and denied access to the vast majority of potential participantsto the 'global' economy. This denial is reflected in an absence of basic provisions of life and an absence of material welfare from the lives of a vast majority. It also brings to the fore a failure to include them in the strategic decision making processes faced by an economy. This is an exclusion of the majority from the developmental processes expected to lead to 'prosperity'.

Knowledge with a market perspective but with a principle of inclusion

The discussion on technology and spiritual ecology centric education system becomes very relevant in times of environmental crisis. It is the presentgeneration which will develop the future technology. A spiritual ecology centric education system can be used to instil high values in students and increase the '*satva*' component in them. Developers exposed to such a system of education will always weigh the impact of the technology they are working with on the other components of the society at large, and specifically on nature. This change in attitude of the young generation will help the country restore its lost glory as pioneers in mathematics and science as in the ancient times in India. Going to the roots is the panacea for the kinds of ills that are ailing our country today.Though we recognize competitive imperative for knowledge in the global economy, our perspective is slightly different. We see learning and knowledge as fundamental to the development of each individual and the communities that they constitute. This enables each community and individual to realizetheir potential. It is essential because it provides peoplewiththe opportunity to get involved in the decision-making processes that lead to development.

This brings about developmentthat is in consonance with the objectives and aims of localities.The uniqueimportance of knowledge is that it is crucial for the decision making to be democratized.It helps people to take part fully in the governance process in their locality.People get involved in the informal and formal networks for the governance of institutions, firms, and governments. In addition, whereever effective governance is missing, it helps people to ascertainthat it first gets established and later evolves towards effectiveness. Knowledge can hence be viewedas both *active* and *dynamic.* The critical issue is far deeper than just knowledge of 'facts'. Educational methods that "discourage original thinking" are highly criticized by Fromm (1941)[5]. He argues against the "pathetic superstition that by knowing more and more facts one arrives at knowledge of reality".

[5]Fromm (1941). Beginning with his first seminal work of 1941, Escape from Freedom (known in Britain as Fear of Freedom), Fromm's writings were notable as much for their social and political commentary as for their philosophical and psychological underpinnings. Indeed, Escape from Freedom is viewed as one of the founding works of political psychology.

Similarly, the essence of good governance is that each interested person is able to think about and participate in the process of governance. Each individual must be active andconscious to the necessity for certain types of knowledge. People should be abletotake decision regarding the pursuit of that knowledge, and also to use that knowledge in influencing strategic options.Besides that, while education and information equip people to actively participate in the governance of their development, participationin itself is a learning process that facilitates acquiring further knowledge. It enables localities to understand and establish what exactly works for them and what does not. It also generates knowledge around the pragmatic issues of governance. Localities get exposed to the concept of economic democracy, which in turn results in improvements in governance.This enhances the incentives and benefits for participation. The idea, therefore, is of a virtuous circle that permits the localities to feel their way forward and evolve ways in which they can administer and govern themselves to ensure realization of *their* development objectives.

The challenge, hence, is to set a virtuous cycle in motion in order to realize an active and dynamic concept of knowledge. Knowledge that encouragesparticipation in governance is critical to record and know peoples' response to new economy and 'globalization'. It basically determines whether these processes can be harnessed to advance the wellbeing of a locality, as defined and set by the locality itself, or if they are geared exclusively towards serving the interests of 'elite' or 'external' interests. In fact, a complete understanding of the art of democracy is the key to economic prosperity and involves an analysis that is multi-disciplinary.According to one popular view, the world is going through profound changes in the existing relationships.It is argued that a 'globalised' economy that is emerging is associated with and facilitated by new technologies and practices. There is further agreement thatregionalization of some kind is essential within this 'globalised', 'new' economy.Indeed, the term 'glocalisation' is frequently used to enunciatethe coexistence of the two: 'globalisation'[6] and 'localisation'. The objective of this paper is to look at thesecontemporary issues from a specific perspective. It seeks to develop a framework for understanding and analyzing current trends, and to propose an approach that indicates appropriate ways in the context of the dangers and opportunities presented by a 'global', 'new' economy. It is important to mention that our perspective on knowledge is neither conformist nor conventional.We emphasize the dynamic and active properties of knowledge, seeing it as generated by and also as a contributor to participation in governance. 'Locality' and 'community' are seen as important units of analysis from this perspective. Participation in governance is built from here. It endorses the view that some form of regionalization is important in a 'new' and 'global' economy. While many authors have debated theimportance of cities, regions and nations,some have proposed the notion of 'locality'. This approach allows consideration of different layers of locality, and the different communities that are present within and across these layers. This view highlights the potential for network relationships within a locality and across localities with *multi*-locational networks.

[6]https://britain2020.wordpress.com/2016/03/07/as-globalisation-wanes-will-localisation-replace-its-environmentally-and-socially-damaging-global-subservience-to-international-competitiveness/

The ultimate challenge involves a movement towards a scenario where all stakeholders participate in the democratic governance of their development. We still need to ascertain how this can be achieved in a 'global' and 'new' economy. A key implication isthe need to identify and follow a new, multidisciplinary research agenda, bringing together the political, economic, social and cultural aspects.

DISCUSSION

Talk on technological development is not something new. This has been under discussion for quite some time. Let us examine what kind of technology is coming to developing countries like India. The other way of putting it is the technological absorption that is happening in our country despite such euphoria over it since last two decades needs to be revisited. The relocation of low-end technology and technological imitation has been the in-thing in our country for past few decades, barring a few exceptions. Looking at the trend it can be inferred that we are not creators of core technology but are consumers of technology. We have learnt to apply and use core technology coming from the West. If we relook at the environment for software development in the country, it can be inferred that even in this space we are not leaders. Only the low-end software is being developed in India at large. The dismal feature of the developing countries, with special reference to India, is that we are not creators of technology but are big consumers. The consumerist mode of our socio-economic fabric is leading to more environmental problems.

Multi branched approach to development

Balanced regional development and not metro centric unbalanced development should be the focus. Lack of development in most of the rural, semi urban and small urban regions have led to large scale migration of skilled labour and educated people to the few more developed parts of the country. This flight of brain and centring of intellectual capital in only a few placesis marring the growth potential of the less developed parts of the country. Intellectual capital will obviously come to places where there is scope for development and growth. A short- sighted policy decision, poor governance, bureaucratic red tape and corruption all are collectively responsible for the present state of affairs in the country. There is an urgent need to address the poor level of individual consciousness, and subsequently social consciousness, that is prevailing in the Indian community as this is the most important factor that has kept social ethics at the lowest ebb. The young generation which will form the future government and bureaucracy requires not only the technological knowledge to solve the problem of the nation and the world at large but also a spiritual ecological perspective. This perspective is absolutely essential to solve the problem of the country most ethically and with a wider perspective, and in order to refrain from giving a myopic solution. If our role as users and consumers of technology is driven by higher spiritual ecological consciousness, there is a greater likelihood of ushering in 'better worldliness'. The biggest threats that the world is facing today is loss of biodiversity and climate change and hence there is a need for sustainable development. When the technological developments are not in line with the ecological ability of the earth to take the burden of that development, clearing of native vegetation for human

settlements and the problems of generation of excessive solid waste, fluid waste and smoke create an imbalance. Too much tampering with nature out of greed and short sightedness has put the survival of this planet at risk. Given the direction of technological change, countries which invest in educating their populations and build strong consumer economies, and countries which have democratic institutions that can deal with social change will benefit because having had their basic needs fulfilled, their people will be able to figure out how to take advantage of the advances in technology.India should invest in education that is deep ecology centric. Enhancement of *satva*element will automatically lead to scientific temper that was prevalent in ancient India. The most path breaking principles and discoveries in science, mathematics, economics and medicine are the contributions of scholars of ancient India where the deep ecology centric *gurukulshiksha-pranali* was followed.

A happy and encouraging change in this direction has begun in the form of the concept of eco-villages that is slowly catching up in some countries including India. Eco-villages[7] are intentional communities that care for the earth and its people. These communities are formed by the coming together of likeminded persons united by shared ecological, social-economic and cultural-spiritual values. There is lot of commonality in the collective consciousness that prevails in these communities. Eco-villages have been formed in Europe, America, Japan, Asia and Africa. According to Earth Rights they arecentres of learning and living that are showing a way towards a brighter future for all. Eco-village formation is gaining momentum as it provides a viable alternative to existing globalized inhumane structures by exploring decentralized solutions on a community level and by connecting traditional and contemporary knowledge for a peaceful and sustainable future and by encouraging spiritual growth.

Conclusion

Achieving sustainable development will require strengthened actions and policies at global, national and regional level to deliver on the legitimate ambition towards further economic and social progress, and this would necessitate growth in income and employment through responsible technological development and adoption that is in line with the spirit of spiritual ecology that strengthens environmental protection. We are at the crossroads of a development phase where the interdependencies in the various components of nature have to be very meticulously comprehended. Technological adaptation is the need of the hour. The generations to come will have to learn to 'learn, unlearn and relearn' to take care of this fragility in nature that we are passing on as a legacy, and careful choices have to be made. Meditation, yogic practice and community service sessions should be internalized in the curriculum to get a discriminatory competence to appreciate, absorb and balance emerging values that concern areas of sustainability, ecosystems, harmony, cultural pluralism and development with civility and equity. Socrates' method of learning, of real critical thinking skills with passion should be the ultimate objective of education with technology or without technology.This paper focuses onknowledge, governance, and networks, thethree pillarsvital to democratic processes. Within each one of these, there are important questions that are required to be addressed. For example, with respect to governance, how do we avert the hijacking of decision-making by the influential elite, whethertransnational, national or local? Moreover, how the communication channels and arenas operate? Questions about the very nature of knowledge and the nature of learning also arise.More specifically, how can people be engaged in the democratic governance most effectively? Though the notion of networks is associatedwith eachone of these issues, questions still arise. For instance,questions pertaining to practicalities and role of *multi*-locational interface and interaction inthe process of democracy. In a progressively moreconnected and complex world, wherein, theconventionally narrow concerns of economics, politics and other related disciplines are under risk and threat, it seems quite natural that acceptanceof these questions will in fact involve a multidisciplinary approach. The question essentially is what structure should dynamic, democratic processes assume in a global, new economy?The answer to this is complexand entails assessment of indirect and direct welfare impacts of particular processes. Education system should be based on developing orientation of inclusiveness and respect for process of democratization.This paper used an exploratory orientation to emphasize that each nation needs a unique combination in terms of technology adoption and adaptation to produce goods and services, keeping in view diversity of resources each region is bestowed with, and thereby maintain the native ecosystems of the region. Identification and maintenance of that unique mix of technology with natural resource base can be better looked into with spiritual ecological orientation[8] and developing this orientation should be the objective of education policy.However, a very small number of people can meaningfully assert that they are citizens in the sense of taking part fully in the governance of their societies and economies. The development in new economies of the globalised world at all levels is characterized by the principle of exclusion.It is a multidisciplinary challenge to make sure that a situation of democraticglobalization prevails.This situation can only be achieved when everyone is involved in the democratic governance of theirdevelopment.

REFERENCES

David Kinsley 1995.Ecology and Religion: Ecological Spirituality in Cross-cultural Perspective. *Prentice Hall.***8**

Erich Fromm, (1941) Escape from Freedom, by Holt, Rinehart and Winston, Inc.

Granzin, K.L. and Olsen, J.E. 1991. Characterizing participants in activities protecting the environment: A focus on donating, recycling, and conservation behaviors. *Journal of Public Policy & Marketing*, 10,(pp.1-27)

[7]GEN, (2013). What is an Ecovillage, Global Ecovillage Network, http://gen.ecovillage.org/en/content/definition-ecovillage.

[8]"Developing a Connect between Spiritual Ecology and Sustainability in the University Curriculum through Empirical Study" in the online Delhi University Journal of Undergraduate Research and Innovation, 2015, available at http://journals.du.ac.in/ugresearch/pdf/Pratibha%2016.pdfPratibha, Prem and Saumya.

Hallin, P.D.1995. Environmental concern and environmental behavior in Foley, a small town in Minnesota.Environment and Behavior. 27, (pp. 558-578)

Heberlein, T.A. 1972. The land ethic realized: Some social psychological explanations for changing environmental attitudes. Journal of Social Issues. 28, (pp.79-87)

Hines, 2000.Localization**:** A Global Manifesto;Protect the local globally-A route to localization, Chapter 6. (pg 62-67)

Hirst, P. Q. and Thompson, G. F. 1999. Globalization in Question:The International Economy and the Possibilities of Governance, 2nd edn (1st edn 1996). Cambridge: Polity Press.

Kaiser, EG.1998. A general measure of ecological behavior.*Journal of Applied Social Psychology*. 28, (pp.395-422)

Kaiser, EG., Wolfing, S. and Fuhrer, U. 1999. Environmental attitude and ecological behavior.*Journal of Environmental Psychology.*

Kaiser, F.G. 1999. Environmental attitude and ecological behavior.*Journal of Environmental Psychology,* 1999.

Kaiser, Florian G. 1998. A General Measure of Ecological Behavior1.*Journal of Applied Social Psychology*. 3/1998.

Korten, David. 2013. Change the story, Change the future?http://livingeconomiesforum.org/node/534

Lang, T. and Hines, C. 1993.The new protectionism. Protecting the future against free trade. London : Earthscan.

MaathaiWangari. (2010). Replenishing the Earth: Spiritual Values for Healing Ourselves and the World.Anchor Books

Nunnally, J. C. 1978.*Psychometric theory*. New York: McGraw-Hill.

Rockefeller & Elder 1992.Spirit and Nature-Why the Environment Is a Religious Issue: An Interfaith Dialogue. Edited by Steven C. Rockefeller and John C. Elder. *Beacon Press.*

Schilke, O. and Goerzen, A. 2010. Alliance Management Capability: An Investigation of the Construct and Its Measurement. *Journal of Management*.

Scholte J. A, 2000.Globalization: A Critical Introduction**,** St. Martin's Press, 2000

Smythe, E.C. and Brook, R.C. 1980. Environmental concerns and actions: A social-psychological investigation. *Canadian Journal of Behavioural Science.* 11, (pp. 175-186)

Stern, P.C, Dietz, T.and Kalof, L. 1993. Value orientations, gender, and environmental concern.Environment and Behavior. 25, (pp.322-348)

Thogersen. 1996. Recycling and morality: A critical review of the literature. Environment and Behavior. 28, (pp. 536-558)

Van Liere, K.D. and Dunlap, R.E. 1978. Moral norms and environmental behavior: An application of Schwartz's norm-activation model to yard burning. *Journal of Applied Social Psychology*.8,(pp.174-188)

Van Liere, K.D. and Dunlap, R.E. 1981. Environmental concern: Does it make a difference how it's measured? Environment and Behavior. 13,(pp. 651-676).

Wang, Yinglei Meister, Darren B. and Gray, P. 2011. In or out: an integrated model of individual knowledge source choice. *Journal of Organizational and End User C*, April-June 2011 Issue.

Wilden, Ralf, Siegfried P. Gudergan, Bo Bernhard Nielsen & Ian Lings. 2013. Dynamic Capabilities and Performance: Strategy, Structure and Environment. *Long Range Planning.*

Web Sources

http://www.equilibriumconsultants.com/upload/clientroom/Colin_Hines_FINAL.doc

http://ww.weea.europa.eu/soer/synthesis/synthesis/chapter7.xhtml

http://www.Iboro.ac.uk/gawc/rb/rb70.html

https://www.washingtonpost.com/opinions/why-stem-wont-make-us-successful/2015/03/26/5f4604f2-d2a5-11e4-ab77-9646eea6a4c7_story.html

http://www.ibtimes.co.uk/cop21-paris-climate-talks-have-failed-by-letting-rich-off-hook-1531460

http://www.greenpeace.org/international/Global/International/publication/RioPlus20/20-years-of-UNFCC.pdf

http://www2.euromemorandum.eu/uploads/ws4_hines_a_green_new_deal_for_europe_requires_a_green_new_protectionism.pdf

http://www.neuroredes.com.br/site/artigos/globalisation_the_new_economy.htm

http://thestirrer.thebirminghampress.com/1310062.html

http://bizshifts-trends.com/tag/global/

https://uk.news.yahoo.com/cop21-paris-climate-talks-failed-111701696.html

http://bizshifts-trends.com/tag/global/

http://environment.gov.mt/en/decc/documents/environment/global%20megatrends.pdf

http://www.ccha-assoc.org/resources/Fareed-Zakaria-Liberal-Education.pdf

https://britain2020.wordpress.com/2016/03/07/as-globalisation-wanes-will-localisation-replace-its-environmentally-and-socially-damaging-global-subservience-to-international-competitiveness/

http://bizshifts-trends.com/2014/02/06/blurring-globalization-localization-internationalization-regionalization-business-dilemma-changing-world/

http://pubs.iied.org/pdfs/9308IIED.pdf

https://nathangotsoul.wordpress.com/2015/04/04/why-americas-obsession-with-stem-education-is-dangerous/

http://www.researchgate.net/publication/237696009_THE_METROPOLITAN_NEW_ECONOMY_INDEX_Benchmarking_Economic_Transformation_in_the_Nation%27s_Metropolitan_Areas

Llewellyn Vaughan-Lee, Spiritual Ecology: The Solution to Our Climate Change Crisis? http://www.workingwithoneness.org/articles/spiritual-ecology-solution. Retrieved June 30, 2013.

Llewellyn Vaughan-Lee. ed.(2013). Spiritual Ecology: The Cry of the Earth.http://www.workingwithoneness.org/articles/spiritual-ecology-solution. Retrieved June 29, 2013

****