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Editorial

Initially, the Journal had been inviting research papers from any specific field of human action and endeavour in an attempt to get a glimpse of almost all the burning topics in the field. In one of such attempts one special number of the Journal was devoted to the pathetic situation of the River Ganga. The number had evoked a response from the readers and researchers which can only be termed as overwhelming. Similarly, we also brought issues focusing emerging frontiers of research and academics in fields like agriculture, education, etc to name a few. These special numbers also were very well received by the students, researchers, thinkers, academics and politicians alike.

However, as the time passed the realisation dawned on us that confining to only one area at a time ran the risk of ignoring other equally if not more important concerns of research and academics in other fields. More so because the winds of change do not impact these various fields of our interest one by one, rather all the fields are swept away at the same time by the emerging patterns of thought and behaviour although not in the same way.

Such a realisation prompted us to go beyond the barriers of one particular discipline and invite scholars and researchers from different areas to contribute their research papers and articles for the Journal so that it may mirror the latest and best trends of research and innovation in these diverse fields.

Besides, it has also enabled us to bring to the readers the outcome of other activities of AVAP in general and seminars, workshops, colloquia, etc in particular so that the mission may be better achieved. Even at the risk of repetition, it should be added here that the Peeth intends to encourage a sense of pride for the Indian thoughts and thinkers through undertaking serious study and research of our ancient intellectual wealth; and at the same time study and examine the modern thoughts and values so as to present for the policy makers the best blend of the ancient and the modern.

We the Indians have always stuck to our values and our dharma; but more importantly it has been emphasised that we have to honour this dharma also when we are dealing with others: *atmanah pratikoolani paresham na samacharet* (do not treat

others the way you yourself do not like to be treated). This is so because since time immemorial we have always been thinking for entire cosmos let alone the Earth and been praying for peace in the universe. We have a reason to feel proud of the fact that our forefathers were so largehearted the parallels of which the world could never see. They would always declare: *vasudhaiv kutumbakam* meaning entire Earth is but our family.

The present number is a joint one and true to its name it has a combination of independent papers as also a number of research papers depicting the lamentable state of River Ganga with valuable suggestions to salvage the holy river about which the Lord Krishna has said that He is Ganga among rivers.

We hope and trust our readers will find these papers useful to further their ends; and will be kind enough to send quality research papers for the Journal.

The Indigenization of Laws

Dr. A. P. Singh¹

Introduction

Any system in crisis always has the tendency of looking back at the institutional mechanism and tries to attribute the causes of ills to this or that institutional lacuna. We are no exceptions. However a strange thing that an independent observer can notice is that we have come to develop a very strange kind of love and hate relationship with the institutional mechanism created by our constitutional instrument. While we would deprecate the ills afflicting our system as being by-products of borrowed institutions like parliamentary democracy or bureaucratic machinery or western understanding of developmental process and would advocate the idea of changing the system, we would at the same time show our over-reliance over these institutions, thereby deprecating the utility and independence of indigenous institutions that have survived without any support for such a long time. Had the indigenous institutions been so fragile as not to be able to survive without state support or support of state institutions they wouldn't have survived so long. What we have to realize is that whatever socio-economic and politico-legal mechanism we are talking of as legacies of past ages and still relevant for the current generations that we are trying to re-create in the name of India's indigenous institutional mechanism has survived despite all hostilities towards it and shall continue to survive in this or that form to inform the national life of this country in the days to come. Therefore an attempt should be made to develop an understanding as to the existing socio-economic and politico-legal institutions and seek to modify them so as to fit in the frame of our supposed indigenous institutional mechanism. This would require a multi-pronged strategy. This paper makes an attempt to analyse the existing model of law and seek to evolve a structure of such institutional thinking to arrive at a long term strategy to usher into an era of indigenous institutions.

Limitations of Indigenization Project

¹ Professor of Law, Dr. Ram Manohar Lohiya National Law University, Lucknow (UP).

First of all we have to realize that this shall not happen in a day or two. It is a project which shall require the efforts of generations together. Changing the life and style of a national system like India with so much of variety of thinking and life processes is a project of centuries if not of millennia. In the meanwhile we have to keep on chiseling and honing the supposed indigenous institutions, conducting experiments on them for which the current constitutional mechanism provides enough of space and keeping them ready as and when an opportunity knocks at the door for implementing them. This is easier said than done but nevertheless we have to proceed with the understanding that this is something for which we have the necessary logistics and patience and have to have the thinking that it is not ‘but for the existing system’, but rather ‘despite the existing system’ we shall have to win the battle of indigenization project of our socio-economic and politico-legal structures. One may fondly remember what an old Chinese proverb would put it this way..... “if you plan for a year show seeds, if you plan for a decade plant trees and if you plan for a century plant man”. Evidently we are planning for centuries and millennia and would have to proceed with a confidence befitting to our tradition and project in hand.

Understanding the Legal Mechanism

A very important point we have to understand is the role of politico-legal structures in the life of a nation. I would figuratively put it in a different format. Law, broadly understood can be talked of in two ways, ‘lead law’ and ‘lag law’. Lead law is one where law determines the nature and direction of the goal towards which the system is to move. Lag law on the other hand would follow the social mechanism and would develop a rule to handle the emerging problem. We at the time of independence proceeded with an understanding that the indigenous model due to variety of reasons has become in-appropriate and is ridden with so much of social rot and therefore has to be given a new direction, the direction determined by the project of modernity. The project of modernity, the product of the western thinking has already maligned the indigenous thinking so much that the generation of political leaders proceeded on the assumptions of ushering into an era of modernity determined by western paradigm. A typical western thinking was typified by Henry Maine’s dismissive remark that much of

Ancient India's wisdom consisted of 'dotages of Brahminical superstitions'.¹ This kind of an attitude towards ancient Indian traditions in law and justice represents the attempts made by the colonial administration to discredit the ideological foundations of Hindu hegemony of ideas. It would be interesting to learn how the so called disadvantaged groups in Indian society willingly accepted their position as part of the *Dharmik* order of things. India's genius for accommodation can only be understood against the backdrop of this *Dharmik* order which holistically encompassed all of the society. This social system was not certainly the rigidified hierarchical structure as it has been presented to be, on the contrary, it was comparatively a dynamic order unparalleled in the contemporary societies and I proceed with an assumption that it still retains a lot of socio-political validity.

Lead law: The Instrumentalist Vision

Turning to the 'lead law' 'lag law' debate for the purpose of understanding the indigenization project in hand, one has to understand that 'lead law' approach proceeds on the instrumentalist vision of law treats Law as an agency of power, an instrument of government, in so far as government is centralised in the state. It is seen as an independent agency of social control and social direction, autonomous and separate from the society it regulates. In this sense law acts upon society rather than is an aspect of society. It is considered to derive its effectiveness from its congruence with popular moves but from the concentration of political power, which the state represents. "Major ages of social change and mobility almost always involve great use of law and litigation",² writes Nisbet, but in modern societies law's capabilities have been seen as vastly greater than appeared to be in earlier eras. Putting of law into written form might be considered historically one of the first steps towards developing its potential as a precise instrument of government. Apart from this accumulation of state power available for enforcement, professionalization of interpretation and application of legal doctrine, instrumentalisation of elaborate adjudicative processes, have helped in consolidating the instrumentalist role of law.

¹ S.S.Dhavan: Indian Jurisprudence and the theory of State in ancient India, Mussorie, National academy of Administration, Printed Lectures, 1962.

² As quoted in Roger Cotterrel's Sociology of Law: An Introduction, Butterworths, 1992.

This instrumentalist vision, considers that sovereign power, the ultimate authority in a polity can legislate on any matter and can exercise control over behaviour within the state. Indeed in a highly centralised political system with advanced technology and communication apparatus, it is taken for granted that legal innovation can effect social change.¹ Roscoe Pound, perceived law as an instrument of social engineering. Underlying this vision is the assumption that social processes are susceptible to conscious human control and the instrument by which this control is to be achieved is law. In such a formulation law is a short-term form of a very complex aggregation of principles, norms, ideals, rules practices and agencies of legislation, administration, adjudication and enforcement backed up by political power and legitimacy.²

Lag Law: The Sociological Vision

‘Lag law’ on the other hand relies on sociological vision of law, and looks at the capacity of law as an instrument of social control, as severely limited by emphasizing upon the fact that if the legal rules are not in congruence with social mores they are not only in-effective, but are doomed to stultification almost at birth, doomed by the over ambitions of the legislator. “Law is vital”, writes Nisbet, “but when every relationship in society becomes potentially legal relationship expressed in adversarial fashion the very juice of social bond dries up, and the social impulse atrophies.”³ For Habermass law is a support, protection and stabilizing structure of life world, within which values motivations and initiatives of individuals are born and nurtured. But as a directing instrument or medium it threatens to crush through violent abstraction the moral subtleties, local meanings and diversity of individual life.⁴

Legal consciousness studies with the declared opposition to the predominant position of prevalence of institutional viewpoint and public policy bias in law, emphasizes at the constitutive theory of social action, pointing its attack on the instrumentalist vision of law, what Mc Cann says countering the lead law approach with

¹ Sally Falk Moore, Law as a process, (1993) Routledge and Kegan Paul, London.

² Sally Falk Moore, supra, f.n. 3.

³ Roger Cotterrel, supra, f.n. 2.

⁴ Legitimation crisis, Heinmann, London, 1976.

a bottom up jurisprudence¹. According to Evick and Silby, the ways in which the law is experienced and understood by ordinary citizens as they choose to invoke law, to avoid it, or to resist it, is an essential part of Law. The attention of the investigator is directed towards these every day concrete social practices in which legal rules are perceived as constitutive elements of the reality. This emphasis on the routine instead of exceptional, on the social in place of institutional, on mental representations in place of coercive legal system is the common elements in this change of optic² from 'lead law' to 'lag law'.

Understanding Indian Paradigm

We know India is a huge country, with huger complexities. A thousand million plus population, spread over 3.28 million sq km of landmass, with every kind of an imaginable weather pattern from minus 40 degree Celsius in the greater Himalayan region to 50 plus degree Celsius temperature in the deserts of Rajasthan, 16 well demarcated agro-climatic zones, 18 official languages written in 15 different scripts, around 2000 dialects and almost all religions of the world well and adequately represented. The variety of India is mind-boggling. Jawaharlal Nehru called India the museum of world religions.³ India has a hoary past and a very vibrant and continuous culture of more than 5000 years of recorded history. But this is only one side of the picture. It has its bleak side as well. 1000 years of colonialism broke India's economy and its socio-legal structure as well. Queen Elizabeth's charter of 1600, authorizing East India Company to trade in the countries of the east and consequent colonization of the land called India (Bharat) marked a complete break with the past in terms of socio-legal structures. A new kind of a system was sought to be introduced and adjustments carried on for 350 years. In mid 20th century India finally broke off the shackles of the colonialism launching itself on the path of Republicanism, liberal democracy and secular state system.

Medieval India under Muslim domination witnessed its social institutions getting distorted and British colonialism broke it economically. In the mid 19th century when freedom struggle in the wake of what may be called the Indian renaissance started, it sought to not only stop the economic exploitation of the country by seeking

¹ As quoted in Maurice Garcia, Villegas, "symbolic Power without symbolic violence ? critical comments on Legal consciousness studies in USA, *Droit a Societe*, no-53/2003.

² Ibid.

³ Discovery of India, Jawaharlal Nehru, Oxford university Press, 1976.

political reforms but also sought to reform the social structure of the country from within. Indian social system, at this point of time was beset with a number of social evils. Caste system, untouchability, child marriages, widow burning, veil system discrimination against women were some of the most visible problems distorting the face of Indian social system. Caste system was the outgrowth of the Varna system or what may be called the classificatory principles which were scientifically designed principles of social organization. Without going into the polemical aspects of Varna system, I rely on Prof PV Kane,¹ in stating that Varna System was based on occupation rather than on birth and that there was both horizontal and vertical mobility available within this system. Widow burning and child marriages had their history in medieval wars, when the men-folk used to die fighting in the battlefield, the widows used to burn themselves for the purpose of saving themselves from falling into the hands of the enemy and get violated. In the later years these practices assumed the form of an orthodoxy and social evil.

Facing the Post-Independence Challenges

In 1947, when India finally broke off the shackles of colonialism, the challenges facing the country were enormous. For a legal professional it was a maze of imponderables, a mix of customary law, case law, and some assorted enactments. The social system was equally confused, beset with intractable social evils like caste system, unsociability, discrimination against women, child marriages and dowry system etc. The partition of the country and a senseless violence in its wake had left deep scars on the social psyche and deep suspicions amongst the people banking on divisions were so evident. Thus the challenges for those who were at the helm of affairs were enormous. Modern law, which has come to be recognized a technical instrument of rational governance, freed from its traditional roots in culture and communal values and moral contents was the option. It served a modern urge to remake the world grounded in the discovery of that world's contingent and changeable character. This law appeared morally and intellectually autonomous both in the sense of its distinctiveness as a governmental tool and its superiority over and independence from other competing normative systems. It also seemed comprehensive as it could be used to cover all contingencies and provide man made solutions to all problems of order; unified and

¹ History of Dharmashastras, Prof PV Kane, Bhandarkar Research Institute, Pune, 1968.

systematic as a body of doctrines linked by its formal rational qualities; a structure of human reason, subduing chaos and contingency and principled as a consistent expression of essential conditions of human life.¹

Lead Law: The Ideal Option

With the above ideal view of law in mind the founding fathers of India's new destiny went on framing a constitution, which was to be the embodiment of all that is rational and modern. Justice, liberty, equality were given the pride of place as the basic organizing principles of the new constitution, caste system and un-touch-ability which were considered the main stumbling blocks in the achievement of social solidarity were now intended to be done away with. Preamble of the Constitution provided the blueprint of the ideals, "We the People of India, having solemnly resolved to constitute India into a sovereign, socialist, secular, democratic, republic and to provide to all justice, social, economic and political, equality of status and opportunity, liberty of thought, expression, faith, belief and worship.....Enact and give to ourselves this Constitution."² Article 14 of the Constitution guaranteed equality, "The state shall not deny to any person, the equality before law, or equal protection of laws within the territory of India."³ This article provides two different types of rights, first, equality before law irrespective of ones caste, creed, race, religion, sex, place of birth etc and second equal protection of laws, meaning thereby that if there are inequalities existing in the socio-legal system, the law, shall take care of them and shall try to change circumstances by way of protective discrimination in such a way that everybody is treated equally and has the guarantee of a right to equality of respect and concern in the design of political institutions⁴. The underlying idea of Article 14 is that there is nothing as unequal as the equal treatment of unequals.⁵ And therefore to treat every citizen equally, who are found to be circumstanced unequally the state can resort to equalising means to protective discrimination.

Article 15 provided a further guarantee against discrimination only on the basis of caste, class, religion, sex, place of birth or any of them. However it also provided that

¹ Rogger Cotterrel, op.cit.f.n. 1.

² Preamble to Indian constitution, 1950, (The constitution of India, was adopted on 26 Nov 1949 and came in to force, on 26 Jan, 1950.

³ Article 14 of Indian constitution 1950.

⁴ Constitutional Law of India, V.N.Shukla, Eastern Book Company, Lucknow, 2000.

⁵ Indian Constitution, H.M. Sheervai, N.M. Tripathi, Bombay, 1993.

special provision could be made in favour of women and children and socially and educationally backward classes. Thus the members of scheduled caste and scheduled tribes could be provided with protective umbrella in various sectors of social life, including admissions in educational institutions. Article 16 went a step ahead and provided another guarantee of equality of opportunity in matters of public services or offices under the government. It further provided that special provisions in government and public services could be provided to scheduled caste and scheduled tribe's candidates. Article 16 (4) provided, "nothing in this article shall prevent the state from making any provisions for reservation for appointments or posts in favour of any backward class of citizens which in the opinion of the state is not adequately represented in the services under the state. Article 17 of the Constitution abolished untouchability and made it an offence to treat anybody as untouchables.¹

A brief overview of equality provisions under Indian constitution would make it clear that the social evil of caste system and resulting deprivation of whole class of people weighed heavily in the minds of the framers of the Indian constitution and they sought to introduce not only the measures that would remove the caste disabilities from the Indian social scene, but also sought to provide compensatory measures for these deprived and less privileged sections of society, so that they could compete with the rest of the world on an equal footing. Under these provisions special provisions were made for peoples belonging to scheduled caste and scheduled tribes under which they are nowadays provided 22 percent reservations under government services. In fact in some states in India like Tamilnadu, and Karnataka, the ratio of reservations of jobs in government services is as high as 69 percent.

Another kind of a protective measure provided to scheduled caste and scheduled tribes is the special representations in Parliament and state legislatures under article 334 of the constitution. Initially this particular provision was supposed to be a kind of transitory provision, to remain in force for 10 years. But this has been successively extended by way of constitutional amendments decade after decade. The last such

¹ Civil Rights Protection Act of 1956 was passed to reinforce the declaration made in Article 17 of Indian Constitution, which made untouchability a penal offence. Glanville Austin in his celebrated work "Indian Constitution, the cornerstone of Nation" has written in this context, that Indian constitution is more of a social than political document.

amendment was made in the year 2000, extending it up-to 2010¹. Another extension of the same up-to 2020 has recently been approved by the Cabinet.

‘Lag Law’ Reality of Social Order: Meeting the Contradictions

Now this system of legal instrumentalism by way of providing lead law rules, was expected to wipe out not only the caste system from the face of Indian social system but also to uplift the deprived sections of the society from the morass of underdevelopment, putting them on the equal footing with other sections of Indian socio-political system. This equality and solidarity amongst citizens was to be the fundamental conception of the political order in India. But the lead law model did not work the way, it was expected to. The reasons are not difficult to find.

There were certain fundamental contradictions in the very approach. First of all, the very idea of law working as an instrument of social reform has its own limitations. Social phenomenon has its own dynamic and any law that seeks to affect certain changes into it without taking into consideration the fundamental realities around is bound to result in failure. Sumner,² talks about the folkways and mores of life, which change gradually as the conditions of life change. There is little scope for changing them fundamentally through any conscious act of legislation. Legislation has to seek standing ground on the existing mores and legislation to be strong must be consistent with the mores. Any law that deliberately separates itself from the mores and values weakens its social base and authority to the similar extent. Law, philosophy, religions and morality have no independent existence, but are various reflections of social dynamic. They are deeply rooted in the process of social development, yet virtually powerless to alter them. Philosophy and ethics too are products of mores and philosophy attempts the impossible when it tries to construe absolutes from the accidents of experience, which shape the mores³.

For Savigny⁴ too, law is an expression, one of the most important expressions together with language is the spirit of the people (*Volksgeist*). This mystical idea of law implies that law is much more than a collection of rules or judicial precedents. It reflects

¹ 82nd constitutional amendment, 2000.

² As quoted in Roger Cotterrel, *supra* f.n.1.

³ *Ibid*.

⁴ As quoted in Roger Cotterrel, *supra*,f.n.1.

and expressed a whole cultural outlook. This does not mean that Savigny did not recognize the importance of legislation. Legislation is important, first to remove doubts and uncertainties in evolving law and secondly to enact settled customary law, but not in the manner of code which denies the evolutionary nature of law by setting out fixed final and comprehensive principles. Law loses its base and authority as it moves away, becomes detached and remote, losing roots in the community life, ceasing to be a part of common consciousness of the people.

But the question is what to do with the inhuman practices of the community life, which not only do not fit in any way with the modern liberal ideas of democratic life, but are also degrading of human life? Should such practices be tolerated in the name of common consciousness of the people? It has been noted above that Indian renaissance had witnessed a whole array of social reform movements. They were basically two streams of reformers. People like Mr. Sharda, Jyotiba Phule, and Agarkar, were in favour of using the instrument of law for affecting social change; and thus they not only attempted to reform the system from within but also lobbied British colonial administration to enact legislations for affecting social reforms.¹ Thus they had enactments like Widow Remarriages Act, Sati Abolition act etc. This tradition of using law for affecting social reform continued even in the post independence period and Civil Rights Protection Act 1955 (prohibiting practice of untouchability) Dowry prohibition Act, 1960, Child Marriage Prohibition Act 1961, and another Sati Prohibition Act in 1987. But what was the impact of it. Any impartial observer of Indian social scene would testify that this law approach of affecting social reform by using the instrumentality of law has not succeeded. Dowry by and large has spread more than it was in pre-1960 period and has turned out to be some kind of status symbol. Child marriages are still performed in plenty within the full knowledge and view of state machinery,² traces of caste system still seen and practiced in many parts of the country and Roop Kanwar Sati Act is not a matter of too distant past. This clearly shows that the law approach of law has not really worked in India. What has, however happened is that either the legislation has been observed in its complete violation in full

¹ Freedom Struggle, Bipan Chandra, Oxford university Press, 1990.

² There is an auspicious day, called 'Akha-teej' which is the third day of Vaisakh month according to Hindu Calender, (Vikram samvat). On this particular day many child marriages are celebrated in full knowledge of the administration.

view of the administration or it has made the practices at which the legislation aims more covert and harder to detect.

It may be noted that right since 19th century, there was seen another stream of social reformers which wanted the things to be done other way round i.e. by way of following the lag law approach. Bal Gangadhar Tilak, Gopal Krishan Gokhale, and Mahatma Gandhi, were some of the more prominent figures who represented this stream.¹ They were conscious of the fact that political reforms without social reform were not going to be of any avail, however they wanted those reforms to come from within and not be thrust from outside upon the people. They therefore made it a mission of their lives to rouse the people from slumber and awaken them to the past glory of India. Bal Gangadhar Tilak who was the political guru of Mahatma Gandhi, was convinced that education could play an important role in this regard and therefore with the cooperation of Agarkar and Chiplunkar he started some English schools in Poona and also had a long stint with the press publishing Kesari and Maratha to educate the people.² But somehow the traditions of these leaders could not be continued in post independence period, a kind of naïve belief prospered that social change could be brought about by enacting laws from the top and no account was taken of the ground realities.

Challenges of Social Reforms and the Limitations of Law

The question still remains unanswered, what to do with the social evils like caste? Madhu Kishwar,³ is of the opinion that even though, survival of kinship and community loyalties has some negative fallout, the existence of strong community ties provide for relatively greater stability and dignity to the individual, than they have as atomized individuals. This in part explains why the Indian poor, retains a strong sense of self-respect. It is that self-respect which the thoughtless insistence of egalitarianism destroys. The support system provided by kinship ties still provide greater social security than combined effect of all schemes that successive socialist governments have introduced to help the poor. Mark Tully⁴ writes, “one way to discredit a system is to highlight its excesses and caste system has many, what continuous denigration of caste system has

¹ Freedom Struggle, Bipan Chandra, Oxford University Press, 1990.

² Supra f.n. 22.

³ Madhu Kishwar, Seminar, 1989.

⁴ There are no full Stops in India, Mark Tully, Penguin books, 1992.

done is to add to the sense of inferiority that many Indians feel about their own culture. It could lead to greater respect for India's culture and even better understanding of it, if it were to be recognized that caste system has not been totally static, that it is adapting itself to today's circumstances and that this has positive as well as negative aspects. Caste system provides security and community to millions of Indians. It gives them an identity that neither western science nor western thought has provided, because caste system is not merely a matter of being Brahman or *Harijan*. It is also a kinship system. The system provides a wider support group than family.

This brief account shows that legislatures in India, in their enthusiasm to use lead law approach to affect reform in India, have not worked well. There can be no gainsaying of the fact that social evils like caste system have got to be wiped out, at least humanized if possible, but that is possible if the behavioural patterns of the people, deeply embedded in customs and traditions is properly understood and proper help provided to them so that they may cop up with the modern realities of life, rather than changes thrust down from above. Roscoe Pound put it this way, "for many reasons, including problems of proof, law cannot attempt to control attitudes and beliefs but only observable behaviour".¹ For Teubner, the primary problem in laws pathological effects is bureaucratising social relations and moral environment and misinterpreting and so creating disruption in contexts previously regulated by extra legal norms..... law can be effective but they must take into consideration the context which was previously regulated by extra legal norms. "Law can be effective but this effect may be to create uncertainty, chaos, distrust or hostility rather than to regulate properly."² And this is precisely what has been done by the lead law approach of law-making in India's Social environment. Justice Krishna Aiyar,³ has put it beautifully, albeit in a different context, "bringing constitutional law and norms into such matters, is like bringing a bull into the china shop". What is necessary therefore is to quote Teubner again, "To find appropriate relationship between law and other normative orders to prevent this".

There has been substantial number of studies about the main factors that make social control effective through law. For example Yehzkel Dror distinguishes between direct and indirect uses of law in promoting change, Dror accepts that seeking social

¹ Roscoe Pound, as quoted in Roger Cotterrel, supra f.n. 1.

² G. Teubner, As quoted in Roger Cotterrel, supra f.n. 1.

³ Harmindar Singh v. Har minder Kaur., AIR, 1978, SC.

change through lead law approach is fraught with danger, but he emphasizes that law can and does play an important, albeit indirect role in fostering social change in many ways. First it can shape various social institutions, which in turn have a direct influence on the rate or character of social change. For example law structuring a national education system and providing for a national curriculum for schools influence the scope and character of educational institutions, which may help in affecting social change. Secondly law provides institutional framework for agencies specifically set up to exert influence change. Thus for example setting up boards, agencies of various kinds may be resorted to charged with promoting particular policy goals and finally creation of legal duties to establish situations in which change is fostered.

William M Evans,¹ an American sociologist, writing in the light of American experiences, shortlists some basic conditions, which may provide a framework of such a system of rules that is likely to lead to social change. First source of new law must be authoritative and prestigious. Secondly the rationale of the new law must be expressed in terms of compatible and continuity with established cultural and legal principles. Law in fact can be powerful force for change, when the change derives from a principle deeply embedded in our heritage. Thirdly pragmatic models of compliance must be identified. The underlying idea of this condition is that law must not appear utopian but practical in its aims. Another important condition that Evans talks of is the element of time in legislative action. But this condition appears to be rather unenlightening answer to a complex question. The appropriate timing and strategy depends on the extent and complexity of change that law seeks to bring about.

Conclusion

The above analysis of an Indian paradigm, of trying to affect social change by a way of lead law should make it clear that in the final analysis the law can not be seen abstracted from the social reality. Effectiveness of law in the ultimate sense must derive from the law as an instrument of social change working in tandem with social and cultural life of the people. This is what has been wanting throughout the post-independence phase in India. So what would be the answer to the indigenization project of laws in India? My prescription would be two-fold, one to keep on pressing the need of

¹ As quoted by G.S.Sharma, in Law and Social Change, 1971, Indian Social Science Research, New Delhi.

indigenization, with lot of confidence and patience required for such a stupendous task. This would require coordination of variety of efforts being made by researchers all across the country for providing an alternative policy frame. At the same time one has to keep on experimenting with the supposedly indigenous models, for which, I have put earlier, enough of scope is available at the grass-root level.

We have a very encouraging social terrain, with vigilant public opinion, vigorous press and vibrant non-governmental organization sector, which can be used for making new experiments in the indigenization of laws in the governance process at the grass-root level. We also have unutilized and under utilized potential of millions of youth which can be used for making effective improvements in the developmental administration. However, what we lack is the political will to make use of opportunities available. What is needed is a kind of new dynamic of developmental politics to grow in the country and there we have the challenge well chalked out for willing social entrepreneurs to make use of and conduct experiment in the supposed models of indigenous law. What would be the shape of such experimentation is something which would require another full fledged research paper. The only thing that can be kept in mind is there is a scope available and there is also a need for conducting experiments at the grass-root level of our political process in trying to balance the ‘lead law’ and ‘lag law’ approach. This balancing between instrumentality of law and the folk ways and mores of the people or between lead law and lag law would really pave the way for real justice in action preparing the fundamental conception of a long lasting political order in India.

Bhartiya Constitutionalism and the Integral Humanism

Ashok Mehta¹

Introduction

¹ Ashok Mehta, Senior Advocate, Allahabad High Court,. Theme Article is based upon various Cases, Books and Materials, for which author is obliged to Hon'ble Judges and Scholars; to initiate further thought process.

The present article is part of a thought process as regards the direction in which we, the people of India, should proceed.

There has already been discussion on the Basic Structure theory as propounded by Keshvanand Bharati case and its applicability in last forty years-development of concept of natural rights linked with values enthroned in the Preamble to the Constitution of India. The seamless well of spirit of democracy, pursuit of social revolution, preservation of unity/integrity of country and omnipresent culture of Bharat with a national character, animates Indian Constitution.

So, keeping in mind that Bharat is a spiritual nation, presently we discuss in detail the Integral Humanism as well as Human Jurisprudence which can be the basis of future of Bhartiya Constitutionalism and framing of national polity of Resurgent Bharat.

Golden Triangle: Basic Structure

On critical analysis of theory and features of Basic Structure of Constitution of India we found the doctrine did play an important role at particular juncture in India's constitutional history and its legal legitimacy is also not doubted. But the same has put the pendulum at extreme from where it is bound to move to a balanced social legitimacy with political sovereignty with "We, the People".

So we have every right to analyze, criticize and comment on doctrine enunciated by court which shall be the only proper way to synthesize to renaissance with well informed public opinion to impact the framing of national polity of Resurgent Bharat.

At this critical time, when the clichés and dogmas in the name of secularism, socialism, communism, capitalism, regionalism and communalism, lie in tatters in the face of the violence and corruption that has overtaken our society, it is time to take a fresh look at the philosophy of Integral Humanism propounded by Pandit Deendayal Upadhyaya. His thesis on Integral Humanism, given in a series of speeches in Bombay from 22rd to 25th April, 1965, form the basis of a system of governance that is suited to

the Indian nation and its people, regardless of caste, religion or region, as an alternative for all round human development.

Within two years on 27 Feb. 1967, the Supreme Court held that Fundamental Rights are outside amendatory process and Parliament will have no power in future to amend provisions of Part-III so as to abridge or take away fundamental rights therein. The matter was Golak Nath's Case.

On 24th April, 1973 in the matter of Keshvananda Bharati Supreme Court held:

- 1. Golak Nath's case is overruled; and**
- 2. Article 368 does not enable Parliament to alter the basic structure or frame work of the Constitution.**

In 1965 theory of Integral Humanism was propounded. In 1967 Golak Nath restricted the exercise of Parliament's power to amend the Constitution so as to ensure that the Fundamental Rights in Part-III of the Constitution were not abridged, destroyed or abrogated. In 1973, Kesavananda says it is hereby overruled.

In 2007, interestingly a nine Judge Bench ended up with a single judgment authored by Y.K. Sabrawal CJ in IR Coelho; inunciated restricting the power of Parliament so as not to destroy the essence of the fundamental rights, which is considered as a feature of the Basic Structure of the Constitution. The Bench found that the "Golden Triangle", comprising of Article 14, 19 and 21 was part of Basic Structure of the Constitution. All fundamental rights revolve around golden triangle. For Determining Test Court relied on the "rights test" as reflected in Article 21 read with 14 and 19.

In 2011 now Supreme Court says Basic Structure is not static.

Legitimacy of Basic Structure is based upon acknowledgment that Constitution can be radically changed by the people themselves.

Legal sovereignty is recognized to vest in Supreme Court; but parliamentary sovereignty has little support in Indian Constitution. Political sovereignty is with the people of India which is supreme.

Before we proceed we must emphasise that certain principles of Nyaya (Justice) are not the creation of Article 14, 19 and 21 nor do these Articles form the basis of Nyaya. These are but Constitutional guardian of NYAYA.

Article 14 – Equality before Law.

Article 19 – Rights to Freedom.

Article 21 – Right of Life of personal liberty.

The reason has been the basis of legitimacy of doctrine.

In 1985 Supreme Court recognized it very specifically in the matter of applicability of principles of Natural Justice, in the matter of Tulsiram Patel.

NATURAL JUSTICE

The principles of natural justice are not the creation of Article 14. Article 14 is not their begetter but their Constitutional guardian. Principles of natural justice trace their ancestry to ancient civilizations and centuries long past. Until about two centuries ago the term "natural justice" was often used interchangeably with "natural law" and at times it is still so used. The expression "natural law" has been variously defined. In Jowitt's Dictionary of English Law (Second Edition, page 1221) it is defined as "rules derived from god, reason or nature, as distinct from man-made law." Black's Law Dictionary (Fifth Edition, page 925) states.

"This expression, 'natural law', or jus naturale, was largely used in the philosophical speculations of the Roma jurists of the Antonine age, and was intended to denote a system of rules and principles for the guidance of human conduct which, independently of enacted law or of the systems peculiar to any one people, might be discovered by the rational intelligence of man, and would be found to grow out of and

conform to his nature, meaning by that word his whole mental, moral and physical constitution. The point of departure for this conception was the Stoic doctrine of a life ordered 'according to nature,' which in its turn rested upon the purely supposititious existence, in primitive times, of a 'state of nature;' that is, a condition of society in which men universally were governed society by a rational and consistent obedience to the needs, impulses, and promptings of their true nature, such nature being as yet undefaced by dishonesty, falsehood, or indulgence of the baser passions. In ethics, it consists in practical universal judgments which man himself elicits. These express necessary and obligatory rules of human conduct which have been established by the author of human nature as essential to the divine purpose in the universe and have been promulgated by God solely through human reason."

Supreme Court states:-There are certain basic values which man has cherished throughout the ages. But man looked about him and found the ways of men to be cruel and unjust and so also their laws and customs. He saw men flogged, tortured, mutilated, made slaves, and sentenced to row the galleys or to toil in the darkness of the mines or to fight in an arena with wild and hungry beasts of the jungle or to die in other ways a cruel, horrible and lingering death. He found judges to be venal and servile to those in power and the laws they administered to be capricious, changing with the whims of the ruler to suit his propose. When, therefore, he found a system of law which did not so change, he praised it. Thus, the Old Testament in the Book of Esther (I, 19) speaks admiringly of the legal system of the Achaemenid dynasty (the First Persian Empire) in which "a royal commandment" was "written among the laws of the Persians and the Medes, that it be not altered." Man saw cities and towns sacked and pillaged, their populace dragged into captivity and condemned to slavery the men to labour, the women and the girls to concubinage, and the young boys to be castrated into eunuchs their only crime being that their ruler had the misfortune to be defeated in battle and to lose one of his cities or towns to the enemy. Thus, there was neither hope nor help in man-made laws or man-established customs for they were one-sided and oppressive, intended to benefit armed might and money power and to subjugate the down-trodden poor and the helpless needy. If there was any help to be found or any hope to be discovered, it was only transcended the laws and customs of men, a law made by someone greater and mightier established these customs. Such a person could only be "natural law" or "the law of nature" meaning thereby "certain rules of conduct upon

all mankind". It was not "the law of nature" in the sense of "the law of the jungle" where the lion devours the lamb and the tiger feeds upon the antelope because the lion is hungry and the tiger famished but a higher law of nature or "the natural law" where the lion and the lamb lie down together and the tiger frisks with the antelope.

Most, if not all, jurists are agreed that "reason" and "the nature of man" constitute the fountain-head of natural law but there is a considerable divergence of opinion amongst them as also amongst philosophers about the nature and meaning of that law and its relation to positive law.

Blackstone, however, in his "Commentaries on the Laws of England" has this to say about natural law: "This law of nature, being coeval with mankind, and dictated by God himself, is of course superior in obligation to any other. It is binding over all the globe in all countries, and at all times: no human laws are of any validity, If contrary to this; and such of them as are valid derive all their force and all their authority, mediately or immediately, from the original."

The two rules "nemo judex in causa sua" and "audi alteram partem" and their corollary that justice should not only be done but should manifestly be seen to be done have been recognized from early days in English courts, Reference to them are to be found in the Year Books – a title preferred to the alternative one of "Books of Years and Terms" – which were a regular series, with a few gaps of law reports in Anglo-Norman or Norman French and French, which had then become the court language, from the 1270s to 1535 or, as printed after the invention of the printing press from 1290 to 1535, that is, from the time of Edward II to Henry VIII. The above principles of natural justice came to be firmly established over the course of centuries and have become a part of the law of the land. Both in England and in India they apply to civil as well as to criminal cases and to the exercise of judicial, quasi-judicial and administrative powers. The expression "natural justice" is now so well understood in England that it has been used without any definition in statutes of Parliament, for example, in section 3 (10) of the Foreign Compensation Act, 1969, and section 6 (13) of the Trade Union and Labour Reforms Act, 1974, which was later repealed by the Trade Union and Labour Relations (Amendment) Act, 1976. These rules of natural justice have been recognized and given effect to in many countries and different systems of law. They have now received international recognition by being enshrined in Article 10 of the Universal

Declaration of Human Rights adopted and proclaimed by the General Assembly of the United Nations by Resolution 217A (III) of December 10, 1948. Article 6 of the European Convention for the Protection of Human Rights and Fundamental Freedoms which came into force on September 3, 1953, and Article 14 of the International Covenant on Civil and Political Rights adopted by the General Assembly Resolution 2200A (XXI) of December 16, 1966, which came into force on March 23, 1976.

The principles of natural justice have thus come to be recognized as being a part of the guarantee contained in Article 14 because of the new and dynamic interpretation given by Court to the concept of equality which is the subject matter of that Article. Shortly put, the syllogism runs thus: violation of a rule of natural justice results in arbitrariness which is the same as discrimination: where discrimination is the result of State action, it is a violation of Article 14: therefore, a violation of a principle of natural justice by a state action is a violation of Article 14. Article 14, however, is not the sole repository of the principles of natural justice. What it does is to guarantee that any law or State action violating them will be struck down. The principles of natural justice, however, apply not only to legislation and State action but also where any tribunal, authority or body of men, not coming within the definition of "State" in Article 12, is charged with the duty of deciding a matter. In such a case, the principles of natural justice require that it must decide such matter fairly and impartially.

PREAMBLE

Judges developed a concept of natural rights linked with cherished values like liberty, equality and democracy as enthroned in the Preamble. Such rights are inalienable and cannot be affected by an amendment of the Constitution for these are cherished values and representative of those ideals for which men have striven through the ages.

The basis of the Preamble added to the Constitution on Nov, 2nd 1949 has been the Objectives Resolution dated 13 Dec. 1946 which is as follows:-

1. this Constituent Assembly declares its firm and solemn resolve to proclaim India as an independent sovereign republic and to draw up for her future governance a Constitution;
2. wherein the territories that now comprise British India, the territories that now form the Indian States, and such other parts of India as are outside British India and the States as well as such other territories as are willing to be constituted into the independent sovereign India, shall be a Union of them all; and
3. wherein the said territories, whether with their present boundaries or with such others as may be determined by the Constituent Assembly and thereafter according to the law of the Constitution, shall possess and retain the status of autonomous units, together with residuary powers, and exercise all powers and functions of government and administrative, save and except such powers and functions as are vested in or assigned to the Union, or as are inherent or implied in the Union or resulting therefrom; and
4. wherein all power and authority of the sovereign independent India, its constituent parts and organs of government, are derived from the people; and
5. wherein shall be guaranteed and secured to all the people of India justice, social, economic and political; equality of status, of opportunity, and before the law; freedom of thought, expression, belief, faith, worship, vocation, association and action, subjects to law and public morality; and
6. wherein adequate safeguards shall be provided for minorities, backward and tribal areas, and depressed and other backward classes; and
7. whereby shall be maintained the integrity of the territory of the Republic and its sovereign rights on land, sea, and air according to justice and the law of civilized nations; and
8. this ancient land attains its rightful and honoured place in the world and makes its full and willing contribution to the promotion of world peace and the welfare of mankind.

Preamble of the Constitution of India also secures to citizens justice, liberty, equality of promote fraternity.

It is no exaggeration to say that the Preamble to the Constitution of India is its spirit and backbone. The preamble pervades through and inspires all the provisions of

the Constitution. It is also the quintessence of the Constitution. Ever since the day it was adopted by the constituent Assembly it has enabled the Constitution to stand erect – neither bending nor breaking. Hundreds of judicial pronouncements made by stalwarts testify to the constitution of India having stood like a rock facing the splash and floods of storm waters; the waters have flown by but the Constitution and its Preamble have not swayed away.

Text of the Preamble is:-

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens:

Justice, social, economic and political;

Liberty of thoughts, expression, belief, faith and worship;

Equality of status and of opportunity;

And to promote among them all

Fraternity assuring the dignity of the individual and the unity and integrity of the Nation;

In our Constituent Assemble this twenty-sixty day of November, 1949, do Hereby Adopt, Enact and Give to Ourselves This Constitution.

It is clear from the Preamble and Provisions of Part III and IV that the Constitution seeks to express the principle "salus population suprema lex" (Good of masses is supreme law) is it not सर्वभूत हिते रताः (to be absorbed in the good of all things).

It may be emphasized in the context that those who refuse to subscribe to the theory of enforceability of natural rights do not deny that there are certain requirements necessary for a civilized existence. It is also not denied that there are certain ideals which have inspired mankind through the corridor of centuries and that there are certain objective and desiderata for which men have struggled and made sacrifices. They are also conscious of the noble impulses yearning for a better order of

things, of longings natural in most human hearts, to attain a State free from imperfections where higher values prevail and are accepted. Those who do not subscribe to the said theory regarding natural rights, however, do maintain that rights in order to be justiciable and enforceable must form part of the law or the Constitution, that rights to be effective must receive their sanction and sustenance from the law of the land and that rights which have not been codified or otherwise made a part of the law, cannot be enforced in courts of law nor can those rights override or restrict the scope of the plain language of the statute or the Constitution.

The Judges in India have referred to international legal documents and treaties in order to do justice in the absence of any law or authority available on the point. In *Madhu Kishwar V. State of Bihar* the Court made use of the Vienna Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) ratified by UNO on 18.12.1979 to uphold the right of succession for tribal women over which there was some amount of legal controversy. The concept of justice and equality spoken of in the Preamble was given a new dimension by the Supreme Court observing that Article 2 (3) of CEDAW enjoins the Supreme Court to breathe life into the dry bones of the Constitution, international conventions and the Protection of Human Rights Act, to prevent gender- based discrimination and to effectuate right to life including empowerment of economic, social and cultural rights. Women are half of the world's population. Among women, the tribal are the lowest of the low. It is mandatory to render them socio-economic justice so as to ensure their dignity of person, so that they be brought into the mainstream of the national life. In *Vishaka v. state of Rajasthan* the Supreme Court laid down guidelines on sexual harassment of women in the work place on the basis of CEDAW in search of gender justice flowing from "justice" and "equality" as employed in the Preamble. In *Kirloskar Brothers Ltd. V. ESI Corpn.* The Court used the Universal Declaration of Human Rights, 1948 and the International Covenant on Civil and Political Rights to reaffirm the duty of the State as regards its welfare role.

Nowhere does a Constitution state expressly or declare that all powers vest in the ultimate analysis in the people of India or the ultimate or residual power or the sovereignty vests in the people of India. The Constituent Assembly itself was divided seriously on the issue of whether the Constituent Assembly could appropriately be

called representative of all the people of India. The constitution was not subjected to ratification by direct vote of the people. However, it seems that the expression "we the people of India" has been borrowed from the Constitution of Eire and of the United States of America. In *Union of India v. Madan Gopal* it was held that our Constitution, as appears from the Preamble, derives its authority from the people of India. However, this finding itself is based on the contents of the Preamble.

Keeping in view the Basic Structure and Features of the Constitution as well as declaration in Preamble of Constitution of India we can proceed towards Integral Humanism.

SEAMLESS WEB

Granville Austin through his works/books has executed considerable influence on India Judiciary.

The Spirit of democracy, pursuit of a social revolution and preservation of the unity and integrity of the country was identified by Austin as seamless web which animates Indian Constitution.

Sudhir Krishnaswamy in his thesis 'Democracy and Constitutionalism' emphasize on the comments of Austin. In year 1966 for Austin, Constitution of India" is history and not a law book it is about politics and 'economics conditions'. In 1997 Austin finds and includes a fourth feature of 'Culture' to the seamless web.

According to Austin understanding Culture includes a range of elements from the citizen's cosmological view of life to his attitude to the Government.

The method and intent of Austin's analysis is exemplified by sentence announcing this significant discovery.

"The seamless web had a fourth strand, omnipresent, visible and invisible."

CULTURE

The first characteristic of our culture is that it looks upon life as an integrated whole. We do admit that there is diversity and plurality in life but we have always attempted to discover unity, integrity and fraternity behind them.

It is simple truth that society is a group of men. But how did society come into being?

In our view society is self born. Like an individual, society comes into existence in an organic way (it is not club, association or group). In reality, society is an entity with its own life (Even McDougal has produced a new branch of Psychology Group Mind). It is not mob mentality (sudden provocation) but social mentality evolves over a much longer period. It is not mere living together similarity. Society and Nation does not spring up from mere cohabitation. When group of persons lives with a goal, an ideal a mission and looks upon a particular piece of land as 'Matribhumi' the group constitutes a Rashtra- A Nation and people are called Nationals. Its identity is intact. It has a soul. According to McDougal it is the innate nature of a group the society. Which is born and is not the result of historical circumstances only.

Austin describes its Citizen's Cosmological view of life.

While according to Deen Dayal Upadhyay, it is Chiti of Nation, which determines the direction in which the Nation is to advance culturally.

NATIONAL CHARACTER

If there is any standard for determining the merit and demerit of a particular's action, it is this national character – Chiti; from nature what ever is in accordance with Chiti, is approved and added on to culture. These things are cultivated.

Whatever is against it is discarded as perversion. Undesirable is to be avoided.

Chiti – National Character is the touchstone – on which each action, each attitude is tested and determined to be acceptable or otherwise.

Chiti is the soul of Nation, on its strength a Nation raises strong and virile.

**An individual is also an instrument in bringing forth the soul of nation
(Cosmological View of Citizen's Life-Austin)**

**(N.B. Hon'ble Judges refuse to recognize any implied limit based on supposed spirit
outside the provisions of Constitution but put brakes at Constitutional Identity only).**

**An individual has a multitude of aspects – apart from self, family, Gram, Society,
institution upto bringing forth the soul of nation – not conflicting but harmony and
cooperation.**

INTEGRAL HUMANISM

**Pt. Deen Dayal Upadhyaya asks what should be the face of new Bharat and in
which direction we should advance? That's the question still relevant after 66 years of
Independence. All the one Billion people of Bharat can not agree on all or even on a
single question. We still have to decide what direction we should adopt to realise our
cherished dream of all round development in the lives of our countrymen. Yet there is
generally a common desire of the people of any nation. If this popular longing is made
basis of our aims, the common men feels that nation is moving in a proper direction,
and that his own aspiration is reflected in the efforts of the nation. This generates the
greatest possible feeling of unity, which should never be neglected.**

**We must absorb the knowledge and gains of the entire humanity so far as eternal
principles and truths are concerned. Of these, the ones that originated in our midst have
to be clarified and adopted to changed times, and those that we take from other societies
have to be adopted to our conditions.**

What is A Nation?

**When a group of persons live with a goal, an ideal, a mission and look upon a
particular piece of land as motherland, this group constitutes a Nation. If either of the
two – and ideal and a motherland – is not there, then there is no Nation. There is a 'Self'
in the body, the essence of the individual; upon the severance of its relation with the
body, a person is said to die. Similarly there is this idea, ideal, or fundamental principle
of a Nation, it's soul. Although, it is believed that man takes birth again and again, yet
the reborn person is a different individual. They are treated as two separate beings. The**

same soul leaves one body and enters another, but the former and the latter are two different individuals. The end of a person is nothing but the departure of his soul from his body. The other components of the body also undergo change. From childhood to old age, there is a drastic change. The biologists tell us that in the course of a few years, every cell of our body is replaced by a new one. A variety of changes takes place. Because the soul resides in the body without interruption, the body continues its existence. Such a relation is known as 'The law of Identity' in logic. It is due to this identity that we admit the continued existence of an entity. In this connection, a nice illustration of a barber's razor is sometimes advanced.

Once while shaving a customer, a barber prided in his razor being 66 years old. His father too had worked with the same razor. The customer was surprised, especially because the handle was quite shiny and new in appearance. "Why is the handle so shiny? How have you preserved the brightness for sixty years?" he asked. The barber too, was amused with this. "Is it possible to preserve the handle in a brand new appearance for sixty years? It has been replaced only six months ago" he replied. Naturally, the customer was curious, and asked how old is the blade?" "Three years", was the reply. In brief, the handle was replaced, the blade was also replaced, but the razor remained old. Its identity was intact. Similarly, a nation too has a soul. There is a technical name for it. The word is Chiti (चिति). According to McDougal, it is the innate nature of a group. Every group of persons has an innate nature. Similarly, every society has an innate nature, which is inborn, and is not the result of historical circumstances.

A human being is born with a soul. Human personality, soul and character are all distinct from one another. Personality results from a cumulative effect of all the action, thoughts, and impressions of an individual. But the soul is unaffected by this history. Similarly, national culture is continuously modified and enlarged by historic reasons and circumstances. Culture does include all those things which, by the association, endeavours, and the history of the society, have come to be held as good and commendable, but there are not added on the Chiti. Chiti is fundamental and is central to the nation from its very beginning. Chiti determines the direction in which the Nation is to advance culturally. Whatever is in accordance with Chiti is included in culture.

Chiti – Culture – Dharma

By way of an illustration, consider the story of the Mahabharata. The Kauravas were defeated, and the Pandavas had won. Why did we hold the conduct of the Pandavas as Dharma? Or why was this battle not considered just a battle for a kingdom? The praise for Yudhisthira and the dishonour heaped on Duryodhana are not a result of political causes. Krishna killed his uncle Kansa, the established king of the times. Instead of branding this as a revolt, we consider Krishna as an *avatar* of God, and Kansa as an *asura*.

Rama was assisted in his invasion of Lanka by Vibhishana, brother of Ravana. Such conduct of Vibhishana instead of being branded as treason, is considered good and exemplary. He betrayed his brother and his king, even as Jaichand had done later on. He might be branded as a 'quisling'. But Vibhishana is not called 'quisling' by anyone. On the contrary, he is praised highly for his conduct, and Ravana's actions are disapproved. Why is this so? The reason behind this is not political.

If there is any standard for determining the merits and demerits of a particular action, it is this Chiti: whatever is in accordance with our nature of Chiti is approved and added on to the culture. These things are to be cultivated. Whatever is against Chiti is discarded as perversion, undesirable and is to be avoided. Chiti is the touchstone on which each action, each attitude is tested, and determined to be acceptable or otherwise. Chiti is the soul of the Nation. It is on the foundation of this Chiti (soul) that a Nation arises and becomes strong and virile. And it is this Chiti that is manifested in the action of every great man of a Nation.

An individual is also an instrument in bringing forth the soul of the Nation's Chiti. Thus, apart from his own self, an individual also represents his Nation. Not only that, but he also mans the various institutions that are created for the fulfillment of the national goal. Therefore he represents these too. The groups larger than Nation such as 'mankind' are also represented by him. In short, an individual has a multitude of aspects, but they are not conflicting; there is cooperation, unity and harmony in them. A system based on the recognition of this mutually complementary nature of the different ideals of mankind, their essential harmony, a system which devises laws, which removes

disharmony, and enhances their mutual usefulness and cooperation, alone can bring peace and happiness to mankind, and can ensure steady development.

"Institution" – A Means to Fulfil National Needs

According to Darwin's theory, living beings develop various organs as per the requirements dictated by circumstances. In our *shastras*, it was stated slightly differently, that the soul constructs, using the strength of *prana*, various organs as the need is felt for the purpose of continuing life. Just as the soul produced these different organs in the body, so also in the Nation, many different organs are produced as instruments to achieve national goals. For example, various department in a factory, such as buildings, machinery, sales, which are called institutions. These institutions are created to fulfil the need of the Nation. Family, castes, guides, (which are known as trade unions), etc. are such institutions. Property and marriage are also institutions. Some *Rishi* established this practice of marriage. Similarly, *Gurukul* and *Rishikul* were institutions. In the same way, the State is also an institution. The Nation creates it. A lot of trouble in the West is due to the fact that they confused the State with the Nation, they considered the State synonymous with the Nation. Truly speaking, Nation and State are not the same. In our country, the State was produced as per the social contract theory. Formerly there was no State of king. The Mahabharata describes that in *Kritayuga*, there was no State or king. Society was sustained and protected mutually by practicing *Dharma*.

Constitution

Is the constitution too, not subject to some principles of a more fundamental nature? Or is it a product of any arbitrary decisions of a Constituent Assembly? On serious consideration, it will be clear that even the constitution has to follow certain basic principles of Nature. The constitution is for sustaining the Nation. Instead, if it is instrumental in its deterioration, then it must be pronounced improper. It must be amended. The amendment is also not solely dependent on majority opinion. Nowadays ,

the majority is much talked of. Is the majority capable of doing anything and everything? Is the action of the majority always just and proper? No. In the West, the king used to be the sovereign. Thereafter, when royalty was deprived of its so-called divine rights, sovereignty was proclaimed to be with the people. Here in our country, neither the kings, nor the people, nor the parliament have had absolute sovereignty. Parliament cannot legislate arbitrarily.

It is said about the British Parliament that it is sovereign and can do anything. They say that "British Parliament can do every thing except make a woman a man and vice versa'. But is it possible for the Parliament to legislate that every Englishman must walk on his head? It is not possible. Can they pass an act that everyone in England must present himself before the local authority once everyday? They cannot. England has no written constitution. They have high regards for their tradition. But their traditions too have undergone change. What is the basis for making changes in their traditions? Whichever tradition proved an obstacle in the progress of England was discarded. Those which were helpful in the progress were consolidated.

Traditions are respected everywhere, just as in England. We have a written constitution, but even this written constitution cannot go contrary to the traditions of this country. In as much as it does go contrary to our traditions, it is not fulfilling *Dharma*. That constitution which sustains the Nation is in tune with *Dharma*. *Dharma* sustains the Nation. Hence we have always given prime importance to *Dharma*, which is considered sovereign. All other entities, institutions or authorities derive their power from *Dharma*, and are subordinate to it.

If we examine our Constitution from the point of view of the growth of the Nation, we find that our Constitution needs amendment. We are one Nation, one people. That is why we did not entertain any special rights on the basis of language, province, caste, religion, etc., but gave everyone equal citizenship. There are separate States. Yet there is no separate citizenship of State and of Union. We are all citizens of Bharat. By the same token, we have denied the right to secede to any individual State. Not only that, the power to demarcate the boundaries, of States and to choose their names is vested in the Parliament and not in the Assemblies. This is as it should be, in tune with the nationalism and tradition of Bharat. However, despite all this, we made our Constitution federal, whereby what we have adopted in practice, we have rejected in

principle. In a federation, the constituent units have their own sovereignty. But these powers are given to the Union. It has no power of its own. Thus the federal constitution considers the individual States as fundamental powers, and the Centre as merely a federation of States. This is contrary to the truth. It runs counter to the unity and indivisibility of Bharat. There is no recognition of the idea of *Bharatmata*, our sacred motherland, as enshrined in the hearts of our people. According to the first para of the Constitution "India that is Bharat will be a Federation of States", i.e. Bihar Mata, Banga Mata, Punjab Mata, Kannada Mata, Tamil Mata, are all put together to make Bharatmata. This is ridiculous. We have thought of the provinces as limbs of Bharatmata and not as individual mothers. Therefore, our Constitution should be Unitary instead of Federal.

Decentralisation of Power

A Unitary State does not mean concentration of all powers in the Centre, just as the head of the family does not have all the powers with him even though all the transitions are carried out in his name. Others also share the executive powers. In our body also, does the soul possess all powers? Thus, a Unitary State does not mean a highly autocratic centre, nor does it entail the elimination of provinces. The provinces will have various executive powers. Even the various entities below the provincial level, such as the *Janapadas*, will have suitable powers. The Panchayats had a very important position. Nobody could dissolve *Panchayats*. Today, however, our constitution does not have any place for these *Panchayats*. There are no powers with these *Panchayats* in their own right. They exist at the mercy of the State only as delegated authorities. It is necessary that their powers be considered fundamental. In this way, the decentralization of power will be accomplished. The authority will be distributed to the lowest level, and will be fully decentralised. At the same time, all those entities of power will be centered around the Unitary State. This arrangement will embody *Dharma*.

If we carry this concept of *Dharma* even further, not only the State and the Nation, but the nature of the whole of mankind will have to be considered. In other words, the constitution of a Nation cannot be contrary to the natural laws. There are a number of norms of behaviour which are not found in any statute book, yet they do exist. At times, they are even stronger and more binding than any statutory law. The precept that one should respect one's parents is not written in any law. The present day

governments which are turning out variety of laws, day in and day out, have not passed a law to this effect. Still, people respect their parents. Those who do not are criticised. If tomorrow there arises a discussion, even in a court, it will be generally accepted that as long as a person does not attain majority, he should accept his parents' decisions.

Dharma Rajya is not a Theocracy

Dharma Rajya does not mean a theocratic State. Let us be very clear on this point. Where a particular sect and its prophet or *guru* rule supreme, that is a theocratic State. All the rights are enjoyed by the followers of this particular sect. Others either cannot live in that country or at best, enjoy a slave-like, secondary-citizen's status. The Holy Roman Empire had this basis. The same concept was existing behind "Khilafit". Muslim kings the world over used to rule in the name of Khalifa. After the First World War, this came to an end. Now efforts are afoot to revive it. Pakistan is the most recent theocratic State. They call themselves an Islamic State. There, apart from Muslims, all the rest are second-class citizens. Apart from this difference, there is no other sign of Islam in Pakistan's administration. The *Quran*, *Masjid*, *Roza*, *Id*, *Namaz*, etc., are the same both in Bharat, as well as in Pakistan. There is no need to tie up State and religion. By such a tie-up, there is no increase in an individual's capacity to worship God. The only result is that the State deviates from its duty. This does not happen in *Dharma Rajya*. Rather, there is freedom to worship according to one's own religion. In a theocratic State, one religion has all the rights and advantages, and there are direct or indirect restrictions on all other religions. Dharma Rajya accepts the importance of religion for peace, happiness and progress of an individual. Therefore, the State has the responsibility to maintain an atmosphere in which every individual can follow the religion of his choice and live in peace. The freedom to follow one's own religion necessarily requires tolerance for other religions. WE know that every kind of freedom has its inherent limits. I have the freedom to swing my hand, but as soon as there is a conflict between my hand and someone else's nose, my freedom has to be restricted. I have no freedom to swing my hand so as to hit another person's nose. Where another person's freedom is likely to be encroached upon, my freedom ends. The freedom of both parties has to be ensured. Similarly, every religion has the freedom to exist. But this freedom extends only as far as it does not encroach upon the religion of others. If such encroachment is carried on, it will have to be condemned as misuse of freedom,

and will have to be ended. Such limitations will be required in all aspect of life. *Dharma Rajya* ensures religious freedom, and is not a theocratic State.

Secular State: A Fallacy?

Nowadays the word 'Secular State' is being used as opposed to a theocratic State. The adoption of this word is a mere imitation of the Western thought-pattern. We had no need to import it. We called it a 'Secular State' to contrast it with Pakistan. There is some misunderstanding arising out of this. Religion was equated with Dharma, and then 'Secular State' was meant to be a State without Dharma. Some said, ours is a निधर्मी State (NiDharmi without Dharma, whereas others trying to find a better sounding word, called it धर्मनिरपेक्ष (Dharmanirapeksha –indifferent to Dharma) State. But all these words are fundamentally erroneous. For a State can neither be without Dharma nor can it be indifferent to Dharma, just as the fire cannot be without heat. If fire loses heat, it does not remain fire any longer. A State which exists fundamentally to maintain Dharma, to maintain law and order, can neither be निधर्मी (NiDharmi) nor धर्मनिरपेक्ष (Dharmanirapeksha). If it is, निधर्मी (NiDharmi), it will be a lawless State, and where there is lawlessness, where is the question of the existence of any State? In other words, the concept of धर्मनिरपेक्षता (Dharmanirapekshata – attitude of indifference towards Dharma) and State are self – contradictory. State can only be धर्मराज्य (Dharm Rajya – rule of Dharma) and nothing else. Any other definition will go against the very raison d'etre of the State.

Legislature versus Judiciary

In a Dharma Rajya, the State is not absolutely powerful, It is subject to Dharma. We have always vested sovereignty in Dharma. Presently there has arisen a controversy. Whether the Parliament is sovereign or the Supreme Court, and whether the Legislature is higher or the Judiciary. This is like a quarrel as to whether the left hand is more important or the right hand? Both are the limbs of the State, the Legislature as well as the Judiciary. Both have distinct functions to perform, In their individual sphere, each is supreme. To consider either one above the other would be a mistake. Yet the legislators say, "We are higher". On the other hand, members of the Judiciary assert that they have a higher authority, since they interpret the laws which the Legislature makes. The Legislature claims to have given powers to the Judiciary. If

necessary, the Legislature can change the Constitution. Hence it claims sovereignty. Now, since powers are bestowed by the Constitution, they are talking of amendments to the Constitution. But I believe that even if by a majority the Constitution is amended, it will be against Dharma, in reality, both the Legislature and the Judiciary are on an equal plane. Neither the Legislature is higher nor the Judiciary. Dharma is higher than both. The Legislature will have to act according to Dharma, and the Judiciary too, will have to act according to Dharma. Dharma will specify limits of both. The Legislature, the Judiciary or the people, none of these is supreme. Some will say "Why ! People are sovereign. They elect." But even the people are not sovereign, because people to, have no right to act against Dharma. If an elected government allows people to go against Dharma and does not punish them, then that government is in reality a government of thieves. Even the general will cannot go against Dharma. Imagine what will be the situation, if by some manoeuvring; thieves gain a majority in the government and send one from their ranks as the head of executive. What will be the duty of the minority, if the majority is of thieves and elects a thief to rule? The duty clearly will be to remove the representative elected by the majority.

Let us understand very clearly that Dharma is not necessarily with the majority or with the people. Dharma is eternal. Therefore, it is not enough to say, while defining democracy, that it is the government of the people. It has to be a government for the good of the people. What constitutes the good of the People? It is Dharma alone which can decide. Therefore, a democratic government, Jana Rajya, must also be rooted in Dharma, i.e. Dharma Rajya. In the definition of democracy, viz. "Government of the people, by the people and for the people" 'of' stands for independence; 'by' stands for democracy' and 'for' indicates Dharma. Therefore, there is true democracy only where there is freedom as well as Dharma. धर्मराज्य Dharma Rajya encompasses all these concepts.

Autonomous Institutions in Ancient Bharat

In our socio-political set up, the king and the State were never considered supreme. Not only that, there were other important institutions (besides the State, which was only one of them), to regulate and to help carry on the social life. Those institutions had been organized both on a horizontal and vertical level, i.e. on regional

and occupational basis. We had evolved Panchayats and Janapada Sabhas. The mightiest of the kings did not ever disturb the Panchayats. Similarly, there were associations on the basis of trade. These two were never disturbed by the State; on the contrary, their autonomy was recognized. They devised their own rules and regulation in their fields. The panchayats of different communities, shrenis, nigams, Village Panchayats, Janapada Sabhas and other such organization, used to frame their own rules and regulations. The function of the State was mostly to see that these rules were observed by the persons concerned. The State never interfered with the affairs of these associations. Thus, the State was concerned only with some aspects of the life of the society.

Similarly, in the economic field, many institutions are created. We have to think what should be the nature of our economic structure. We must have such an economic system that helps in the development of our humane qualities or civilization, and enables us to attain a still higher level of all round perfection. We should have a system which does not overwhelm our humane quality, which does not make us slaves of its won grinding wheels. According to our concept, man attains God-like perfection as a result of development. Therefore, we have to devise such an economic system, to create such infrastructure and to frame such regulations, in which and by which, the inherent potentialities of man may find their highest fulfilment. Let us consider this point.

There after Deen Dayalji refers to Eco Destructive consumerism and deficiencies in Western Economic Theories.

For Deen Dayalji Society must enable the individual to carry out his obligation to society emphasising on Education A Social Responsibility Guarantee of Marks, 7m's – man, Material, Money, Management, Motive, Market of Machine. For him full employment is a must, Neither Capitalism nor could Socialism find proper solution.

The only Third way, Alternate is to take account of Integral Man and discard status quo mentality.

We shall heave to discard the States quo mentality and usher in new era. Indeed our efforts or reconstruction need not be clouded by prejudice or disregard for all that is inherited from our past. On the other hand, there is no need to cling to past

institutions and traditions which have outlived their utility. We have considered what the direction of change should be.

We shall have to end a number to traditions and set in reforms which are helpful in the development of values and of national unity in our society. We shall remove those traditions which obstruct this process. Whereas one need not mourn the limitation of the human body, one must undergo the required surgical operation if any part of the body has a cancerous growth. There is no need to amputate healthy limbs. If today, society is gripped with evils like un-touch-ability, (which leads men to treat other human beings as lower than themselves), and thereby threaten the national unity, we shall have to end such evils.

We shall be required to produce such institutions as will kindle the spirit of action in us, which will replace the self-centeredness and selfishness by a desire to serve the Nation, which will produce not only sympathy towards our brethren, but a sense of affection and oneness whit them. Such institutions can truly reflect our Chiti.

Chiti is a Nation's soul. The power that energises and activates the Nation is called Virat, which in turn is aroused and organised and canalized by Chiti. The place of Virat in the life of a Nation is similar to that of Prana in the body. Just as Prana infuses strength in various organs of the body, refreshes the intellect, and keeps body and soul together, so also in a Nation, with a strong Virat alone, can democracy succeed and the government be effective.

We have to undertake the task of awakening our Nation's Virat. Let us start carrying on this task of awakening the Virat of the Nation with a high sense of pride in our hoary glorious past, taking a realistic assessment of the present and having a great ambition for the future. We wish neither to make this country a shadow of some distant past nor an imitation of Russia or America.

It is a state in which Nar (Man) becomes Narayan (God). This is the eternal and continuous divine form of our culture. This is our message to humanity at the crossroads. May God give us the strength to succeed in this task.

Human Jurisprudence

So we reach our last part of discussion.

Before we start discussion a comment is necessary that family is part of basic structure with essential role to establish orderly production and reproduction of the society and its culture from one generation to next and the political principles impose essential constraints on the family as an institution and guarantee the basic rights and liberties and fair opportunities of all its members. For example the equal rights of women and claims of children as future citizens are in a liable and protect them wherever, there are.

A major part of jurisprudence is to cope social conflict. Conflict can exist anywhere. Touching the people in deep and painful ways, the same are serious disagreement, clashing at variants of opposed principles, beliefs, and interests.

Conflict starts with difference, if unresolved lead to disagreement and become dispute leading to violence and even war. The methods of resolution of conflict and social orders are what we have to think about. The very first priority being a jurist is not to allow meagre differences between the individuals not be allowed to be converted into conflicts and at least they should never be criminalized. There can be a difference of opinion, but never of minds. The best way to keep the conflict away in society is to keep the social communication always alive by conciliation, mediation, negotiation and Samvad.

Alternative Jurisprudence

When we talk about religion, we talk of Ethics and Morality and in the present era of knowledge, the primary Ethical Ideas come to the society by religion. Mostly when we talk about jurisprudence we talk about certain theories and aspects of justice; we talk about persons, possession, ownership; we talk about legal theories; we talk about medical jurisprudence, criminal jurisprudence, tax jurisprudence, labour jurisprudence etc. But even in most corporal society we still have to talk about corporate social responsibility, its Philanthropy and corporate citizenship as well as

trusteeship concept. So we shall start lateral thinking afresh. A few comments taking holistic view of society, religion and jurisprudence are as follows:-

Cannons of Personal Jurisprudence:-

The first ethical cannon is, DO NO HARM "अहिंसा परमो धर्मः,"

अहिंसार्थाय भूतानां धर्मं प्रवचनं कृतम्।

यः स्यादहिंसासम्पृक्तः स धर्म इति निश्चयः ॥

The words uttered 2500 years ago are relevant even today and importance of *Ahimsa* has been emphasized by Mahatma Gandhi. We need a proactive, more positive and more forceful ethical canon. It is, DO GOOD. As saint Kabir says:

“परमार्थ के कारने, साधुन धरा सरीर।”

These two canons of ethics have significance not only for sages and spiritual aspirants. They are equally important for today's professionals as well. For example, highly specialized professionals like scientists and engineers have a moral responsibility to examine the larger social and human implications of their work.

The two canons ought to be binding for all kinds of institutions and organizations as well. These institutions exert a greater influence on the quality of life today than the activities of private individuals.

When we talk about aesthetics we emphasize on virtues (धर्म के दस लक्षण) –

धृतिः क्षमा दमोस्तेयं शौचमिन्द्रिय निग्रहः।
धीर्विद्या सत्यमक्रोधो दशकं धर्म लक्षणम् ॥

Ethical Jurisprudence

Evolution of principles for making moral judgments is the task of ethics (Naitikta means acting according to Niti i.e. principles conduct) are moral sensibilities are largely shaped by the social customs and religious belief. We acquire them unconsciously from the external society and the family in which we grow up. Social ethics give a readymade basis for making moral judgments and customary ethics is

based on the past experiences of civilization and collective wisdom distilled out of it. The categories of customary morality do not apply to newer activities, social arrangements and Gandhi Ji as well as Mahamana at different stages clearly recognized this difficulty. In there typical style at one place or other expressed seven deadly sins of modern times:

1. Politics without principles
2. Pleasure without conscious
3. Knowledge without character
4. Commerce without morality
5. Wealth without work
6. Science without humanity
7. Worship without sacrifice

We further talk about integrity, fairness, self discipline, humility and courage.

Evolving a concept of Preventive Jurisprudence is necessity of the day, which can be basis of Societal Jurisprudence.

Societal Jurisprudence

Enthusiastic performance of social duties by all individuals and groups is a prime requirement of a good society. It is the moral duty of parents to nurture and to help children grow up as good persons.

Equally important is the reciprocal ethical demand of duty towards parents: to love them, help them and to look after them in their old age.

Civic duties constitute another group of social duties. These concern our duties as citizens of a community, of a democratic society and a sovereign nation. Having enjoyed and rights and benefits of being a member of this socio-political and cultural unit it is our moral obligation to strengthen its institutions, and contribute towards its smooth, collective functioning. These citizenship duties have been well articulated as a set of ten Fundamental Duties in part IV-A of the Indian Constitution.

The strongest proponent of duty as the standard for ethical conduct in the modern times is Emanuel Kant.

- (i) The Principle of Universality**
- (ii) The Principle of Humanity as an End in Itself**
- (iii) The Principle of Autonomy**

We owe moral responsibility not only to the present generation, but also to the coming generations.

Duty as responsibility, of care and concern, applies not only to individuals, but also to collectivities like professional groups, organizations, corporations, governments, communities and nations.

It is heartening to see an initiative at the international level for promotion of the concept of universal human responsibilities on lines parallel to that of universal human rights. This initiative has been taken by the Inter Action Council founded by the former Japanese Prime Minister Fakuda. An international gathering in Viena in 1997 has come out with a draft proposal of a "Universal Declaration of Human Responsibilities".

The document states:

A better social order both nationality and internationality cannot be achieved by laws, prescriptions and conventions alone, but needs a global ethic. Human aspirations for progress can only be realized by agreed values and standards applying to all people and institutions at all times.

Every person has a responsibility to treat all people in a humane way.

Every person has a responsibility to respect life.

All people have responsibility to protect the air, water and soil for present and future generations.

All property and wealth must be used responsibly in accordance with justice and for the advancement of the human race.

Sensible family planning is the responsibility of every couple.

The only morally defensible goal is growth of all - सर्वोदय, Responsible use of power demands purity of heart, चित्तशुद्धि, and an attitude of selfless, egoless and disinterested discharge of duties, i.e. an attitude of अनासक्त or निष्काम कर्म.

The three main factors to be considered in making ethical judgments are:

- 1. The motive from which the action springs.**
- 2. The nature of the act itself, including the means adopted.**
- 3. The resulting consequences.**

The essence of reason based reflective morality is a careful, honest, competent, and wise examination of all the three factors, i.e. motive, means and consequences, in making moral choices and judgments.

Conclusion

So we must escape the methodological and disciplinary boundaries of ordinary legal academic discourse.

Think out of the box, about the values intrinsic in society which give coherence and durability to Nation with goals to achieve (not merely to Constitution and constitutionalism).

Constitution or No Constitution.

Beyond Constitution.

The values are eternal and have been put in Constitution as foundational values, a few recognized in Preamble.

The values are the soul of Nation We the people have to cultivate, Cherish and develop the same; as political supreme to achieve the Goal of Bharatvarsh.

So we can conclude that different dimensions of jurisprudence and Constitutionalism devolve different categories of values of good life of an individual in the society. These categories are very much inter-related and constitute a continuum, they are all necessary. It is the realization of this whole spectrum in society which

constitutes the full flowering of "Param" in the society. In this historical development the stream of humanism flows in different directions and in different currents, but the goal is the same with faith in the intellectual, emotional, spiritual and creative potential of human being in development of the society and that's the human values as jurisprudence.

We move from societal level to intellectual and cultural level and from सद्गुण to सदाचार and "सम्भवामि युगे-युगे". The study and implementation of Bhartiya Constitutionalism and jurisprudence works for एकीकृत सामंजस्यपूर्ण एकात्म समाज।

For detailed studies the ready reference is as follows:

1. Golaknath Vs State AIR 1967 SC 1643
 2. Keshawananada Bharti Vs State AIR 1973 SC 1461
 3. UOI Vs Tulsiram Patel AIR 1985 SC 1416
 4. Madhu Kishwar 1996 (V) SCC 125
 5. Vishakha 1997 (III) SCC 545
 6. Kriloskar 1996 (II) SCC 682
 7. Madam Gopal 1954 SCR 541
 8. 2011 (I) SCC 228
 9. Human Values – A.N. Tripathi
 10. Preamble – Justice R.C. Lahoti
 11. Integral Humanism – Deen Dayal Upadhyaya
 12. The Indian Constitution : Cornerstone of a Nation - G. Austin
 13. Working a Democratic Constitution – G. Austin
 14. Democracy and Constitutionalism in India – Sudhir Krishnaswamy
 15. Basic Structure Constitutionalism – Indian Institute of Advanced Legal Studies, ILS Law College Pune.
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Culture and Literature in a Glo(b/c)al World

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Globalization is not as new a phenomenon for Indians as is made out to be by the economists of the 20th century. Anthropologists, sociologists and geographers tell us that

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human beings have migrated from one geographical location to another and so have their ideas. The Vedic Prayer: *krinvanto vishwam aryam* (*Rig Veda* IX.63.5; tr. “Let the entire world be cultured”) and *yatra vishvam bhavati ek nidam* (*Yajurveda*, XXXII.8; tr. “Where the world becomes a solitary abode”) indicate Indians’ wish to treat the whole world as one single family. This is not to be treated as a proposition for holding only one idea to be valid and good for all and therefore making it prevail. Rather, it imbibes the idea that the people at different levels of society, states and countries may stay and live together holding different viewpoints and worldviews. Besides respecting their mutual differences they look after each other’s needs and interests as in a family different members do and explore the truth. In the *Atharva Veda* (*bhumi sukta*), the Rishi is delighted in proclaiming himself to be the son of the mother Earth: *mata bhumi putro aham prithviah* (XII.1.12). The *Sukta* further hails the earth for giving shelter to numerous faiths: *jana vibhrati bahudha vivacasam nana dharmanam prithvi yathoksam*. (XII.1.45 Tr. “The earth that holds people of manifold varied speech, of different customs, according to their habitations”) Similarly, the Vedic idea of *vasudhaiva kutumbakam* (Tr. “The entire world constitutes a family”) provides ample space not only to the human beings but also to the animals, birds, plants, minerals and other organisms in the ecosystem as it is enshrined in the idea that everything is just the manifestation of God and has one pervading soul (*atma*). As in a unit family everything and everybody becomes a part of the family similarly in this world everything and everybody belongs to one family. The entire *shloka* containing this wish condemns all sorts of discrimination. It reads: *ayam bandhurayam neti ganana laghuchetasam, udaracharitanam tu vasudhaiva kutumbakam* (*Maha Upanishad* VI.71, tr. “Discrimination saying ‘this one is a relative; this other one is a stranger’ is for the mean-minded. For those who are magnanimous, the entire world constitutes but a family.”) This idea cuts across time and geographical location as is evident from the *Panchatantra*, the *Hitopadesha* and the Tamil Sangam literature. The idea is not just about peace and harmony among the societies in the world, but also about a truth that somehow the whole world has to live together like a family. This is the reason why Hindus think that no power in the world, big or small can have its own way, disregarding others.

A sustainable and holistic development paradigm emerges if this idea of the world-brotherhood is accepted. According to N Radhakrishnan, Gandhian vision of holistic development and respect for all forms of life emerges from this philosophy of

Vasudhaiva Kutumbakam; similarly nonviolent conflict resolution embedded in the acceptance of nonviolence both as a creed and strategy is an extension of this ancient Indian concept of *Vasudhaiva Kutumbakam*. (N Radhakrishnan) On the other hand there are those who consider their respective religion to be superior to the rest's and therefore reject pluralism. They firmly hold that they are obliged to take on a 'cosmic battle' against evil. Modern globalization is a by-product of this thinking. They believe that globalization is the panacea for the evil called "religious" and other forms of pluralism and by imposing the global process of secularization fundamentalism can be countered. Samuel Huntington's thesis on the clash of civilizations is also rooted in this idea (edvardas.home.mruni.eu). The result of this thinking on the one hand has led to the destabilising of the entire Arab peninsula; on the other this thinking has created pockets of economic disparities by bringing the concentration of wealth into a few hands. This has led to frustration among large sections of global society. The linguist turned political activist Chomsky has written a great deal about it (chomsky.info). Similarly British author David Icke talks of a global agenda being pursued by a few powerful business families in the form of the Origination, History, Symbolism, Secret Societies, Big Brother Surveillance, Manipulation of Wars, Politics, Business, Banking, and Media, Mind Control, Religion etc. (exopoliticshongkong.com) Icke suggests that they use "Problem-Reaction-Solution technique" in most of the cases to exercise their control. Icke's books also reveal how a hidden hand is there behind world-changing events like the attacks of 9/11 and the manufactured wars in the Middle East and the consequent 'War on Terror'. However, Icke's main focus is on the concentration of wealth into a few hands and the techniques adopted by them to retain and increase their wealth. Some other people have also expressed their concerns on the issue but not as ferociously and as intensely as Icke has. Their main strategy has been one of emphasising the inclusiveness of more and more people in the process of globalization though without making much dent. The former American president Jimmy Carter, for example, observed: "Globalization, as defined by rich people like us, is a very nice thing... you are talking about the Internet, you are talking about cell phones, you are talking about computers. This doesn't affect two-thirds of the people of the world." (ushistorysite.com) Similarly Kofi Annan, the Former Secretary General of the United Nations, said, "... we must ... ensure that the global market is embedded in broadly shared values and practices that reflect global social needs, and that all the world's people share the benefits of globalization." (corpwatch.org)

In the days when ‘double speak’ is prevalent the slogans like “the world is a global village”, “have free flow of information”, “nothing is hidden”, “access every piece of information” and the like are given on the one hand to eulogise the impact of globalization and on the other whistle blowers like Julian Assange and Edward Joseph Snowden are made to run to save their lives. In such a scenario, ‘who is controlling whom and why’ becomes a valid and reasonable question. Assange claims that the purpose of his deconstructive activity is simply “to bring important news and information to the public... .” He claims, “One of [their] most important activities is to publish original source material alongside [their] news stories so readers and historians alike can see evidence of the truth.” (wikileaks.org) But at what stage this deconstructive activity will be termed subversive is not decided on the basis of principles but on the basis of the interests of certain global groups. And therefore people like Assange and Snowden are hounded. The hounding is also done in case of dissenters in scientific matters. For example, Peter H. Duesberg (a professor of Molecular and Cell Biology at the University of California, Berkley) and his group have been vilified as “a small group of pseudo-scientists.” Peter and some other scientists raised some interesting questions about AIDS and have declared the entire project a big hoax: “Despite enormous efforts, over 100,000 papers and over \$22 billion spent by the US taxpayers alone, the HIV-AIDS hypothesis has failed to produce any public health benefits, no vaccine, no effective drug, no prevention, no cure, not a single life saved. Is the science system to be blamed? Has science failed to reveal the truth about AIDS?” (duesberg.com). Some people saw a conspiracy when they correlated Duesberg’s hypothesis to the propagated facts like “the black Africans bear the largest share of the AIDS burden” and “the drugs at a very high profit are sold by the whites”. As a result of this the President of South Africa, Thabo Mbeki, stopped the Western pharmaceutical multinational companies’ selling their expensive drugs there; consequently he was ousted from power. A trial of Thabo Mbeki for not preventing “about 171,000 HIV infections and 343,000 deaths ... between 1999 and 2007” (Nicoli Natrass) by following “the more sensible public health policies” may take place any day at the behest of the multiple vested interest groups backed by these companies.

One may argue that people like Icke, Assange, Snowden, Duesberg and Thabo Mbeki are irresponsible and they do not fall into the canon of literary activity nor do they claim any authentic study of globalization. I, therefore, turn to the International

Forum on Globalization (IFG) a San Francisco based educational alliance of sixty prominent activists, scholars, economists, researchers and writers. It was established in the context of increasing economic globalization, to “promote equitable, democratic, and ecologically sustainable economies.” IFG publishes research detailing various aspects of the impact of global economic forces related to globalization. One may refer to the papers like “Searching for a Miracle” (2009) and “Outing the Oligarchy” (2010) and the report “Nuclear Roulette: The Case Against a ‘Nuclear Renaissance’” (2011) to understand how globalization is hoodwinking the poor of the world and helping only a few powerful individuals or groups. *The International Forum on Globalization: Alternatives to Economic Globalization* (2002) presents “10 governing principles for new rules and institutions for the global economy, rules that will lead to more democratic and sustainable societies.” It “elaborates key principles for sustainable societies and sketches policy perspectives for a de-globalized world order, for corporate accountability, for resource-light production patterns, and for fair trade relations.” (Wolfgang Sachs) *International Forum on Globalization*, (Vandana Shiva along with Jerry Mander, Edward Goldsmith, Ralph Nader, et al.) has launched a global solidarity movement known as the alter-globalization movement. Vandana Shiva has argued for the wisdom of many traditional practices, as is evident from her interview (Ranchor Prime). Shiva suggests that a more sustainable and productive approach to agriculture can be achieved through reinstating a system of farming in India that is more centred on engaging women. (likeawhisper.files), She advocates against the prevalent “patriarchal logic of exclusion,” claiming that a woman-focused system would change the current system in an extremely positive manner. Vandana’s approach is in contrast with the American model of Agriculture which has been popularised in India and elsewhere at the behest of the global agencies like UNO and FAO. Only a novice will believe that the so called modern alias scientific alias American model of agriculture does not promote the interests of a few multinational companies alias capital houses. The extent of the control of these powerful lobbies in controlling various subsidies and various plans mooted to help the “poor farmers” who have to embrace death to come out of their clutches can be felt by any agricultural economist. The “intellectual elites” also become a party to such decisions as they directly or indirectly are on the payrolls of these companies or benefit from them in some way or the other. Innocent looking Extension Centres of the Agriculture Universities act as the advertisement boards/agencies of these multinational houses whose wish to control the entire populace

is evident from their plan of producing and selling only the genetically modified seeds. Their strategy is very simple: increase the lust and greed; the rest will follow on its own.

It was basically against these two vices (lust and greed) that Gandhi opposed the Western Civilization in his *Hind Swaraj*. (mkgandhi.org). We need to study Gandhi more closely to understand and appreciate the phenomena called globalization and glocalization, particularly in the Indian context. Gandhi himself was not opposed to any new or foreign idea as is evident from: “I do not want my house to be walled in on all sides and my windows to be stuffed. I want the cultures of all lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any. I refuse to live in other people’s houses as an interloper, a beggar or a slave.” (*Young India*)

One must not forget that Gandhi himself was a product of globalization. He was educated in London, started his political activities in South Africa, led Khilafat movement in India to support the Turkish Khalifa, was constantly in touch with so many British and American journalists and others and was greatly influenced by western figures such as Jesus, Tolstoy, Thoreau and Ruskin. Gandhi himself identifies globalization as an ancient phenomenon, whereby he claims that it was not a bigger threat to India as various races starting from the Greeks and Huns to the British had came to India and settled here. He believed that the mingling of cultures in India would not be a threat to India’s dominant customs and culture. However, he did identify that the establishment of a global society would carry certain dangers for a sovereign nation. For example, industrialisation and commercialisation of the economy will lead to class antagonism and environmental hazards. Gandhi was a great believer in the preservation of the ancient Indian culture and norms of society though he had understood Indian Civilization via the West. He therefore was not against the West as such but opposed the values that the West stood for.

Globalization can also be studied in relation to the Gandhian economics. For instance, through the Swadeshi Movement, Gandhi advocated for home spinning of cotton as a means of production and consumption for Indians. His rejection of western textile cloth and other factory/foreign products is tantamount to rejecting globalization and glocalization as he does not want a centralised system of production and distribution. On the other hand, he backs a small and decentralised form of production/governance. Gandhi’s thinking and the suggested action of planning has a

moral dimension which is absent in the socialist/ communist protectionism and liberal Globalization. Thus, Gandhi holds an idealist view of economic globalization where village states would be self sufficient on most accounts but mutually dependent on some others. He neither supports machines nor industrialisation on which Globalization stands to gain. Toeing the Gandhian line of planning and development would require a great effort in redefining the existing parameters and finding out new ones. The existing parameters of growth are the borrowed ideas from the west, which Gandhi rejects as unwholesome. I believe this is a challenge less to our government and more to the intellectuals. For example, instead of measuring growth in terms of GDP, GNP, per capita income and more consumption goods one may have to measure growth in terms of GNH. A small nation like Bhutan has taken initiative in that direction because the intellectual class there is not as complacent and tardy as ours. R P Mishra puts forth the case of development in the Indian context: “Indian culture has a different concept of development called *mangalya*. It means a state in which man has no insurmountable problems and the natural, cultural and social environment in which he lives is conducive to his overall welfare. *Mangalya* is not limited to an individual; it covers all those humans and other lives in and around the individual. It is collective welfare. It carries man towards a blissful life.” (ignca.nic.in)

A major part of Gandhi’s criticism of industrialisation was geared towards preserving India’s rich natural resources on moral grounds. With the progress of globalization the tendency to exploit every possible resource in the country to increase the GDP has also increased, as a result of which rapid deforestation is taking place and serious environmental hazards are being faced not only by India but also by most of the developing countries. The corporate power undermines the efforts of the government at curbing environmental loss, as the American withdrawal from the Kyoto Protocol and other such talks vividly depicts. Further, poor countries have to bear the brunt of the climate change all by themselves as is made out by Filipino Commissioner Naderev Saño in his speech at the ‘COP18 Climate Talks’:

Each destructive typhoon season costs us 2% of our GDP, and the reconstruction costs a further 2%, which means we lose nearly 5% of our economy every year to storms. We have received no climate finance to adapt or to prepare ourselves for typhoons and other extreme weather we are now experiencing. We have not seen

any money from the rich countries to help us to adapt ... We cannot go on like this. It cannot be a way of life that we end up running always from storms Climate change negotiations cannot be based on the way we currently measure progress. It is a clear sign of planetary and economic and environmental dysfunction ... The whole world, especially developing countries struggling to address poverty and achieve social and human development, confronts these same realities. ... (qtd. by John Vidal, theguardian.com)

If one considers oneself a ‘trustee’ of the wealth one has created and one is able to control one’s lust and greed, as Gandhi wanted it to be, one can very easily control the damage to the environment. Gandhi puts it very succinctly when he writes: “The earth has enough for everyone’s need, but not enough for everyone’s greed.” (mkgandhi.org) It shall not be out of place to quote Rabindranath Tagore to summarise Gandhi’s contribution to the issue: “We have for over a century been dragged by the prosperous West behind its chariot, choked by the dust, deafened by the noise, humbled by our own helplessness, and overwhelmed by the speed. We agreed to acknowledge that this chariot-drive was progress, and that progress was civilization. If we ever ventured to ask, ‘Progress towards what, and progress for whom,’ it was considered to be peculiarly and ridiculously oriental to entertain such doubts about the absoluteness of progress. Of late, a voice [Gandhi] has come to us bidding us to take count not only of the scientific perfection of the chariot but of the depth of the ditches lying across its path.” (swaraj.org)

It is also argued by some intellectuals that some modern day Indians are over-reacting to the whole issue though Indians themselves have enjoyed their share of globalization throughout the ages. For example, the book *Globalization: Pre Modern India* presents theoretical arguments and empirical data regarding the process of globalization with reference to India. The contributors to the book assert that long before the colonial period in Indian history, Indians maintained commercial and cultural contact with the outside world, which continued to flourish even during the colonial period. In this way, the contributors have substantiated the thesis that pre modern India experienced the process of globalization and this helped in the spread of Indian culture especially in South East Asia. Similarly, E Pococke in his book *India in*

Greece (archive.org) argues that Greece has been a colony of the Indians particularly because of the large scale migration after the Mahabharata war.

The example of the spread of Indian religion and culture in the South East regions of Asia in the ancient times and the spread of Hinduism in the West particularly in the US and Europe in the modern age are also cited to exemplify India's share in globalization. Since the late 19th century, a large number of Hindus have settled in eastern and southern Africa, Malaysia, the islands of the West Indies, the Pacific Ocean and the Indian Ocean. A large number of them have adhered to their religion faithfully for several generations. Since World War II many Indians have also been settling in the United Kingdom, and North America. Although the earliest migrants were comparatively uneducated Hindus and Sikhs, many of the émigrés of the late 20th century are highly skilled and well-educated professionals. This has affected people on both the sides. A good number of Hindu migrants have also been converted to Christianity and Islam. Similarly a large number of Christians have also taken to the Hindu ways though Hinduism does not believe, practice and preach proselytisation.

Buddhism spread to the South East of Asia around 250 BC. A manifestation of the spread of Indian religious attitudes is visible in the Western world in 20th -21st centuries. It may be attributed to the International Society for Krishna Consciousness (ISKCON) started by *Swami* Prabhupada (1896 –1977) in 1965. *Sankirtana* (devotional singing and dancing), performed on the streets of many cities in Europe and the US by young Christian or Jewish men and women wearing dhotis and saris is not an uncommon sight. This is essentially a part of the *bhakti* movement and the followers are initiated into vegetarian diet systems and into practising organic farming. Another contribution is that of Osho (1931 –1990) and Maharishi Mahesh Yogi (1918 –2008) who primarily taught meditation through different ways and techniques. Both of them followed a pattern established earlier by Vivekananda (1863-1902) and Paramahansa Yogananda (1893–1952), who emphasized to the Western audiences the nonsectarian and philosophical teachings of Hinduism and taught that meditation, yoga, and parts of the Vedantic texts were compatible with any religious tradition. Maharishi Mahesh Yogi not only presented Transcendental Meditation as a technique for improving one's health and reducing stress but also founded Maharishi University of Management at Fairfield (USA) in 1971, based on the Vedic tradition of India as “a serious alternative

to traditional schools.” (mum.edu) The University promotes sustainable living and education based on the consciousness of Maharishi Vedic Science. Vegetarian and organic food grown on the principles of Maharishi Vedic Organic Agriculture is provided in the dining halls of the University.

Of late there has also been an indubitable boom in Yoga Centres in the West. Many forms of Yoga have been popularised there by gurus such as B K S Iyengar, Bikram Choudhury, and Swami Ramdev. Divorced from its Indian religious and philosophical roots, it is now very common in fitness centres across the globe. The people who have taken to the Hindu ways respect the animal and the plant world by taking to vegetarianism; they become more frugal in their habits by adapting to natural habitats and nature cure centres and therefore they are a lesser burden on the resources of our planet. In contrast to this the westerly inclined globalization turns people more burdensome on the existing resources on this planet and consequently turns them more violent.

In the early 21st century the Hindu Diaspora in the United States and the UK has greatly increased in a number of cities; wealthy Hindu communities have built large temples and endowed chairs in South Asian studies at the major universities there. The temples also serve as community centres and provide classes in classical Indian music and several forms of classical dances from India — particularly *Bharatanatyam*, *Kuchipudi*, and *Odishi*. Among the Indian Diaspora, these art forms, along with popular devotional songs (*bhajans*), are an important means of transmitting Hinduism to younger generation. But all this is aimed more at preserving their own cultural identities than at promoting conversions. Likewise, the Sikhs also keep on maintaining their Gurudwaras and struggling to protect their identities at several places in the world.

Bollywood movies, almost all of which portray some form of Hindu culture, are extremely popular in many parts of the world. However, no authentic study of their influence on the indigenous cultures like the Arab world is available. Still it may safely be concluded that Hinduism/ Buddhism/ Indianism in several forms has spread in different parts of the world at different times but no nation has ever accused Indians of coercing its population to accept Indian values. Similarly, one has to see if the spread of

Indian culture was in conformity with the universal laws/values or against them. If yes, it has to be termed not globalization but universalization.

In contrast to this, in 20th – 21st century India the phenomenon of globalization is often described as “open economy”, “Global economy” and also “free market economy”. It is evident from the term and its usage that the entire emphasis is on the free flow of capital/money/wealth from one nation to another nation. In this description only money/business/economy is given importance. But there is no capital/money without the ideas associated with it. However, money generally flows from economically superior societies to the lower ones. And riding the money come the cultural ideas to change the ethos of a particular society. Thus, the culture of a place is changed without any external and forceful coercion. However, most of the sadhus/ intellectuals who reached the western shore had gone there penniless; they had started attracting the westerners on the strength of their ideas. Osho’s case may be cited to prove that many of them became wealthier than many capital houses there. But most of the multinational companies grow their business in countries like India not because of any intrinsic value/ superiority but on account of the wealth that they carry with them which is used to lure people at various levels and sometimes even to destabilise the hostile parties/governments. In other words their business grows on unethical practices. Various concerns have been expressed against this sort of inequalities/unfair practices/coercion but without much impact. (un.org)

Again, with a cue from energy systems it becomes clear that energy flows from higher levels to lower levels and not vice-versa until some device is used for the purpose. Similarly in a modern economy when free flow of money is not there some extra energy/ force is required to push it from one economy to another. This force comes in the form of various laws and treaties – inter-national as well intra-national cutting across various parts and parties. International forums such as UNO, International Courts of Justice, World Bank, World Trade Organization and International Monetary Fund monitor these treaties with a view to watching the flow of money or capital in one direction only. If something contrary starts taking place all these suddenly become very active to divert the route of this flow. Their activity is reflected in creating lobbies, providing various packages and also coercing the governments to bend and alter rules and laws and in their favour. The example of subsidies on agriculture and agricultural products may be

cited to prove the point. (Devinder Sharma) However, the national leaders are not oblivious of this fact; they have faith in the trickledown theory and believe that whatever little amount trickles down will help the people grow and will give a boost to the country's economy. Thus, again it is obvious that large quantities of money are siphoned by bigger economies while the small partners remain contended with smaller quantities. Whether their remaining contended with smaller quantities exemplifies the grip of the culture that teaches them not to be greedy or reflects their helplessness also remains to be studied.

Now let me turn my attention to 'Glocalization'; the word is a "combination of the words 'globalization' and 'localization' [and is] used to describe a product or service that is developed and distributed globally, but is also fashioned to accommodate the user or consumer in a local market." (investopedia.com) Products or services that are effectively "glocalized" are, by definition, supposed to be of much greater interest to the end user. Glocalization is generally proposed as a solution to the perceived problems of globalization. Critics believe globalization causes a conflict between an emerging worldwide system of values and regional autonomy, resulting in the destruction of local cultures while Glocalization seeks to mediate between global systems and local communities by ensuring that a globalized community would be stable and that local practices, laws, customs and beliefs would be respected. It, therefore, often involves tailoring products intended for international distribution to the tastes of local consumers. However, glocalization is not necessitated by an urge to respect local communities rather it is a strategy of multi-national companies to do business as they have realised that one-size-fits-all versions of their products fail in many markets. McDonald's Corporation, for example, has restaurants in more than 100 different countries. Instead of offering an American-style menu, which is chiefly beef based, in India, where most of the residents do not eat beef, McDonald's claim to sell mostly chicken, mutton and vegetarian offerings. However, charges are often levelled against what they practise and what they claim. The question still remains if the Indians need an International restaurant for providing them items like "*alu-tikki*" or "*chicken-tikka*" or "*bhujia*". When it comes to bigger items, one may look at automobile industry for examples of glocalization at work. A car manufacturer like Mercedes-Benz or BMW offers many different engine offerings for their home market and the target markets. However, in most of the cases the third world markets are considered to be the dumping

grounds for the rejected stuff of their home markets. For example, the foreign cars not conforming to Euro- I/II norms were dumped in the initial phase in Indian markets.

Likewise, the MTV Networks broadcasts its various programmes in more than 20 countries. Instead of offering the same programme in each of those countries, the network tailors each channel to suit those countries' individual tastes and features regional and international musicians because not all in the world like to listen to Liam Gallagher or Martha Stewart or Lady Gaga or to watch "Teen Moms" or "Punk'd" or "Laguna Beach". However, the fact remains that the music programmes on Doordarshan and MTV have different target audiences and different aims. For example, even a cursory look at the sets and the hairstyle, dress, the language (both verbal and non-verbal), and the presentation of the anchors on these channels will prove the point being made. However, the fact remains that with the help of satellite TV, immigrant audiences like Indians in the UK and the USA can even glocalize their living rooms by having access to *desi* channels like *Doordarshan*, *Astha* and *QTV*. It is needless to mention that one sided flow of information on television is not always value-less. It carries some ethos. For example, beauty pageants and fashion parades on FTV not only promote such events in India but also make the flaunting of (fe)male body culturally acceptable by changing its ethos and encouraging capitalist interests by legitimising lust and greed. Partying with ingredients like drugs, drinks, dancing (not classical but hip-hop style), gambling, kissing and others gets its social acceptance and legitimacy on account of such channels. Those who do not accept them are derided using terms like "confused *desi*", "*behanji*", "*ganwar*", "*dehati*", "*bhaiyaji*" and "Sitaji".

Even innocent looking channels like 'Discovery', 'National Geographic', 'Animal Planet' and 'History' propagate the American/western point of view about nature and different world events. The programmes on such channels also encourage one to be more self-centred to fulfil their "wish and ambition" and lay the foundation for demanding more and more personal freedom to pursue their individual agenda. All this is done in a very polished and persuasive language and displaying cultured, suave and sophisticated taste/manners. There is no other alternative in the globalised but unipolar world than accessing and depending on the information easily provided by the multinational channels and news agencies located in the capitalist countries. In such a scenario truth is the first casualty. For example, for a piece of information about even a

neighbouring country like Burma, Indonesia and Nepal one (this includes Newspapers/ news channels in English and regional languages) has to depend on whatever is churned out by the English media based in the US. The hysteria that was created around the false charges of hoarding mass destructive weapons to attack Iraq despite UN resolutions against it highlights the role of the media controlled by the vested interests. The role and location of language thus is very important and also suspect in such circumstances.

In such a scenario what role is to be performed by the Universities/ Teachers? Some guidelines have been spelled out by the government regulatory agencies like AICTE, ICAR and UGC in the form of Teacher Appraisal forms and spelling out model curriculum. Similarly, by way of accreditation of universities and colleges an agency like NAAC also lays certain dos and don'ts. This is one aspect of the whole plan to negotiate the autonomy of the institutions by the government. A university these days is considered to be more successful and modern if it has a large of number of tie-ups and partnerships with the foreign collaborators. A natural corollary is a demand for foreign capital in the hither-to untouched educational sector. To complete the process of globalization 'The Foreign Educational Institutions (Regulation of Entry and Operations) Bill, 2010' to allow foreign universities and colleges to start their campuses in India is already pending with the parliament. (prsindia.org) The day is not far when the huge and prime infrastructure owned by state/central universities/ colleges will be sold for peanuts as has happened with many public sector companies which were handed over to the private players. The once derided Hindu growth rate is limping back as the targeted growth of 10-11% could not be achieved even once despite Govt selling almost all its assets.

The people with low self-esteem and colonial mind-set are likely to be the end losers in the era of globalization at least in terms of the loss of plurality and individuality; the loss of identity generally leads to alienation, frustration and depression. To substantiate my thesis let me take up an example of text-books in engineering stream as their impact is easily visible though things are no better in other disciplines. Whatever text-books are taught in a civil engineering course in MIT are also prescribed in IIT, Mumbai and the same teaching material percolates, sometimes through their *desi* versions, via NIT's and other engineering colleges to distant places

like Imphal. This ends up in having similar types of buildings from New York to Mumbai to Nagpur to Kolkata to Shillong and to Kohima. This sort of “development activity” in the form of globalised/Americanised concept of construction not only destroys the plurality in terms of the building materials, building styles, living patterns, local needs and the like but it also generates discontent and disparities of various sorts; nay the whole ecology of the area is affected. It creates related demands for items like iron (= more excavations/ felling of trees) and cement (= more quarries) to raise them and electric gadgets (= more plastic and iron) and electricity (= more coal or nuclear energy) to run and maintain them. The global politics of electricity can be equated to the politics of hunger in a developing society. When even a “global power like India” is arm twisted by bigger economies (= powers) on the issue of power generation the fate of smaller fries can easily be imagined. The result of all this is that a third world country remains a third world despite all sorts of destruction of its culture and ecology—nay in most of the cases they are almost in debt trap. The easiest way in such a situation for a teacher is to adhere to the Govt diktats and remain a mute spectator/wage-earner to witness all this and in turn be an indirect party in causing frustration and discontent amongst the youths of this country. But that is not the job of an enlightened teacher/intellectual. Therefore, they have to rise to the occasion and think beyond the ready-made solutions dished out to them by various agencies.

Since I am a student from literature stream and this Seminar is being organised by the Dept of English Literature I am supposed to talk about some literary books as well. Before coming to some authors proper, a bird’s eye view of English Studies in India is necessary. It is a common knowledge that (i) a course in English Literature in India was offered to Indians as an alternative to indigenous studies in the British colonial period to suit the needs of the English rulers who did not know Indian languages, (ii) any literature course is basically meant and aimed at L₁ speakers/users and (iii) English even today is claimed to be L₁ only by a marginal number of people in this country. But the policy planners/makers/executives in this country forget these basics. So the courses like BA English (Lit. Hons.) and MA English (Literature) that should have been offered on a limited scale like any other course in a foreign language/literature for L₂ or L₃ learners (like MA in Spanish, French etc) after independence are being offered on a mass scale. The teachers of English who are a vested party pursuing their pecuniary interests also keep on encouraging this expansion in collusion with other

vested interest groups. They also keep on hoodwinking the society and the prospective students by (i) generally not specifying the objectives of a particular programme/course/paper or at best keeping them ambiguous and (ii) by offering a course in “English Literature (=British Literature)” in the name of “English”. The purpose of a University course in English Literature, as is apparent from the testing material, is not to make students proficient in English language, but “to refine their literary and cultural sensibility” through a literature which they generally do not understand because of the poor grasp on the language. In other similarly situated countries like the Gulf/African countries where L₁ is not English but English Language is the requirement for historical, business, educational and other purposes, the syllabi clearly specify the nomenclature and the achievable objectives; most of the courses in a PG programme in English aim at improving their English Language; generally the core courses from English Language constitute about half of the course work unlike the system in India. However, owing to historical positioning in India a course in English literature is offered as if it were a course in L₁ and also a historical necessity. However, the fact remains that the spread of English Literature even to remote and inaccessible places in India is not because of the intrinsic quality of the subject but because of certain linguistic and opportunistic politics. Globalization accentuates this politics.

One should not be oblivious of the fact that a secular course in English Literature was started in India at the initiative of Macaulay in order “to form ... a class of persons Indian in blood and colour, but English in tastes, in opinions, in morals and in intellect” (Macaulay) — a class to which the task of refining “the vernacular dialects of the country” has been left, besides that of enriching “those dialects with terms of science borrowed from the Western nomenclature”, and a class armed with degrees that are “fit vehicles for conveying knowledge to the great mass of the population.” (Macaulay) This is a class “who [are] the interpreters between [the rulers] and the [billions] whom [they] govern.” Macaulay deserves all praise for (i) expressing the colonial/global agenda in such unambiguous terms which perhaps could not have been articulated in a better way and (ii) being successful in achieving his objectives in a meticulous manner. No wonder the unchanged system continues to churn out such graduates even today because the planners have not taken bold initiatives to understand the needs of the independent nation/India and the big steps that are needed to fulfil those aspirations. To rub salt to the wounds books with religious agenda like *The Bible*,

The Faerie Queene, Paradise Lost, Pilgrims Progress and religious discourses of Newman form a part of the literary canon in almost every university syllabus in a secular India. Such/these books had formed an essential reading in the syllabus designed by a missionary Alexander Duff with an agenda to proselytize but many of them had been kept out of the syllabus designed for propagating Macaulay's secular agenda (Krishnaswamy 43). The result of all this is that most of the graduates from this discipline lead a schizophrenic life. The alienated graduates instead of becoming sources of help to their parents, society and culture become problem children who are not able to adjust themselves with everything and everybody around and therefore treat them with contempt. A good fictional example of such a character is Ogu in Upamanyu Chatterjee's *English, August*.

Teachers may choose a soft option of pretending to be helpless in this scenario and may go on waiting for a moment when homogenization takes place. This approach not only reveals a complacent approach to the situation but also ignores several facts like people's attachments to their cultures, faiths, traditions, beliefs, food-habits, language and the like which become a source of a large scale discontent on the College/ University campuses and the society. Looking at the texts prescribed in Indian universities from the perspective of globalization one may very easily note that almost every reference/ text book (though actually prepared for L₁ users of English) in a course has been published by a multinational publisher based in some foreign land. Apparently the local authors/ critics/ publishers are no good; however some headway particularly in matters of text books has been made by glocal publications: Indian authors/editors and multinational publishers but not the other way round.

The situation is no better in the field of English Language studies either. One realises that English is a large scale cultural and economic export item from the UK if one looks at the volume of export from the UK. New academicians are roped in by various agencies like BBC, British Council and various ELT institutes as new avatars in the field to promote its export. The case of N S Prabhu and his Bangalore Project, considered to be a generating point for communicative approach, may be cited to exemplify the point. Books with communicative approach to materials, methods, grammar, technology and testing were dumped on a large scale in the third world countries. Those who did not lap them up were ridiculed. Today no one talks of the

Bangalore Project. Michael Swan writes, “Communicative Approach, whatever its virtues, is not really in any sense a revolution.” (seas3.elte.hu) Wolfgang Butzkamm writes, “Nevertheless [Communicative Approach] ‘failed to deliver’, as Robert O’Neill wrote in *The Guardian* in 1999, and is still failing today. This is because it tragically came with several birth defects... .” (juergenkurtz.wordpress.com) Similarly, on the authority of scholars like Beretta, N. Markee, Long and Crookes Alireza Ameri (faculty-pavilion.eltzone.org) concludes that the project did not deliver because it was formulated on wrong premises. The situation is something like celebrating the advent of new millennium in 2000 AD and then again in 2001 AD to cash on the event to make a fast buck by marketing consumer products.

In consumer markets advertisements play an important role; “beautiful” people are needed to lure “ugly” people to become like them so that some strain on their time and money could be put. One can easily understand as to why there was a sudden spurt of activities in finding out hidden beauty queens and label them as “Miss India”, “Miss Asia Pacific”, “Miss World”, “Miss Universe”, “Miss Galaxy” etc. with the advent of new economic policies in India in the nineties. Even those feminists who advocate the use of the title “Ms” in place of “Miss/Mrs” enthusiastically participate in such events and justify the organisers and the participants as a matter of the concerned women’s choice and those who oppose them are branded as “right reactionary forces”. Thus, the larger issue of maintaining human dignity by keeping the (fe)male bodies away from lustful (fe)male gaze and that of engaging a (fe)male body to further the capitalist intentions/profits by increasing “lust and greed” in a society and thereby promoting violence are side tracked. This analogy has been advanced to understand the phenomenon of the rise of the authors like V S Naipaul, Salman Rushdie, Vikram Seth, Bharati Mukherji, Arundhati Roy, Kiran Desai, Khaled Hosseini and Aravinda Adiga. All these authors have been named randomly; they are being discussed here to understand the matrix of the capitalists and the authors; of course there is a lot not only to understand but also to disagree. Some of the readers of this article may not find my analogy of a model to describe an author palatable. I bring the following passage of Sandra Ponzanesi to the attention of such innocent readers:

As the earlier transition from industrialization (focus on production) to advanced capitalism and globalization (focus on worldwide spreading of

consumption based on the outsourcing of development countries), the literary industry now – with a different intensity and of course with different modalities – has shifted its focus from supplying potential audiences to planning them. Rather than merely reading submitted manuscripts and discovering new talent, *they now proceed as if on a hunting campaign aiming to locate authors even before they have attempted to write, and commissioning subjects, topics, and areas to reach one major goal: to create a demand for the product, a real thirst for consumption prior to production.* (emphasis added, 116)

All these and many other such authors as mentioned above have abandoned their native land (remember Scott's "My Native Land") at some point of time and have relocated themselves on their own in foreign lands not to become global but to seek greener pastures in a "better place" – not the third world but the first world – not the south block but the capitalist world – mainly the US, though in some cases this could be via Canada or the UK or some other place. Their selection of the land also speaks a great deal about their commitment, priorities, perceptions and personal agenda. No wonder that the place of their location and the place of a multinationals' location are one and the same – the capitalist world. Both of them know that there is a burgeoning middle class in a highly populated India that has much free time to indulge in gossips (= light reading); that they have a purchasing capacity to buy costlier books in English (= bourgeois wish to look more fashionable and modern); to brag of their sophisticated tastes (= highbrow mannerism); to keep themselves more up-to-date about books (= not to gain knowledge); that they detest to buy books in regional languages (= cheap, substandard and ghettoised writing); that they like to drop names to look more cultured (= remember Eliot's "... the women come and go/ Talking of Michelangelo") and consider culture and religion a matter of ridicule under the influence of Marx/Modernism (= intellectualism). This middle class in India, even at the cost of several losses and miseries like to send their children to English medium schools where English and English mannerisms are taught to make their children more useful for the job market mainly in the form of multinational companies. Otherwise also in India there is a tradition of giving more respect to people with higher education. Keeping all this in mind plans are made to exploit this class and commissioned books are churned out to cater to the tastes of this new class of reading public.

It has been pointed out earlier that a beauty-queen/model is needed to market all kinds of products and this work can be carried out only by a native model. One can also note that a *desi* model is needed to do the marketing of not only the global products (e.g. “Loreal Hair Products” are marketed by Aishwarya Rai) but also the glocalized products (e.g. “Kaun Banega Carorepati” is advertised by Amitabh Bachchan) or even the local products (e.g. “Pataka Tea” is endorsed by Urmila Matondkar); a Noami Campbell or a Caroline Winnberg or a Mayo Okawa or a Ngoli Onyeka Okafor is not needed for marketing in India. Similarly a L H Myers or a John Masters or an E M Forster or a Rudyard Kipling or a M M Kaye or a Paul Scott will not be a proper choice to target the burgeoning Indian middle class market but somebody who is “Indian in blood and colour, but English in tastes, in opinions, in morals and in intellect” (Macaulay), somebody who is “‘a learned native’ ... familiar with the poetry of Milton, the metaphysics of Locke, and the physics of Newton (read Einstein or Hawkins to make it look contemporary)” (Macaulay); somebody who believes that he is “to educate a people who cannot ... be educated by means of their mother-tongue” (Macaulay); somebody who believes “the dialects commonly spoken among the natives of ... India contain neither literary nor scientific information, and are moreover so poor and rude” (Macaulay); somebody who believes “[English] stands pre-eminent even among the languages of the West. It abounds with works of imagination not inferior to the noblest ... with models of every species of eloquence, -- with historical composition, which, considered merely as narratives, have seldom been surpassed, and which, considered as vehicles of ethical and political instruction, have never been equalled -- with just and lively representations of human life and human nature, -- with the most profound speculations on metaphysics, morals, government, jurisprudence, trade, -- with full and correct information respecting every experimental science which tends to preserve the health, to increase the comfort, or to expand the intellect of man” (Macaulay) is needed to market the product. Pride verging on belligerence as finds reflection in the Minutes about his language comes to Macaulay, not only because of the pride he has in his nativity but also because of his coming from the class of the colonial masters out to debunk the ruled. This belligerence was also a part of the essential strategy of the East India Company – a powerful global business house. The products of English education gain this belligerence in inheritance. This is the reason why these postcolonial authors “elected as spokespersons for their nation are at times disliked in their home countries” (Sandra 119)

The authors, who like Macaulay, believe in the superiority of the English language and the white, Anglo-Saxon and perhaps Christian race come handy to the publisher and they form a good union and enter into a contract to fulfil each other's aspirations. The big amounts of advance royalty to such authors are given and publicised in the form of news-items (Nilanjana Roy). The book churned out by such an author is a sort of made-to-order product prepared for a particular market; the book/product is given publicity through various means of advertisements to attract different target groups: the pre-publication and post publication reviews of this book are arranged to target scholars and general reading public; the book is released with a great fanfare in the presence of "cultural connoisseurs"; meet the author programmes are arranged to attract "academicians and other intellectuals"; interviews of the author on media are held, which are unlike Karan Thapar's hard hitting 'Devil's Advocate', as one does not understand who tries to good humour whom in them; book reading sessions are organised like film music is released to rouse the curiosity of the general public/ prospective buyers. This commissioned book may therefore be equated to propaganda material which is another form of advertisement material aimed at still a new target market in the form of highly educated, professional, moneyed Indian middle class both at home and abroad (Indian middle class Diaspora which has come into existence in contrast to the Diaspora in the form of "girmitia labour"). To cater to the needs of such a market an author who understands the socio-cultural psyche of the middle class and also the nuances of culture of the Diaspora is explored/readied.

This recluse author comes handy to those who were on the lookout for him/her; (s)he already has abandoned his land; (s)he has learnt the ropes of English language and culture and (s)he thinks and feels like a white man besides being culturally sensitive to his/her former master. No one else could have understood the needs of Indian middle class in a better way than this author. On the authority of Bourdieu Sandra says, "... our choices and tastes are determined by social affinities." (113) Therefore, the question 'who writes for whom and why' needs to be probed deeper before appreciating such literature. However, the gullible young men and women from far and nook of the country, mainly from the lower middle class, looking for a career in English Literature (with their aspiration to make a faster buck and perhaps sick of their helplessness), are made to think that Indian writing in English has come a long way and Indian talent is ultimately being recognised by the west (colonial aspiration of wishing for a few words

of appreciation from the masters = servility syndrome). They not only buy their books but also conduct research on tracing out “Indian sensibility” in such authors and do not stop till they have found it. After all they want their (Indian) affinity to be proved/strengthened with these “fellow-native” authors. Since the subtle point being made here requires some elaboration an actual incident needs to be narrated to clarify the issue: some ‘B’ approached some ‘A’ and enquired of him if he knew Pranabda, the President of India. ‘A’ readily admitted that he knew him and gave out all the information that were needed of a well-read and up-to-date person with a good general knowledge to prove his assertion. ‘B’ was quite impressed and said, “I am convinced that you are quite close to Pranabda; kindly help me; I want my lieutenant son to be transferred from J&K to Odisha; Pranabda being the Supreme commander of the forces can easily do it; a recommendation from you will help me and my son.” ‘A’ politely replied, “I know Pranabda but he does not know me.” The point that is made being out here is that it is not necessary for Pranabda to know either ‘A’ or ‘B’ but it is for ‘A’ and ‘B’. Similarly, it is not the necessity of the author to personally know a scholar back home but it is that of the scholar to know the author. But there is something more to it in case of the author/researcher relationship. ‘B’ is looking for greener pastures elsewhere and therefore takes inspiration from this “successful Indian author cum cousin” and glorifies him/her for mutual gratification.

Some of the Indian scholars mainly from the *muffasil* towns try to contact some of these authors to seek a personal interview for academic purposes. When no reply is received by them they seek some time for a written interview and propose to send a written questionnaire. When even that is not answered they presume that either their letter has not reached “the great author” or (s)he is on some International assignment or (s)he is busy reading and thinking for a new book. The author is imagined to be too busy even to acknowledge receipt of the communication. Little do these scholars realise that their effort is being spurned and they are being slighted by a person whom they revere as “great”. Not only are they snubbed but the entire nation is affronted by them as a worthless country. That is why they had abandoned India and looked for greener pastures in the more prosperous lands. In such a situation, the theme and purpose of the commissioned book, imagined to be a literary piece about India/Indian Diaspora, can very easily be guessed. Thus, to consider the commissioned book a piece of literary work only may be a grave mistake as it rather might be a part of the larger conspiracy to

denigrate India, a former colony; a product to have a desired sale should have all the necessary ingredients needed for its marketing. Such things are not new as is evident from the following observation of Gandhi: “We have become used to understanding from pre-British days, that the art (perfected by the British) of government includes the harnessing of the secret services of men learned, and reported to be honest and honourable for shadowing suspects and for writing up the virtues of the government of the day as if the certificate had come from disinterested quarters.” (“Drain Inspector’s Report” 540) In today’s context one may read “government” along with “multinational companies.”

Again, a person with a middle class aspiration and the colonial mindset wants to have some relationship with those of his country cousins who are successful in the first world. This explains why “a success story” like that of Piyush Bobby Jindal being elected to the post of Governor of Louisiana in the US made a news headline in Indian media. Bobby has Indian roots but he being an American is obliged to look and to be an American to the core. He is trying his best to adapt to his (new found) identity; he professes Roman Catholic sect of Christianity and not Hinduism to be more acceptable to the society he wants to be associated with. If there is a conflict between India and the US, as an American, he is obliged to consider this country (India) which his parents had abandoned, perhaps, with contempt as a hostile nation. But his success was glamorised by the Indian electronic media; for the whole day of his victory his given-up relatives were televised with questions like: “How do you feel to know that one of your relatives has become a Governor? Did he ring you up? When did you last receive his call?” The poor relative had to admit very softly, “There has been no contact with him for several years.” Our young researchers and their innocent supervisors unknowingly behave like the over enthusiastic reporter who is trying to find love in a place where it does not exist.

No model/advertiser however great (s)he may be go against the diktats of the manufacturer of a product to be advertised and sold. For example, can Amitabh Bachchan, generally described as the super hero of this millennium, having got his fees (his share in the market profits), dare to say that he has never used *Navratan tel* (a brand of hair oil which he advertises)? Is he hoodwinking his fans or advising them in all sincerity in the concerned advertisement? Like a model, an author has only a limited

role to play in the globalized/glocalized market economy. Only a novice will believe that an author who has taken huge advances works for his own interests, presents his true feelings and remains oblivious of the publishers' interests. Publishers are there in the market not for the service of literature but to do business. "The thumping economic advance [was] conferred on Roy ... [for] a new star on the occasion of India's fiftieth anniversary of independence ... had to be created ... [to stay in business] in terms of modalities of multinationals". (emphasis added, Sandra 116). Hector Tobar reports how Jonathan Cape Lessing's own publisher rejected one of her stealth novels saying it was "not commercially viable" and how similarly another publisher declined to publish her book considering it as "too depressing" to be successful though they became famous once they were published. (Hector Tobar) Therefore, the publisher is well within his rights to expect to get not a realistic book but to have a material to cater to the market needs by having all those ingredients as required and necessary to sell a book. In such a situation there is no question of the will of the author. No author can be given huge advances if his/her book does not sell well. Thus, it is very clear that the books by such authors become important "products" (cf. artefacts) not because of their intrinsic value but because of extraneous considerations—sometimes because of the advance amounts doled out to them and sometimes because of the "suspect awards". "The Nobel Prize is run by a self-perpetuated committee. They vote for themselves and get the world's publishing industry to jump to their tune. I know several people who have won, and you don't do anything else for a year but Nobel. They are always coming out with new torments for me. Downstairs there are 500 things I have to sign for them." (David L. Ulin) Further, on getting the news of the award of Nobel Prize Doris-Lessing is said to have remarked: "Who are these people? They're a bunch of bloody Swedes." (Nigel Farandale)

It shall not be out of place to briefly refer to the discourse of films as well. A new genre of films has come to exist that may be described as Diaspora Films. Many of these films meant for the audience located in the west are aimed at presenting India as an exotic land and some ridicule Indian customs and ways. Such films are also nominated for various prizes under various categories and tags. However, those produced for Indian audience back home have altogether a different tenor and ethos. There is no denying that it is mainly because of the technological exchange/collaboration with the west that the Indian film industry has boomed a great deal; but the

development of technology is just a matter of time – some people get it early and some others a little late.

Now let me rivet my attention on some of the “major Indian writers in English” mentioned above one by one. The Indian writer has come a long way since the frank admittance of Raja Rao: “We cannot write like the English. We should not.” (v) But, Salman Rushdie in his book, *The Vintage Book of Indian Writing*, holds, “the ironic proposition that India’s best writing since independence may have been done in the language of the departed imperialists is simply too much for some folks to bear.” (viii) Times have changed and with it has the ethos; historical reality has given place to economic reality; gone are days to vociferate, “British, Quit India” (*angrezo bharat chhodo*); we now send official delegations in hordes to invite foreign capital and companies. Many of the “so called Indian” authors feel more at home in the foreign lands than in India; many of them stay in the first world of English; they visit India on short trips simply to collect their material for the books they are working on. India baiting comes naturally to them because they neither try to understand India from Indian perspective nor are they worried about her problems. For them India is a saleable commodity therefore they use it/ its tag to achieve their goals. Therefore, it is not a matter of surprise if their fiction has been branded the fiction of India baiters. For example, Stephen Schiff writes about Naipaul: “... Naipaul didn’t mind baiting his enemies, sometimes outrageously. ... why a culture like mine or like the one in India, from which I come ancestrally ...” in his books like *India: A Million Mutinies*, *An Area of Darkness* and *India: A Wounded Civilization*. (books.google.co.in) About Salman Rushdie’s *Midnight’s Children* Mujeebuddin Syed writes, “... after the India baiting of V. S. Naipaul and Nirad C. Chaudhuri, [*Midnight’s Children*] seemed to present, despite a certain cynicism about its own method, a newer and fresher picture of India and Indianness.” (Mujeebuddin Syed) “A newer and fresher picture of India and Indianness” in *Midnight’s Children* enraged Mrs Indira Gandhi so much that she sued Salman and his publisher and they had to tender an unconditional apology to her. (Shahid Siddiqui) Mrs Gandhi was not alone to be irked by Salman but he has offended the Muslim community as well by misrepresenting Islam in his writings. (Ismail Isa Patel) This he has been doing perhaps to prove his secular credentials to the western world and become more acceptable to a largely Christian society.

Though Vikram Seth does not exactly fall into the category of India baiters yet his concerns are certainly not Indian. I would like to quote from my own review of *The Golden Gate*: “By giving its award for 1988 to *The Golden Gate*, the Sahitya Akademi has promoted a book which is totally alien to Indian culture in its theme and ethos, which has neither Indian characters nor Indian psyche nor even Indian locale. Can the experimentation or the mark of best seller be the only criterions for the much coveted award? What kind of values does Sahitya Akademi want us to cherish by promoting such a book?” (academia.edu)

Arundhati Roy’s *God of Small Things* “became a literary sensation even before it actually came out in print. It is said that it had been read by all fifteen people when it was pronounced a bestseller.” (Anuradha Marwah 13) Geeta Doctor has raised doubts about the greatness of Arundhati Roy’s *God of Small Things*: “Is it great literature? ... We do not ask for greatness of literature these days. We are quite relived with entertainment or better still seduction.” (4) In a similar vein A N Dwivedi writes: “Arundhati Roy has written her novel with the Western readership in mind... [the book] does not promote the cause of Indian aesthetics ... it is a little painful and disquieting to see an Indian writer making the work of literature a mere saleable commodity. ... [she should have desisted] from ... unnecessary incestuous, immoral scenes ... in keeping with Indian spirit and culture.” (2) Charges of obscenity against the book were raised and a court case ran almost for a decade. The book is an interesting matrix of class segregation in the Marxist Kerala – two subjects dear to the capitalist class. It shall not be out of place to quote Arundhati Roy on India: “I don’t even feel comfortable with this need to define our country. Because it’s bigger than that! How can one define India? There is no one language, there is no one culture. There is no one religion, there is no one way of life. There is absolutely no way one could draw a line around it and say, “This is India” or, “This is what it means to be Indian.” (Reena Jana) By implication she suggests that India is not a nation because it does not profess one religion, one culture and one language. In questioning the idea of India Arundhati is echoing the colonial debate about this nation and also echoes European idea of a nation. Arundhati Roy does not seem to accept either Gandhi’s or Nehru’s notion of India rather she seems to accept the European notion of a nation.

Arundhati Roy readily accepted Booker prize but refused to accept much coveted national award from India's Academy of Letters (Sahitya Akademi) "in protest against the Indian Government toeing the US line by 'violently and ruthlessly pursuing policies of brutalisation of industrial workers, increasing militarisation and economic neo-liberalisation'." (Deccan Herald) I do not know if Ms Roy is familiar with Jeanette Winterson (the author of *Oranges Are Not the Only Fruit*) who maintains, "This country [The UK] is so in thrall to America. We're such lapdogs to them and that will skew things with the judges." (Rosa Silverman) I do not know if she has ever pondered over British industrial policy, military policy, and economic neo-liberalisation otherwise she would have realised that they are mere appendages to US policies; I doubt if she could ever dare to take on Tony Blair for ravaging Iraq or Margaret Thatcher's rejection of Argentine claims over Falkland islands (and a consequent war) but she has always been mudslinging Indian government – whether it is the issue of Narmada dam or Kashmir or terrorists' protection or the attack on Indian parliament. Man Booker prize is run by a business house; only a novice believes that its economic/political interests are not kept in view while giving away an award. It is something like a social welfare project of a multinational company which uses the opportunity to create a market for its products. I doubt if she has ever raised doubts about the credentials and business interests of the group that sponsors/backs Man Booker Prize which she so proudly flaunts; I do not know if she is familiar with John Pilger who dismisses the Booker as "only one award that represents the views of a clutch of mostly elite, London-centric, conservative-liberal judges". (Shobhan Saxena) I wish to know her take on this prize or on Pilger. If Arundhati's intentions and acts are dubbed as "anti-Indian" in the back drop of the double standards she maintains it should not come as a surprise.

In her reply to Amanda Meer's "You consider yourself an American writer", Bharati Mukherji did some plain speaking about her past allegiance to India and newly found realities. The reply is so interesting that it needs to be quoted in full:

I totally consider myself an American writer, and that has been my big battle: to get to realize that my roots as a writer are no longer, if they ever were, among Indian writers, but that I am writing about the territory about the feelings, of a new kind of pioneer here in America. I'm the first among Asian immigrants to be making this distinction between immigrant writing and expatriate writing. Most Indian writers

prior to this, have still thought of themselves as Indians, and their literary inspiration, has come from India. India has been the source, and home. Whereas I'm saying, those are wonderful roots, but now my roots are here and my emotions are here in North America.

I'm not writing like a Richard Ford or a John Updike, that's not the only America. It has many pluralities. I'm writing about an American immigrant group who are undergoing many transformations within themselves. And who, by their very presence, are changing the country. America is not the America that, until recently, has come through in contemporary popular fiction. (bombsite.com)

She had shown similar allegiance to Canada before migrating to the US. However, not every writer of her stature shows this sort of courage to do plain speaking. Her reply, in fact, has answered several questions about such writers and their writings.

Kiran Desai came to lime light because of the Betty Trask Prize from the British Society of Authors 1998 for her first novel *Hullabaloo in the Guava Orchard*. "[It] is an ironical novel satirizing Indian mentality. It openly makes fun of our sense of propriety and logic. The major satire of the novel is the Indian sense of religiosity." (Shubha Tiwari) While describing the book the reviewers in *India Today* use all those ingredients that I have talked above to lure a prospective buyer, "... Hullabaloo could be a case of hype and hope rather than soul, but the phenomenal advances that Kiran has got (an estimated Rs. 50 lakh), an initial print run of 50,000 each in the US and UK, early excerpts in the New Yorker and in the Salman Rushdie-edited anthology, Vintage Book of Indian Writing, is a pointer that another little Indian girl is on the threshold of big things." (indiatoday.intoday.in).

The doctor turned author Khaled Hosseini is the son of an Afghan diplomat who sought asylum for himself and his family in Northern California after the Russian intrusion into Afghanistan. He has had nearly a secular upbringing. (Bakhshian) No wonder, his books have been written in the back drop of "Soviet Union invasion" and against the "regime of Taliban". The charge of the anti-Muslim incitement against Khaled Hosseini has been levelled because his books have a tenor against Islam and he has a pro-American stance.

All these authors have been living in the US/ UK and have seen that society with close quarters but they generally do not write about it, unlike their British counterparts as Forster etc, though they can very well do that as well. Vikram Seth, for example, has written about American yuppies in his *The Golden Gate* in a meticulous manner. The novel deals with Californian psychology and awareness and “suggests intimate knowledge of Californian mores, from its bill boards and bumper stickers to personal ads and pet psychiatrists. *The Golden Gate* is filled with details about California that natives sometimes overlook because of excessive familiarity.”(qtd. by Susheel Sharma, *Ibid*) The book was successful by all means. But, most of the Indian expatriates, as a matter of fact, save not only their energy but also their ink to deride the native cultures. In these days of “Clash of Civilizations” who will be a better author-agent than Salman Rushdie or Khaled Hosseini to deride the Muslims and present an authentic picture of a Muslim society from a western perspective? The result in the form of *Satanic Verses* and *A Thousand Splendid Suns* is for everyone to see. Both these authors present Muslims as not only intolerant villains but also as uncultured people because a large number of the prospective readers at whom the book is aimed want them to be projected like this.

Mahatma Gandhi described Katherine Mayo’s *Mother India* (1927) as “Drain Inspector’s Report”. It shall not be out of place to quote from Gandhi’s review of the book:

This book is cleverly and powerfully written. The carefully chosen quotations give it the false appearance of a truthful book. But the impression it leaves on my mind is that it is the report of a drain inspector sent out with the one purpose of opening and examining the drains of the country to be reported upon, or to give a graphic description of the stench exuded by the opened drains. If Miss Mayo had confessed that she had come to India merely to open out and examine the drains of India, there would perhaps be little to complain about her compilation. But she declared her abominable and patently wrong conclusion with a certain amount of triumph: ‘the drains are India’. (Gandhi, “Drain Inspector’s Report” 539-40)

Whatever Gandhi has said about Mayo’s book is applicable to Adiga’s *The White Tiger* as well. *The White Tiger* has won the coveted Man Booker Prize “... perhaps [because] the most drastic and bitter facts ... have impressed the judges, who have got a

revealing inside into India. ... the book, as a whole, presents the crude, dark and naked facts about India, and that has added all the merits for the award... .' (Khan 1) Similarly, Sudhir K. Arora charges Adiga of presenting an incomplete truth and calls the awarded prize "A Freakish Booker". "Even the head of the jury, Michel Portillio, [calls] it a work that shows the 'dark side of India - a new territory' ... for many of us, our worst fears have come true - the West is once again using our poverty to humiliate us." (Saxena). No wonder such books become instant best sellers (to recollect Mayo's *Mother India* was reprinted twelve times between May and December in 1927, the year of its first publication and thirty-three times between 1927 and 1931) and are also nominated for some prize or the other.

It is not that Indians do not want to discuss their problems or realities or that they do not take their criticism sportingly or that they do not want to improve their situation Indians or that they are status quoists. The Indians are by and large not averse to the criticism of their beliefs, faiths, thinking and practices. As a matter of fact, the authors in Indian languages have been very severely criticising various Indian ways. Who could be a greater critic of Indian religious and social practises than Kabir? Swami Dayananda was a bitter critic of Sanatan Hindu practices. Gandhi did not agree with so many practices of Hindus and suggested reform. Can a bitterer picture of Indian reality be presented than what has been done by Prem Chand? Does Phanishwar Nath Renu not present a very grim and harsh picture of poverty in the Indian countryside? Does Qurratulain Haider not describe the sufferings of Muslim women in a belligerently male dominated and stingingly poverty stricken society? Who could satirise autocratic tendencies in Indian politics and bureaucracy in more acerbic terms than Shrilal Shukl? What is Dalit Literature if not a stringent criticism of caste/social hierarchies? Because of my limitations I have referred to the authors in Hindi only. The list of such authors from Indian literature in other languages can still be longer. These authors have neither been considered offensive nor has a charge of their being guided by pecuniary considerations or their working at the behest of some business house been lavished against them. It is so because of different treatment and the handling of the same subject matter at the hands of two persons: while one shows how to counter the reality called poverty the other showcases poverty to make it a saleable item. It is their motive and mind-set that critics raise their protest against. Poverty for Indians is not just an economic parameter it is also a way of life. "Willing acceptance of poverty" and

“poverty in the midst of plenty” are the key concepts in the Gandhian economics which is inclusive of his ideas of Non-violence, Trusteeship, *Aparigraha* (Non-possession), *Swadeshi* (Using locally made goods) and the like. Indians voluntarily accept multiple pluralities in every walk of life. So it is the issue of contentment on the basis of acceptance not coercion. Rushdie does not seem to like the Indian delineation of the subject matter. It is partly because of this as well that he dismisses the writings in other languages than English. For further light on the issue let me turn to Gandhi again. Gandhi equates western education to false education. He does not like education to be given just for the sake of literacy. Gandhi asks: “Will you add an inch to his happiness [by giving this type of education]? Do you wish to make him discontented with his cottage or his lot? ... [This education] does not make men of us. It does not enable us to do our duty. ... [On the contrary] [c]haracter- building has the first place in [Indian ancient school system]. A building erected on that foundation [of the Indian system] will last.” (*Hind Swaraj* 82-84) We can replace “education” in the above Gandhian discourse by “writings of these authors”. None of the books of the authors mentioned above withstand the test on Gandhian parameters.

I would again like to quote Gandhi for those who see English as a necessity in Globalization and who, therefore, would like to prescribe these authors for the sake of their English/style: “To give millions knowledge of English is to enslave them. The foundation that Macaulay laid of education has enslaved us. ... It is worth noting that, by receiving English education, we have enslaved the nation. Hypocrisy, tyranny, etc. have increased. English-knowing Indians have not hesitated to cheat and strike terror into the people.” (*Hind Swaraj* 84-85) I wish all these authors to realise what they have been doing to India at the behest of the capitalist world, by becoming their agents knowingly or unknowingly. I wish them to be more responsible and to stop playing to the gallery of the globalised agenda and wish them good sense so that the true value of literature in reflecting *Vasudhaiv Kutumbkam* finds cogitation in their writings.

Works Cited

- Alireza, Ameri. “Prabhu’s Procedural Syllabus.” 4 Oct. 2013. Web. <<http://faculty-pavilion.eltzone.org/wp-content/uploads/2010/10/article.pdf>>.
- Annan, Kofi. “UN: Annan Says Only Open Markets Can Ease World Poverty.” 24 Sept. 2013. Web. <<http://www.corpwatch.org/article.php?id=717>>.
- Arora, Sudhir K. Aravind Adiga’s *The White Tiger*: A Freakish Booker. New Delhi: Authorspress. 2011. Print.
- Assange, Julian. “About: What is Wikileaks?” 24 Sept. 2013. Web. <<http://wikileaks.org/About.html>>.

Atharva Veda. 4 Oct. 2013. Web. <http://vedpuran.files.wordpress.com/2011/10/atharva-2.pdf>

Butzkamm, Wolfgang. "The Tragic History of the Communicative Approach." 1 Dec. 2013. Web. <http://juergenkurtz.wordpress.com/2011/10/08/the-tragic-history-of-the-communicative-approach/>

Carter, Jimmy. "Jimmy Carter Quotes & Speeches." 24 Sept. 2013. Web. http://ushistorysite.com/carter_quotes.php.

Chatterjee, Upamanyu. English, August. New Delhi: Penguin India, 1988. Print.

Chomsky, Noam. 14 Oct. 2013. Web. <http://www.chomsky.info/interviews/2006----.htm>.

Deccan Herald, "Sahitya Akademi Award: Arundhati Roy Rejects Honor." January 16, 2006. 26 Oct. 2013. Web. <http://www.commondreams.org/headlines/06/0116-01.htm>.

Doctor, Geeta. "Avenging Angel." Rev. of *The God of Small Things* by Arundhati Roy. *Indian Review of Books* (16 Apr-15 May 1997): 4-5. Print.

Duesberg, Peter H. "AIDS: Virus or Drug Induced?" 4 Oct. 2013. Web. <http://www.duesberg.com/books/pdbkluwer.html>.

Dwivedi, A N. "Reversing the Gear: A Critique of Arundhati Roy's *The God of Small Things* (1997)". *Arundhati Roy's Fictional World (A Collection of Critical Essays)*. Ed. A N Dwivedi. Delhi: B R Publishing Corporation, 2001. Print.

Farandale, Nigel. "Doris Lessing: Her Last Telegraph Interview." 18 Oct. 2013. Web. <http://www.telegraph.co.uk/culture/books/10455494/Doris-Lessing-her-last-Telegraph-interview.html>.

Foreign Educational Institutions (Regulation of Entry and Operations) Bill [The], 2010. 18 Sept. 2013. Web. <http://www.prsindia.org/uploads/media/Foreign%20Educational%20Institutions%20Regulation/Foreign%20Educational%20Institutions%20Regulation%20of%20Entry%20and%20Operations%20Bill%20%202010.pdf>.

Gandhi, M. K. "Drain Inspector's Report." *The Collected Works of Mahatma Gandhi*. Vol. XXXIV. 22 Nov. 2013. Web. https://www.gandhiheritageportal.org/cwmg_volume_thumbview/MzQ=#page/566/mode/2up.

---. Hind Swaraj. 18 Sept. 2013. Web. http://www.mkgandhi.org/ebks/hind_swaraj.pdf.

---. "No Culture Isolation For Me." *Young India*, 1-6-1921, p. 170, 18 Sept. 2013. Web. <http://www.mkgandhi.org/momgandhi/chap90.htm>.

---. "Science and Spirituality." qtd. by M. S Dadage. <http://www.mkgandhi.org/articles/sci.%20and%20spirituality.htm>.

'Glocalization' [Definition of], 21 Sept. 2013. Web. <http://www.investopedia.com/terms/g/glocalization.asp>.

Hosseini, Khaled. "'The Kite Runner' Soars Into Theaters: Interview by Sara Shereen Bakhshian." 8 Nov. 2013. Web. <http://www.beliefnet.com/Entertainment/Movies/2007/12/The-Kite-Runner-Soars-Into-Theaters.aspx>.

Huntington, Samuel. *Clash of Civilizations*. 8 Sept. 2013. Web. <http://edvardas.home.mruni.eu/wp-content/uploads/2008/10/huntington.pdf>.

Icke, David. ... the truth shall set you free. 18 Aug. 2013. Web. http://exopoliticshongkong.com/uploads/And_the_truth_will_set_you_free_-_Icke.pdf.

Jana, Reena. "Arundhati Roy: The Salon Interview: Arundhati Roy." 8 Nov. 2013. Web. <http://www.salon.com/1997/09/30/00roy/>.

John, Binoo K. and Arthur J. Pais. "Impish Fable." 8 Nov. 2013. Web. <http://indiatoday.intoday.in/story/kiran-desai-makes-a-much-hyped-debut-with-hullabaloo-in-the-guava-orchard/1/263623.html>.

Khan, M Q. "The White Tiger: A Critique." 12 Nov. 2013. Web. <http://www.inflibnet.ac.in/ojs/index.php/JLCMS/article/viewFile/34/32>.

Krishnaswamy, N. & Lalitha Krishnaswamy. *The Story of English in India*. Delhi et al.: Foundation Books, 2006. Print.

Maha Upanishad. 12 Nov. 2013. Web. http://www.gayathrimanthra.com/contents/documents/Vedic-related/Maha_Upanishad.pdf.

Macaulay, T. B. "Minute by the Hon'ble T. B. Macaulay, dated the 2nd February 1835." 10 Nov. 2012. Web. http://www.columbia.edu/itc/mealcac/pritchett/00generallinks/macaulay/txt_minute_education_1835.html.

Marwah, Anuradha. "The Second Coming of Indian Fiction in English: 1990s and After." *Illuminati*, IV (2013-14): 9-15. Print.

Meer, Ameena. "An Interview with Bharati Mukherjee." *Bomb* 29/Fall1989, 12 Nov. 2013. Web. <http://bombsite.com/issues/29/articles/1264>.

Mishra, R. P. "The Indian World-view and Environmental Crisis." 11 Nov. 2013. Web. <http://ignca.nic.in/cd_05016.htm>.

Nattrass, Nicoli. "AIDS and the Scientific Governance of Medicine in Post-Apartheid South Africa." 21 Nov. 2013. Web. <<http://afraf.oxfordjournals.org/content/107/427/157.abstract>>.

Patel, Ismail Isa. "Mis/Representations of Islam: Reading Salman Rushdie's The Satanic Verses." 21 Nov. 2013. Web. <<http://www.scribd.com/doc/107049639/Mis-Representations-of-Islam-Reading-Salman-Rushdie-s-The-Satanic-Verses-By-Ismail-Isa-Patel-London-1998>>.

Pococke, E. India in Greece. 19 Sept. 2013. Web. <<http://archive.org/details/IndiaInGreece>>.

Ponzanesi, Sandra. "Boutique Postcolonialism: Literary Awards, Cultural Value and the Canon." 19 Sept. 2013. Web. [http://www.uu.nl/wiredup/sandra/Ponzanesi\[1\]%20boutique%20postcolonialism.pdf](http://www.uu.nl/wiredup/sandra/Ponzanesi[1]%20boutique%20postcolonialism.pdf)

Prime, Ranchor & Prime W. Vedic Ecology: Practical Wisdom for Surviving the 21st Century. Novato: Mandala Publishing, 2002. Print.

Radhakrishnan, N. "Gandhi in the Globalised Context", 19 Sept. 2013. Web. <<http://www.mkgandhi.org/articles/Radhakrishnan.htm>>.

Rao, Nagendra (ed.). Globalization: Pre Modern India. New Delhi: Regency Publications, 2005. Print.

Rao, Raja. Kanthapura. New Delhi: Oxford UP, 2005 [1938]. Print.

Rig Veda, 30 Sept. 2013. Web. <<http://www.sanskritweb.net/rigveda/rv09-044.pdf>>.

Roy, Nilanjana. "The Golden Bait." 17 Nov. 2013. Web. <http://www.business-standard.com/article/beyond-business/the-golden-bait-113071201059_1.html>.

Rushdie, Salman and Elizabeth West. The Vintage Book of Indian Writing 1947 – 1997. New York: Vintage Publishers, 1998. Print.

Sachs, Wolfgang. "Book Review: Alternatives to Economic Globalization". 17 Nov. 2013. Web. <<http://www.yesmagazine.org/issues/our-planet-our-selves/book-review-alternatives-to-economic-globalization>>.

Saxena, Shobhan. "Fact not Fiction." 10 Nov. 2013. Web. <http://articles.timesofindia.indiatimes.com/2008-10-19/special-report/27894026_1_new-india-balram-halwai-booker>.

Schiff, Stephen. Conversations with V. S. Naipaul, Feroza F. Jussawalla [Ed.] Jackson. Jackson: U. P. of Mississippi, 1997. Google Book Search. 10 Nov. 2013. Web. <http://books.google.co.in/books?id=k84sWNCu5wC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false>.

Scott, Walter. "My Native Land." 10 Sept. 2013. Web. <http://www.best-poems.net/sir_walter_scott/poem-18599.html>.

Sharma, Devinder. "The WTO is Destroying Indian Farming." 21 Oct. 2013. Web. <<http://www.hindustantimes.com/comment/columns/the-wto-is-destroying-indian-farming/article1-1137811.aspx>>.

Sharma, Susheel Kumar. "Review of The Golden Gate." 21 Oct. 2013. Web. <http://www.academia.edu/306394/Vikram_Seth_The_Golden_Gate_Delhi_Oxford_University_Press_1989_pp._307_Rs._75_>.

Shiva, Vandana. "Empowering Women." 21 Sept. 2013. Web. <<http://likeawhisper.files.wordpress.com/2009/03/empoweringwomen.pdf>>

Siddiqui, Shahid. "Salman Rushdie and Freedom of Expression." 21 Oct. 2013. Web. <<http://www.milligazette.com/news/3184-salman-rushdie-and-freedom-of-expression-try-it-with-holocaust>>.

Silverman, Rosa. "Jeanette Winterson Launches Latest Attack on New Man Booker Prize Rules." 21 Oct. 2013. Web. <<http://www.telegraph.co.uk/culture/books/booker-prize/10350567/Jeanette-Winterson-launches-latest-attack-on-new-Man-Booker-Prize-rules.html>>.

Swan, Michael. "A critical look at the Communicative Approach (2)." 1 Dec. 2013. Web. <<http://seas3.elte.hu/coursematerial/HalapiMagdolna/Swan2.pdf>>.

Syed, Mujeebuddin. "Midnight's Children and Its Indian Con-Texts." Rushdie's Midnight's Children: A Book of Readings. Ed. Meenakshi Mukherjee. Delhi: Pencraft International, 1999. Print.

Tagore, Rabindranath. "Civilization and Progress." 27 Sept. 2013. Web. <<http://www.swaraj.org/tagorecivilization.htm>>.

Tiwari, Shubha. "A New Godman is Born." 29 Oct. 2013. Web. <<http://www.boloji.com/index.cfm?md=Content&sd=Articles&ArticleID=11748>>.

Tobar, Hector. "Doris Lessing Remembered: Provocative, Blunt, Unforgettable." 23 Nov. 2013. Web. <<http://www.latimes.com/books/jacketcopy/la-et-jc-doris-lessing-remembered-20131117,0,2096019.story#axzz3qHDHK9F6>>.

Ulin, David L. "Doris Lessing Reveled in Her Status as A Contrarian." 28 Oct. 2013. Web. <<http://www.latimes.com/books/jacketcopy/la-et-jc-doris-lessing-appreciation-20131118,0,335755.story#axzz3qHDHK9F6>>.

United Nations Task Team, Realizing the Future We Want for All. 26 Oct. 2013. Web. <http://www.un.org/millenniumgoals/pdf/Post_2015_UNTTreport.pdf>.

Vidal, John "Typhoon Haiyan: What Really Alarms Filipinos is the Rich World Ignoring Climate Change." 21 Nov. 2013. Web. <<http://www.theguardian.com/commentisfree/2013/nov/08/typhoon-haiyan-rich-ignore-climate-change>>.

Yajurveda. 21 Sept. 2013. Web. <<http://vedpuran.files.wordpress.com/2011/10/yajurved.pdf>>

Yogi, Maharishi Mahesh. 21 Sept. 2013. Web. <<http://www.mum.edu/about-MUM/inside-story/vision>>.

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Right to SD- An HR Perspective

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1. Of Rights and Human Rights

Gita enlightens us that the Prakriti (nature) and Purush (Parameshwar) are primordial and that all things-merit or demerit- are born out of nature. This philosophy was of universal acceptance in the sense that there arose a great school of philosophers

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who would try to explain everything in life by reading the nature and its various phenomena and getting guidance there from. The terms 'natural law', natural justice, and natural rights were coined by those scholars who thought and believed that laws of nature could be applied to regulate the behaviour of man. Man was a rational creature and, hence, natural laws had to be applied under the control of reason.

Here we are reminded by Indian philosophers that dharma-in the sense of all virtues one ought to have- was the only attribute distinguishing man from lower animals. Minus dharma, said they, man is but an animal.

This eternal truth is seen to have its echo in the observation of great Greek philosopher Zeno who claimed that 'universe is made up of but one element that is reason'; and that 'reason is the spark of divine in man'. Such an idea of man led to universal principle of equality of human beings. Cicero was an advocate of this egalitarianism and his writings brought many a change in the contemporary roman jurisprudence.

The natural rights of man identified and explained by these philosophers lost their uniform application to all members of society and for reasons which still remain a volatile topic of debate among historians, political scientists, sociologists and others. Put more baldly, it is not easily understandable why and how slavery (in the West) or untouchability (in India) developed as social institutions even amidst chanting of mantras like 'let all be happy, etc.' The naturalists witnessed opposing theories of law, namely, positivist, socialist, historic, et al; but enormous loss of human life and property occasioned by two World Wars that took place within a span of less than half a century exposed these non-natural law theories; and the natural law philosophy re-emerged in the years to come.

It is in the light of this 'renewed' interest of mankind in the natural law philosophy (and, thereby, the natural rights of man) that one has to appreciate the efforts leading to establishment of United Nations Organizations or the Universal Declaration of Human Rights. Before moving further let me add almost in a haste that the universal element once peculiar to the natural law approach has become symptomatic of all other philosophies of law, the long drawn debates among the likes of

Hart (a neo-positivist) and Fuller (a naturalist) of the preceding century notwithstanding.

The idea of development is inherent in the universe itself which according to scientists keeps on expanding (and in one sense, developing) even today. Philosophies of life, whether religious or scientific, entertain a notion that the universe developed, owing to either the will of the Lord of Lords¹ or a Big Bang (which some would make us believe is but *Omkar, the Naad Brahma*). Anyway, it sounds quite reasonable that anything that one can think of would have been a ‘no-thing’ had it not developed as such. The statement would not be complete without another reference from Gita wherein the ‘universe is like a peepal tree whose roots are going upwards, and branches extended both upwards as also downwards.

For man to develop in the company of man, it is necessary to make provisions that avoid a clash of interests. Whether it is a distant call (like, say, Kant’s) or one from our own heart (like Vyas’), the man is being constantly reminded by the seers and scholars that he should not give to others a treatment that he would not like unto himself. This is so because everyone has by virtue of being man certain natural interests and thus it is as much natural that everyone should have a right (or, rights) to protect these inalienable interests. I say ‘inalienable’, because they are supposed to be inherent in the very idea of a human being.

And, since rights are but means to protect human interests, it is no wonder that the above mentioned UDHR mentions them also as ‘inalienable’. This also means that shorn of these inalienable rights the growth of mankind in the true sense of the term is simply unthinkable; principally because minus the guaranty of these, a human being can not develop his personality as such; and his mode of development if there were one would be no better than that of other animals: uncared, unattended, and unprotected. Thus these numerous rights collectively lead to but one-the right to development. It is however, lamentable that the very right to development could not get universal recognition until about four decades after the UDHR.

In this context, one thing more need be submitted. The idea of human rights, at least in one sense, appears to be a misnomer in as much as dharma is a peculiar feature

¹ Bible says God said ‘Be’ and it became. Qur’an mentions it as ‘Qun-fai-Qun’ meaning ‘Be, and it became’.

of the man; and the modern jurisprudence also does not recognize and protect any interest of lower animals except in so far as it is deemed necessary for the protection of human interest.

However, there is another argument that seems equally powerful. The way society had come to recognize slavery which saw a section of society being bought and sold like things and treated worse than lower animals and, the way men were butchered during the two World Wars; warranted the re-recognition of these basic rights as human rights with an added emphasis on the word 'human'. Thus the universal declaration of human rights becomes doubly important because while on the one hand it condemns the inhuman treatment of man by man in the past, on the other it guarantees that nobody would be subjected to such 'inhuman' treatment in days to come. In that sense the term 'human rights' is also reminiscent of a phase in the human history most of us would like to forget.

It is thus that UDHR became a gift to the mankind, and every nation whether it had a constitution or not, or whether it had these rights guaranteed therein or not, embraced this charter on human rights with equal zeal.

2. The Right to Development

The post-World War scenario was defined by an earnest desire on the part of political leadership to 'reaffirm faith in fundamental human rights, and in the dignity and worth of human person' and 'to promote social progress.'¹ A clarion call was made 'to achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights'.² Accordingly, a bundle of rights were recognized by the UDHR which in general were thought essential to protect the dignity, person, and well being of man. Inter alia, it guaranteed the right to a standard of living adequate for the health and well being³, education⁴, to participate in cultural life of the community⁵, and to the protection of moral and material interests⁶; and at the same time it underlined

¹ See, Preamble to the UN Charter.

² See, Article 1 (3), UN Charter.

³ Article 25 (1), *ibid.*

⁴ See, Article 26 (1), *ibid.*

⁵ See, Article 27 (1), *ibid.*

⁶ See, Article 27 (2), *ibid.*

everyone's duty to the community 'in which alone the free and full development of his personality is possible'.¹

By virtue of these rights, right to food, clothing, housing and medical care and necessary social services; special care and assistance in case of motherhood and childhood, free education necessary for full development of human personality; and to enjoy arts and to share in scientific advancement and its benefits were also guaranteed.

A perusal of these rights in particular and other rights of the Declaration in general leaves no doubt that the endeavour is to make available to every man a composite right, say, the right to development. All that the Charter and the Declaration do is to facilitate the realization of right to development without discrimination; the former does it for the nations and the latter the human beings. Another notable point in the Charter and the Declaration is that while they visualize a political environment free from the War phobia, they do not seem to address the environment as such. This may be for two reasons: one is the anxiety of the world leaders to usher in to a World free from discrimination, conflict, torture, injustice, etc which would keep them too pre-occupied to perceive any threat on the front of environment; and second is that the problem of environmental pollution had by then not emerged on the global scene as a threatening one. Thus it is but natural that the issue of environmental protection was not directly addressed.

The story of the two International Covenants- one on Economic, Social and Cultural Rights (ESC) and the other on Civil and Political Rights (CP) - is not very different in that they are the tools to translate the UDHR in to points of obligations for the signatory nations. As such they talk of all those rights which form the composite right to development as hinted above. To be fair to these Covenants, it should be noted that both do talk of a right to economic, social and cultural development albeit as a derivative right. Article 1 of these Covenants is the same, paragraph 1whereof states:

"1. All peoples have *the right of self-determination. By virtue of that right* they freely determine their political status and freely pursue their economic, social and cultural development."

¹ See, Article 29 (1), *ibid*.

For whatever reasons, all the earlier documents do not specifically mention the right to development. It was the African Charter on Human and People's Right (1981, effective from 1986) which, as they say, dared to take the bull by horn. The Article 22 of this Charter is very categorical in its intent:

“1. All peoples shall have the right to their economic, social and cultural development with due regard to their freedom and identity and in the equal enjoyment of the common heritage of mankind.

2. States shall have the duty, individually or collectively, to ensure the exercise of the right to development.”

It goes without saying that what the Charter has done is made the right to development a perfect right as opposed to a derivative right. It entitles all peoples to have right to development while at the same time making the States duty-bound to ensure the exercise of this right. Thus it is a right (of the people) that correlates to a duty (on the part of the States).

It is interesting to note that the year 1986 when the Charter entered in to force was also the year of Universal Declaration on the Right to Development. This declaration recalls the aims and objectives of the UN Charter, the UDHR, and the two international covenants (for ESC rights, and for CP rights) in an endeavour to establish the continuity of efforts which has culminated into the present Declaration, as also to stress that the background so prepared is the only one where right to development may be meaningfully ensured.

But most importantly, its preamble hints at the hurdles in guaranteeing such a right and thus recognizes that ‘development is a comprehensive economic, social, cultural and political process’. This also implies that right to development has been central to all the documents mentioned in the preamble of the present Declaration, even though the same had not been explicitly mentioned there. Article 1 (1) makes it abundantly clear:

“The right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy

economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized.”

The Declaration refers to this right as the ‘human right to development’¹, notes that ‘the human person is the central subject of development’², reminds that ‘all human beings have a responsibility for development, individually and collectively’³, admits that ‘all the aspects of the right to development (set forth in the present Declaration) are indivisible and interdependent’⁴, and underlines the bare truth that ‘all human rights and fundamental freedoms are indivisible and interdependent’.⁵ In the same vein the Declaration mentions that the States have the right and duty to formulate policies aiming at the well being of entire population⁶, duty to take steps individually and collectively to facilitate full realization of right to development⁷, and primary responsibility to create conditions favourable to the right to development⁸. It also obliges the States to take all necessary measures at national level for the realization of the right to development.⁹

The status of right to development as a human right was reaffirmed at the World Conference on Human Rights in Vienna (1993). Vienna Declaration and Action Plan 1993, echoing the spirit of 1986 Declaration, emphasised that the right to

¹ See, Article 1 (2), *ibid.* The human right to development also implies the full realization of the right of peoples to self-determination, which includes, subject to the relevant provisions of both International Covenants on Human Rights, the exercise of their inalienable right to full sovereignty over all their natural wealth and resources.

² See, Article 2 (1), *ibid.* The human person is the central subject of development and should be the active participant and beneficiary of the right to development.

³ See, Article 2 (2), *ibid.* All human beings have a responsibility for development, individually and collectively, taking in to account the need for full respect for their human rights and fundamental freedoms as well as their duties to the community, which alone can ensure the free and complete fulfilment of the human being, and they should therefore promote and protect an appropriate political, social and economic order for development.

⁴ See, Article 9 (1), *ibid.* All the aspects of the right to development set forth in the present Declaration are indivisible and interdependent and each of them should be considered in the context of the whole.

⁵ See, Article 6 (2), *ibid.* All human rights and fundamental freedoms are indivisible and interdependent; equal attention and urgent consideration should be given to the implementation, promotion and protection of civil, political, economic, social and cultural rights.

⁶ See, Article 2 (3). . States have the right and the duty to formulate appropriate national development policies that aim at the constant improvement of the well-being of the entire population and of all individuals, on the basis of their active, free and meaningful participation in development and in the fair distribution of the benefits resulting there from.

⁷ See, Article 4 (1). 1. States have the duty to take steps, individually and collectively, to formulate international development policies with a view to facilitating the full realization of the right to development.

⁸ See, Article 3 (1). States have the primary responsibility for the creation of national and international conditions favourable to the realization of the right to development.

⁹ See, Article 8 (1). States should undertake, at the national level, all necessary measures for the realization of the right to development and shall ensure, *inter alia*, equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income

development ‘is a universal and inalienable right and an integral part of fundamental human rights’; and that ‘the human person is the central subject of development’.¹ It also caught the winds of change blowing on the global arena vis-à-vis the concept of development which had resulted in to a paradigm shift:

*“The right to development should be fulfilled so as to meet equitably the developmental and environmental needs of present and future generations. Everyone has the right to enjoy the benefits of scientific progress and its applications.”*²

3. The Idea of Development - A Paradigm Shift

The mode of development which followed industrial revolution came at a heavy cost. It soon became too evident that this fashion of development could not be continued for long as it impacted the environment adversely resulting in an irreparable loss to ecology and biodiversity, besides polluting the atmosphere. This pattern of development, then, was likely to lead to a situation where no life would be possible let alone the possibility of human life.

However, it is noteworthy that the problem of environmental pollution had seldom been brought to the fore, and never been interlinked to the process of development. I say seldom because one does get it mentioned in the Covenant on ESC which recognizes the right to enjoyment of ‘highest attainable standards of physical and mental health’; and states that measures to be taken by member States for realization of this right may include the steps necessary for ‘improvement of all aspects of environmental and industrial hygiene’³. Before moving further let me set things aright by noting that the focal concern here was about human right of physical and mental health in realization of which the environmental hygiene referred there was a requirement. The Covenant did not reflect any concern for the degradation and

¹ See, paragraph 10, *ibid.*

² See, Article 11, *ibid.* 11.

³ See, Article 12 in general and Article 12 (2) (b) in particular. **Article 12:** 1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. 2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for: (a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child; (b) **The improvement of all aspects of environmental and industrial hygiene**; (c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases; (d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.

pollution of environment much less correlate it with the process of development adhered to by most of the States so far.

Stockholm Conference (1972)

New grounds were broken in this field by Stockholm Conference (1972), aptly described as the Magna Charta of international environmental jurisprudence. This was the maiden global attempt that tried to read between the lines of the story of development authored by industrial and technological revolution and indicated a paradigm shift so far as the development was concerned.

For the first time more than one hundred nations of the world showed solidarity to take care of deteriorating quality of environment. The declaration that they adopted stressed the man's fundamental right to a healthy environment, and his duty to protect it for the present and future generations¹; called for protection of natural resources for the benefit of present and future generations²; cautioned that capacity of Earth to produce renewable resources be maintained³; and reminded that man has special responsibility to safeguard the heritage of wildlife⁴.

In a tone wherein reverberated the spirit of Ishavasya Upanishad (*ten tyakten bhunjethah*, etc), the declaration underlined that non-renewable resources be utilised for the benefit of all, and in a manner that did not lead to their exhaustion.⁵ While the declaration contained several aspects of environment and suggested several measures to improve the quality of environment; it pin pointed the under-development as one of the root causes leading to environmental degradation⁶; emphasized the interrelation of economic factors and ecological process⁷; and cautioned that environmental policies should enhance rather than adversely affect the present or future development and particular requirement of developing countries⁸. It noted that resources should be made available to preserve and improve the environment, taking into account the

¹ See, declaration 1.

² See, declaration 2.

³ See, declaration 3.

⁴ See, declaration 4.

⁵ See, declaration 5.

⁶ See, declaration 9.

⁷ See, declaration 10.

⁸ See, declaration 11, *ibid*.

circumstances and particular requirements of developing countries¹; and advocated for an integrated and coordinated approach to development planning by all States in order to achieve a more rational management of resources².

The Declaration minced no words to admit that economic and social development was essential in order to improve the quality of life³; and suggested ‘rational planning’ as an essential tool to reconcile any conflict that might arise between the ‘needs of development and the need to protect and improve the environment’.⁴ It also presented guiding principles for planning of human settlements, demographic policies, science and technology, education, research and development, and pledged to save mankind from nuclear catastrophe.⁵ Declaration 21 reminded the States that their sovereign right to exploit their own resources could run only concurrent to their responsibility of not spreading trans-boundary adverse impact on environment. Later, it became one of the basic principles of Agenda 21.

Brundtland Commission’s Report: Our Common Future (1982)

Ten years thence, the UN General Assembly set up a World Commission on Environment and Development, famously known as Brundtland Commission to report on how these twin needs of humanity, namely, development and environment, could be best harmonised. In its report entitled ‘Our Common Future’ (1987), the Commission discovered the magic word which was to become a guiding principle for all developmental activities of mankind. This much needed concept was called the sustainable development which, in the words of the Commission, meant ‘the development that meets the needs of the present without compromising the ability of future generations to meet their own needs’.⁶

Concept of Human Development (1991)

¹ See, declaration 12, *ibid.*

² See, declaration 13, *ibid.*

³ See, declaration 8, *ibid.* *Economic and social development is essential for ensuring a favourable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life*

⁴ See, declaration 14, *ibid.* *Rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment.*

⁵ See, declaration nos. 15, 16, 18, 19 20, and 26 in that order.

⁶ See, Chapter II, p.43, *ibid.* It has also been referred by the apex Court in *Vellore Citizens Welfare Forum v. Union of India*: AIR 1996 SC 2715, at p. 2720.

The concept of development that flourished during the 1980s was based on the presumption that good economic growth would bring development. Since the world had by then begun to taste the bitter effects of such a concept of development, there was rising criticism by those economists who felt that ‘people are the real wealth of nations’¹. This was similar to the commitment made in the two Declarations-one by Organisation of African Unity, and other by the UN- regarding the right to development wherein it had been emphasized that man should be at the centre of all development. The leading economists like Mehboob-ul-Haq of Pakistan and Amartya Sen of Indian origin sensed this new paradigm of development called the human development. Haq (1934-1998) who believed that ‘the objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives’, in fact became the founder of Human Development Report which started in 1991. Explaining the idea of human development Sen, a Noble laureate of 1998 in Economics, made these observations:

“Human development, as an approach, is concerned with what I take to be the basic development idea: namely; advancing the richness of life, rather than the richness of the economy in which human beings live, which is only a part of it.”

This was a great shift in the western thinking which had followed the realization that richness acquired through financial wealth had its limitations and that it could not go very far without the company of rich personal attributes of man. In a nutshell, the development that was the need of the hour was human rather than economic. The Human Development Index (HDI) is published annually since 1991 which shows the world ranking of nations based on the level of development they have achieved in different sectors like health, education, etc. In HDR 2013, that covers 187 nations, India ranks 136, whereas she ranked 134 in 2011 and 136 in 2012.

Thus by the 1990s, there was a paradigm shift in the very concept of development. Rather than economy, the new concept had to focus on human beings and environment. This metamorphosed the erstwhile idea of development in to sustainable development or, as some would say, sustainable human development.

4. For the sake of Sustainable Development

¹For a better and greater detail of evolution of HDI, see on the official website of United Nations Development Programme.

Interpretation is a tool that helps one know the spirit of law with the help of letters of law; and often a good interpretation rescues the law from getting obsolete with changing times. For example, it took the Indian judiciary more than two decades to interpret ‘law’ as ‘just, fair and reasonable law’. Similarly, it took the world almost five decades to finally interpret the word ‘development’ as ‘sustainable development’. The Rio Declaration was overshadowed by this charismatic word, so much so that even the right to development became subject to it.

Rio Declaration (1992)

The UN Conference on Environment and Development (1992), better known as the Earth Summit, that took place five years after ‘*Our Common Future*’, inter alia declared that human beings are at the centre of concerns for SD and entitled to a healthy and productive life in harmony with nature¹; reiterated the sovereign rights and corresponding duties of member states²; and made the right to development contingent upon meeting equitably the developmental and environmental needs of the present and future generations³, the Rio Declaration also stressed the fact that in order to achieve sustainable development, environmental protection should constitute an integral part of developmental process rather than be looked in to isolation⁴; and that for this the states should reduce and eliminate unsustainable patterns of production and consumption⁵. Besides, there was prepared Agenda 21 which is a blue print of how humanity should march in the twenty first century towards the goal of sustainable development.

By declaring that ‘human beings are at the centre of concerns for sustainable development’ the Earth Summit gave ‘sustainable development’ the very place of pride which the word ‘development’ had enjoyed under African Charter (1981), UN Declaration (1986), and Vienna Declaration (1993). The last of these, it may be noted, showed a clear faith in the concept of sustainable development, making it more than evident that the right to development was soon to be succeeded by the right to sustainable development. It is interesting to see how it has nearly copied one of the declarations at Rio:

¹ See, Principle 1, Rio Declaration.

² See, Principle 2, *ibid*.

³ See, Principle 3, *ibid*.

⁴ See, Principle 4, *ibid*.

⁵ See, Principle 82, *ibid*.

‘Right to development should be fulfilled so as to meet equitably the developmental and environmental needs of present and future generations.’¹

Johannesburg Summit on Sustainable Development (2002)

The Summit ended in producing one set of Declarations, and another of Plan of Implementation. Recognising that humankind is at crossroads, the declaration expressed the firm resolve of participants for poverty eradication and human development². But most importantly it recognised that ‘poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of and essential requirements for sustainable development’.³ It also stressed the ‘vital role of indigenous people in sustainable development’. After five years, the UN Declaration on rights of indigenous people 2007, was to recognize, their right to ‘determine and develop priorities and strategies for exercising their right to development’⁴

The plan of implementation copied most of the millennium developmental goals setting the same deadline. For example, they put the year 2015 as deadline for 50% eradication of poverty.⁵ They finally pledged to the world that they were ‘determined to ensure that our collective hope for sustainable development is realized’⁶.

The Summit was significant in that it was the first Summit focussing the concept of sustainable development and producing a plan to achieve sustainability within a specified time period. More than anything else, it emphasized the multidimensional aspects of the concept of sustainable development, and realised that it requires the active participation and cooperation of all: the governments, the peoples, and other institutions as well.

¹ See, declaration 11, *ibid.* Also see, principle 3, Rio Declaration; f. n. 38, *supra*.

² See, declaration 7, *ibid.*

³ ³ See, declaration 11, *ibid.*

⁴ See, Article 23, *ibid.* *Article 23.* Indigenous peoples have the right to determine and develop priorities and strategies for exercising their right to development. In particular, indigenous peoples have the right to be actively involved in developing and determining health, housing and other economic and social programmes affecting them and, as far as possible, to administer such programmes through their own institutions.

⁵ See, Chapter II: Poverty Eradication, P. 7, Plan of Implementation which calls for ‘actions at all levels to:

(a) Halve, by the year 2015, the proportion of the world’s people whose income is less than 1 dollar a day and the proportion of people who suffer from hunger and, by the same date, to halve the proportion of people without access to safe drinking water.’

⁶ See, paragraph 37 of the Declaration.

In their Millennium Declaration, 189 heads of State noted that more than one billion of the world's population was subjected to 'the abject and dehumanising conditions of extreme poverty'; and expressed their commitment to 'making the right to development a reality for everyone'. The Millennium Development Goals presented the vision plan for development in the new millennium, and identified eight focal areas: ending poverty and hunger, universal education, gender equality, child health, maternal health, combating HIV/AIDS, environmental sustainability, and global partnership. For each of these the deadline was the year 2015 by which time an appreciable progress had to be made, e.g. to halve between 1990 and 2015, the proportion of people whose income is less than \$1 (one dollar) a day, and the proportion of people who suffer from hunger.

The MDG Summit (2010, New York) did not have much to be satisfied. According to one estimate, fifty thousand people continued to die of hunger everyday. The MDG Report 2011, however, is not so disappointing. In his foreword to the report, UN General Secretary Ban-ki-Moon has appreciated that 'already, the MDGs have helped to lift millions of people out of poverty, save lives and ensure that children attend school'; but cautioned that 'we still have a long way to go in empowering women and girls, promoting sustainable development, and protecting the most vulnerable from devastating effects of multiple crises'.¹

The HDR2011, in its report entitled 'sustainability and equity' had projected a 'disturbing reversal of trends' by which the people in the least developed nations ran the risk of being left far behind the rest of the world in the race of development by 2050, should the 'environmental degradation and social inequalities continue to intensify'. It may be noted here that India's rank has come down from 134 in 2011 to 136 in 2012 and 2013.

5. Right to SD: An HR Approach

It is a right that is at the centre of all human rights; but the one that still waits a formal recognition as such. This contradiction is due to a number of factors.

¹ See, *ibid.*

The UN Declaration on Right to Development makes it abundantly clear that right to development is a fundamental human right, and also that this has always remained there in the spirit of UN Charter UDHR and two International Covenants on Human Rights. The World Conference on Human Rights 1993 explicitly mentions it as a fundamental human right.

Since Earth Summit 1992, the rhetoric that “man is at the centre of all development” gets replaced by “man is at the centre of all discourse on sustainable development”. As has been hinted above the spirit of sustainable development has also been there in Vienna Declaration and Action Plan 1993, produced by the World Conference on Human Rights. The principles as well as other documents of Rio Summit (like, Agenda 21, Convention on Biological Diversity, etc) revolve round the idea of sustainable development in an apparent effort to protect this all important human right i.e. right to SD.

The Johannesburg Summit focussed on the overarching concept of SD, and thus underlined the need to protect the human right to SD. The UN Conference on Sustainable Development or Rio+20 endured a renewed commitment of the global community to make sustainable development a living reality.

However, it should be noted that as all human rights are inter related and human rights and right to development are interconnected; the right to SD too is interrelated with and indivisible from all human rights that one can think of, as also all possible processes of development. This is why, to some extent, an express recognition of right to SD is tantamount not only to say the obvious but also to limit the all encompassing nature of this right.

This may be one reason why it is difficult to find the right mentioned explicitly in a constitution or any international covenant. Indian Constitution is no exception either. Still in the light of the fundamental rights and the directive principles of state policy; coupled with India’s commitment to global initiatives in this regard, it can not be said that Right to Sustainable Development does not enjoy status of an HR in India. The

very definition of human rights given in the Human Rights Act, 1993¹ supports this view; because right to development has been declared by the UN as a human right, and current trends of global thinking convince us that the term 'development' has to be read now as 'sustainable development'. The world has only one way to go, the SD way; because sustainability alone can ensure us a bright future.

6. Towards a Sustainable Tomorrow

While claiming that it was a beginning and not an end, the then UN General Secretary observed: "The true test of what the Johannesburg Summit achieves are the actions that are taken afterward. We have to go out and take action. This is not the end. It's the beginning."²

And, ten years after millennium declaration whose goals the Johannesburg Summit had copied, these words of urgency came from the present UN General Secretary:

"Between now and 2015, we must make sure that promises made become promises kept. The people of the world are watching. Too many of them are anxious, angry and hurting. They fear for their jobs, their families, their futures. World leaders must show not only that they care, but that they have courage to deliver."³

¹ See, s. 2 (d), *ibid*: "human rights" means the rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International Covenants and enforceable by courts in India.

² See, http://www.johannesburgsummit.org/html/whats_new/feature_story39.htm.

³ See, foreword to MDG Report 2011, *op. cit*.

The economic crisis of 2008-09 has taken its toll on the projects aimed at achieving sustainable human development as has been admitted by both, the MDG Report 2011 as well as HDR 2011.

The world's hopes were pinned on Rio+20. It was expected to bring a new dawn for the better realisation of the right that presents an essence of all human rights, namely, the right to sustainable development. Accordingly, it witnessed the global community renew its political commitment to sustainable development and in the process suggest some clear measures for implementing sustainable development.¹

Bhimgoda Barrage

The epicentre of problems for Ganga

U.K.Choudhary²

Introduction

Bhimgoda barrage is diverting large quantity of the water throughout the year to the extent of more than 95% during some of the period of the year into Upper Ganga canals. Thus, meagre quantity of water is allowed to flow in the mainstream. The heavy

¹ For more details, see, <http://sustainabledevelopment.un.org/>

² Director, MMITGM, Varanasi, U.P. The paper is co-authored by A.N.Singh Asst. Professor, Galgotias College of Engg. Technology, Greater Noida (UP); R.C.Vaishya Professor, Dept of Civil Engg., MNNIT, Allahabad (UP); and A.K.Upadhyay Principal, Govt. Polytechnic, Vikramgarh, Thane, Mumbai. It was presented at the Seminar organised by AVAP on 'Ganga: Status, Direction and vision' on 10th Nov. 2013 at Allahabad.

diversion of water from a place continuously throughout the year has not been correlated with the environment management in the basin.

Heavy diversion of water causes sudden decrease in dilution factor in the downstream that adversely affects natural self purification process of the river.

The sudden decrease in discharge also causes instantaneous fall in the river stage in downstream of the barrage. This leads to loss in momentum and energy of the flow. The environmental impacts of the Ganga diversion have been assessed by measuring variations in base flow characteristics, depth of flow velocity of flow, sedimentation erosion and physico chemical characteristics. The investigation suggests that with the diversion of more and more water from Ganga, ground water level falls deeper in downstream. This may result into increase in the depth of dry soil zone in the basin.

It may therefore result into adverse impacts on growth of flora and fauna fall in humidity and rise in atmospheric temperature adding thereby global warming.

The increase in sedimentation and erosion with the decrease in discharge indicates environmental problems in terms of rise in river bed, heavy sedimentation in flood plain, dissipation of kinetic energy, and its proportionate enhancement in potential energy causing the flood/inundation even without much of rainfall.

The distarous flood/inundation in Uttrakahand in June 2013, the heavy sedimentation in Tehri and other dams reservoirs and low hydropower generation, dried up Ganga at Haridwar and Narora, the epicenters of the entire Gang problems in downstream plains due to the Bhimgoda and Narora barrages, the Ganga becoming drain at Kanpur, Allhabad, Varanasi, Patna etc. due to unscientific discharge of pollutants and problems cropping up in the form of polluted drinking water, erosion of banks and shifting of villages due to meandering problems, heavy sedimentation, depeletion in ground water table, infertility of basin soils, shifting course of the Ganga at Patna and other places, year round floods in more than 130 villages around Farraka barrage and sedimentation in height in more than 130 ft at Farraka, heavy land erosion in downstream of Fararrka barrage, an entire change in floura and fauna, atmospheric temperature and pressure basin in the Ganga system affected complete meteorological conditions of entire country linked through different rivers to the Ganga.

Out of the above mentioned problems the problem created by Bhimgoda barrage which affects the drinking water problem and the problem associated with the basin has been presented here.

As more and more water is diverted from the Ganga in the western Ganga canal through Bhimgoda barrage the river stage (depth of water in the Ganga falls down instantaneously). This causes the lowering of ground water table in the vast area of the basin in the downstream. This results into increase in the depth of dry soil zone in the basin. This may therefore results into adverse affect on growth of flora and fauna, low evapo-transpiration, fall in humidity, rise in atmospheric temperature adding thereby global warming. The cumulative effect of all may result into reduction in agricultural production which may require to be compensated by increase in use of chemical and fertilizers that further increase in the barren land area. Further due to increase in level difference between the ground water table and level of water in the Ganga due to heavy extraction seepage rate increases this result into increase in subsidence bank, problem of meandering and shifting of village and towns.

Salient Literatures Reviewed

Spence and Hynes (1971) studied in their paper “Differences in benthos upstream and downstream of an impoundment” the Shand Dam and its impoundment, Belwood Lake, on the Grand River, Wellington County, in which the water is released from the hypolimnion. The object of this study was to investigate the influence of a dam on the benthos of the river downstream. Pronounced differences were found in the macro invertebrate riffle fauna upstream and downstream of a flood control impoundment. They concluded that construction of the dam has caused great changes in the community structure of the benthos: a reduction in the total number of species, an increase in the numbers of some species, and the replacement of yet other species by closely related ones. Theses faunal changes are the result of alterations of the stream environment by the dam. In attempting to answer the question of what factors caused the changes below the dam, one must remember that many environmental factors affect invertebrates and that several are interrelated. At least three primary factors are important: alteration of the temperature regime; abundant development of Aufwuchs;

and outflow of organic matter, particularly zooplankton and phytoplankton, from the impoundment.

Chang (1984) analyzed in his paper “Analysis of river meanders” using an energy approach. He concluded that meandering represented a degree of adjustment for rivers. A meander curvature increased the power expenditure due to secondary currents, but this was matched by a compensating increase in the sediment efficiency associated with the transverse bed slope. Thus, uniform utilization of power and sediment continuity was maintained throughout the river approach. Thus, a basic understanding of the nature of power transformation is of fundamental importance in river control and regulation.

Choudhary and Singh (1989) presented in their paper “Effluent dispersion in river Ganga at Varanasi, India” dispersion pattern of different physico-chemical parameters in the form of contours and profiles representing the phenomenon in longitudinal and transverse directions and stated that the dispersion of pollutants in the river can be presented by the following equations.

$$D_L = f_1(q_e, V_e, \rho_e, K_{qe}, Q_c, \bar{v}_e, \bar{u}_e, h_{av}, K_{qr}, df) \quad (1)$$

$$D_T = f_2(q_e, V_e, \rho_e, K_{qe}, Q_c, \bar{v}_e, \bar{u}_e, h_{av}, K_{qr}, df) \quad (2)$$

$$D_L = f_3(Q_c, IR_e, F_r, df, K_{qe}) \quad (3)$$

$$D_T = f_4(Q_c, IR_e, F_r, df, K_{qe}) \quad (4)$$

\bar{u}_e = Average transverse velocity in the region

\bar{v}_e = Average velocity in the confluence zone

V_e = Average velocity of effluent discharge

Q_c = Confluence angle

ρ_e = Density of effluent df = Dilution factor

D_L = Longitudinal dispersion length

D_T = Transverse dispersion length

f_1, f_2, f_3, f_4 = Proportionality constant

q_e = Quantity of effluent

K_{qr} = Quality parameter of river water,

K_{qe} = Quality parameter of effluent

Rosenberg et al. (2000) in their paper “Global-scale environmental effects of hydrological alterations: introduction” defined hydrological alteration as any anthropogenic disruption in the magnitude or timing of natural river flows and focus on dams (and associated impoundments), a major cause of these disruptions on a global scale. The creation of storage and head allows dams: to generate electricity; to supply water for agriculture, industries, and municipalities; to mitigate flooding; and to assist river navigation. However, the effectiveness of dam technology in delivering these services is hotly debated. Ubiquitous hydrological alterations—dam construction and associated water diversion, exploitation of groundwater aquifers, stream channelization, and intercatchment water transfer are producing global-scale effects on the environment. Large dams and river diversions have proven to be primary destroyers of aquatic habitat, contributing substantially to the destruction of fisheries, the extinction of species, and the overall loss of the ecosystem services on which the human economy depends. Their social and economic costs have also risen markedly over the past two decades.

Choudhary (2003) in his book “The living similarity between the Ganga and the human body” stated that rivers are the most precious gift of Nature to humanity. Biosphere is directly or indirectly linked with rivers which are nucleus of the environment. Hence, the imbalances in rivers signify the disturbed environment. In spite of remarkable achievements in the field of science and technology, people of the World is suffering from flood, soil erosion, water pollution, meandering and other related problems. Millions of scientists throughout the world are trying their level best to solve the problems. Many mathematical equations have been given, but their applications are very limited. He personally feels that the solutions of river problems

are far off the present methodology. This made him restless and he tried to know the views of the great sages in the Vedas, Puranas, and the other scriptures. The sages realized the river system as a living body and pronounced her as the mother. Why they did so was a haunting question in his mind and inspired him to think scientifically; he collected the data related with the river behaviour and substantiated the river as a living system. He started thinking to achieve solution of river problems based on that of the solution of the human body. As the activity of the human body is difficult to be defined in mathematical terms, similarly, the problems and behaviour of river system are difficult to be defined with the mathematical equations. What he personally feels is that the solutions we try to arrive at are related with water, only, and not the structural and functional character of the river. This is the root cause why the river problems are not yet solved and keep on multiplying. This is why he compared river body system with that of the human body with an aim so that in the era to come, the people and children may feel river as the living body system. This will generate in them the sense of regard and respect for the river and they may be more cautious in dealing with the river. They will, accordingly, modify the technology with the same care as they will do for their body. This will be real solution for the prosperity and happiness of human life.

National River Conservation Directorate, Ministry of Environment and Forests, Government of India (2009) explained in its report “Status paper on river Ganga” that the Ganga Action Plan (GAP) was launched in 1985 with the objective to improve the water quality to acceptable standards, which was later modified to “Bathing Class” B based on Designated Best Use Classification as shown in Table 2.1 below; however, the river water quality has not yet reached the prescribed “Bathing Class” except in the upper Ganga from origin to Haridwar as a result of GAP. A very significant factor in this regard is the inadequate flow in the river due to withdrawal of water for various purposes including irrigation, drinking water and power generation. A sizeable proportion of water is diverted into the Upper and Lower Ganga canals resulting in reduced flow in the main river. One of the important functions of recently constituted committee of Govt. of India, the NGRBA, is the maintenance of minimum ecological flows in the river Ganga with the aim of ensuring water quality and environmentally sustainable development. Since water quality is directly impacted by abstraction, it may issue directions for taking appropriate measures with a view to ensuring minimum flows in the river in the interest of pollution control and environmental management.

Thus, it was accepted in principle that the environmental management is linked to water flowing in the river but not quantified.

Experimental Investigations

The field experiments were performed to assess the variations in: base flow characteristics in terms of depth of groundwater level; and physic-chemical characteristics in terms of DO, BOD, TDS, EC, Salinity, pH and Temperature. The laboratory experiments were performed to assess the impacts of lowering down of discharge (hence river stage) on: base flow characteristics in terms of depth of ground water level, slope of phreatic line, free seepage height, and seepage rate; depth of flow; velocity of flow; sedimentation and erosion. Thus, some observations were recorded both in field and laboratory and can be compared.

Section	Distance from section 1 km	Average Daily Discharge (Cusecs) in the Months from May, 2010 to April, 2011											
		May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1	0	11387	18574	45377	108559	137333	33417	16566	8770	5020	14459	16200	21326
2	1.8	11387	18574	45377	108559	137333	33417	16566	8770	5020	14459	16200	21326
3	2.2	863	1479	23949	87601	113973	21322	5020	400	400	400	1182	2376
4	4	934	3912	28207	93375	124448	26515	8087	2077	561	4471	4898	11142
5	14	3109	7608	33792	99043	133844	29646	10776	3550	967	5785	6576	12707
Difference of discharge between sections 5 and 3	12	2246	6129	9843	11442	19871	8324	5756	3150	567	5385	5394	10331
Difference of discharge between sections 1 and 5	14	8278	10966	11585	9516	3489	3771	5790	5220	4053	8674	9624	8619
Section 1 - CWC, Gauge Station, Haridwar Section 2 – 200 m U/S BB, Haridwar Section 3 – 200 m D/S BB, Haridwar Section 4 - Chandibridge, Haridwar Section 5 -- Shyampur Village													

RESULTS AND DISCUSSIONS

Variations in Discharge of the Ganga with the Time and Space:

Table 4.1 Average Daily Discharge in the Ganga with the Time and Space near Bhimgoda Barrage, Haridwar

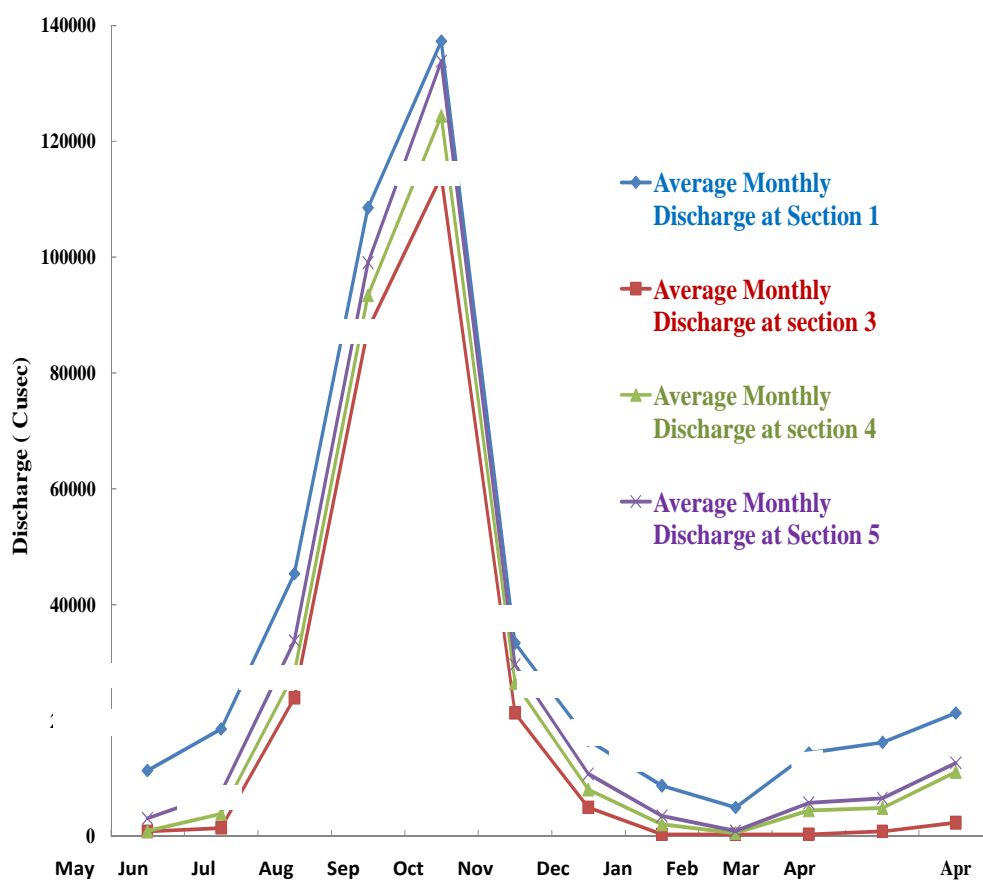


Figure 4.1 Average Daily Discharge in the Ganga with the Time and Space near Bhimgoda Barrage, Haridwar

The difference of average daily discharge between sections 5 and 3 varies from the minimum 567 to the maximum 19871 cusecs. This data provides scope of better management of water distribution so as to reduce alteration in dynamics of the river flow between sections 3 and 5 without compromising total quantity of water diverted into the Upper Ganga Canals. Variations in difference of average daily discharge between sections 1 and 5 from May, 2010 to April, 2011 in sequence are shown as 8278, 10966, 11585, 9516, 3489, 3771, 5790, 5220, 4053, 8674, 9624, and 8619 cusecs respectively; it is the average daily discharge of water diverted from the Ganga in the months from May, 2010 to April, 2011 respectively. The water is diverted into the Upper Ganga Canals at the Bhimgoda barrage between sections 2 and 3.

Table 4.2 Average Daily % Release of Water into the Ganga near Bhimgoda Barrage

Month	Average Daily Percentage Release of Water w.r.t. Section 1			
	At Section 3	At Section 4	At Section 5	Diff. between Sections 5 and 3
May	7.56	8.00	25.76	18.20
June	8.85	21.23	37.05	28.20
July	41.68	51.50	66.3	24.62
Aug	80.08	85.14	90.06	9.98
Sept	80.79	88.12	96.77	15.98
Oct	65.48	77.38	89.68	24.20
Nov	24.58	38.12	54.38	29.80
Dec	5.62	18.28	32.46	26.84
Jan	8.98	10.26	16.71	7.73
Feb	3.08	25.30	33.78	30.7
Mar	7.30	28.13	35.94	28.64
Apr	12.26	51.80	57.17	44.91
Yearly Average	28.83	41.94	53.01	24.18

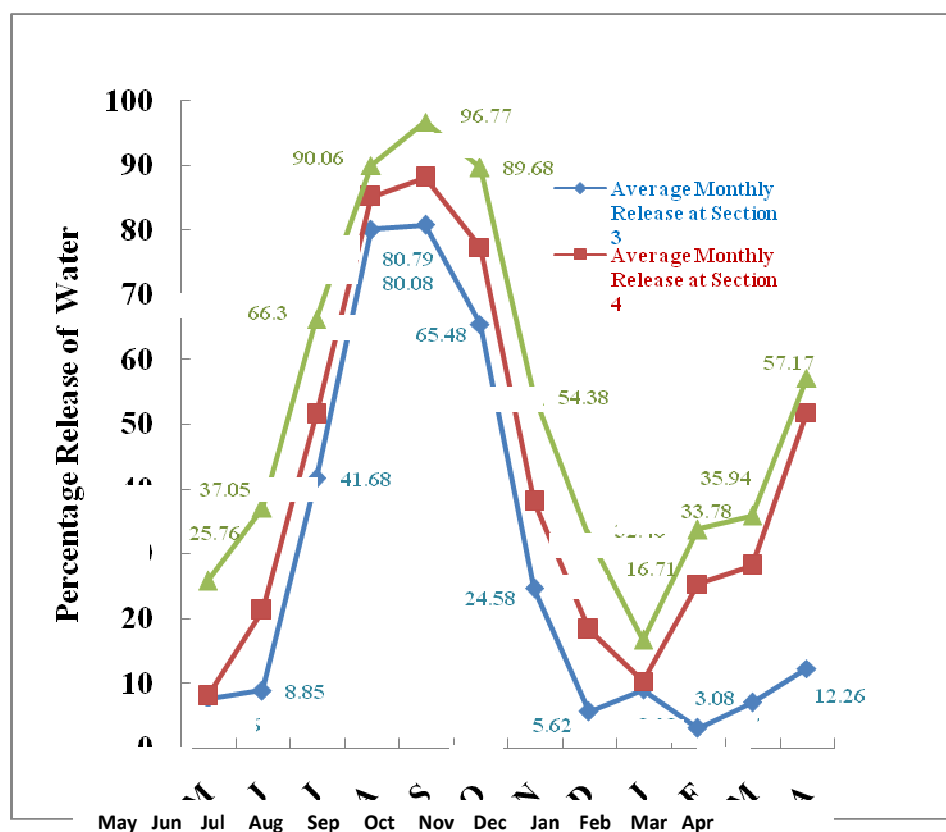


Figure 4.2 Average Daily % Release of Water into the Ganga near Bhimgoda Barrage Results of the field experimentations.

Depths of ground water level (GWL) as shown in Table 3.1 in the Well near section 1 (where the river was assumed flowing freely compared to its d/s sections) are 5.57, 3.66, 0.58, 3.35, 4.78, and 5.33 m in the months of May, July, September, November of 2010, and January and March of 2011 respectively. Similarly, depths of ground water level in the Well near section 5 are 7.50, 5.18, 1.02, 4.57, 6.23, and 6.93 m in the above months respectively. These variations in GWL are shown in Figure 3.2. It is thus observed that that depth of ground water level in Well near section 5 is always deeper than that of Well near section 1. It is further observed that depth of ground water level in both the Wells is the minimum i.e. closest to the ground in the rainy season in the month of September, 2010. Therefore, considering GWL in the two Wells in the month of September, 2010 as datum, zero, fall in their Ground Water Level in different months is calculated. This fall in depths of GWL at the two Wells near sections 1 and 5 in the respective months are shown in Table 3.2. These values in the Well near sections 1 and 5 are 4.99 (5.57-0.58), 3.08, 0.00, 2.77, 4.20, 4.75 and 6.48 (7.50-1.02), 4.16, 0.00, 3.55, 5.21 and 5.91 m respectively. These variations of fall in GWL of the two Wells are shown in Figure 3.3. Thus, the difference of fall in GWL of the two Wells is 1.49 (6.48-4.99), 1.08, 0.00, 0.78, 1.01, and 1.16 m in the respective months and is shown in Figure 3.4. Hence, it is found that within 14.0 km length of the river, GWL of the Well in d/s of the barrage near section 5 goes down at higher rate of 1.49, 1.08, 0.00, 0.78, 1.01, and 1.16 m compared to that of the Well in u/s of the barrage near section 1 in the months of May, July, September, November of 2010, and January and March of 2011 respectively. This may be due to diversion of the Ganga by the barrage and hence decrease in discharge at section 5. It is worth mentioning here that percentage release of water at section 5 is nearly the minimum (i.e. diversion of water is the maximum) in the month of May as seen from the Table 4.2; this time of maximum diversion coincides with the time of the maximum difference of fall (i.e.1.49 m) in GWL in the month of May. This indicates that diversion of the river causes higher fall in GWL in d/s of barrage which will enhance slope of phreatic line, free seepage height and seepage rate from the basin and has been verified in the laboratory experimentations discussed ahead.

Thus, variations in GWL in Wells near sections 1 and 5 show that: depths of ground water level in both the Wells 1 and 5 is the minimum in September, 2010 i.e. closest to their

ground level and it falls down thereafter continuously. Fall in GWL in Well near section 5 is deeper (i.e. higher value of fall) than that of fall in GWL in Well near section 1. The maximum difference of fall in GWL occurs in the month of May, 2010 and is 1.49 m deeper in the Well near section 5 than that of the Well near section 1. This difference is within 14 km length of travel of the river only, and may enhance and generate the condition of increasing free seepage height and pronouncement of meandering with the increase in length of travel. Further, the higher rate of fall in GWL in the d/s of the barrage after diversion may adversely affect: atmospheric temperature and humidity; water requirement of crops; production of food grains; and growth of the flora and the fauna in the basin.

Results of the laboratory experimentations:

Table 4.3 shows the variations of heads in observation Wells (their location can be seen in Figure 3.5) with the decreasing river stages in the model. These river stages are 20.5, 15.0, 11.0 and 3.0 cm. The decreasing river stages cause increasing canal river stage differences (ΔH) of (43.5-20.5) i.e. 23.0, (43.5-15) i.e. 28.5, (43.5-11) i.e. 32.5, and (43.5-3) i.e. 40.5 cm. The head in the observation Wells (in cm) at the above canal river stage differences of 23.0, 28.5, 32.5 and 40.5 cm are: 33.2, 32.3, 32.0, and 31.5 for W11; 31.0, 28.9, 27.6, and 27.2 for W12; 29.1, 27.2, 25.9, and 23.8 for W13; 25.0, 23.0, 21.3, and 20.0 for W14; 23.4, 20.0, 17.4, and 15.3 for W15; 33.3, 32.3, 31.5, and 29.8 for W21; 31.6, 30.0, 28.6, and 27.2 for W22; 28.9, 27.2, 25.5, and 23.0 for W23; 25.0, 22.5, 20.4, and 19.4 for W24; 33.2, 32.3, 31.9, and 31.0 for W31; 31.1, 29.9, 28.5, and 27.2 for W32; 28.6, 27.2, 25.1, and 23.6 for W33; 25.2, 23.1, 20.8, and 19.6 for W34; 23.0, 18.7, 16.2, and 14.5 for W35 respectively. The seepage rate at the above canal river head differences are 2.6×10^{-5} , 4.3×10^{-5} , 4.9×10^{-5} , and 5.1×10^{-5} m³/sec respectively.

Tables 4.4 to 4.7 are obtained from Table 4.3 for canal river stage difference ΔH of 23.0, 28.5, 32.5, and 40.5 cm respectively. The data in these Tables show that with the increase in canal river stage difference (i.e. decrease in river stage), head in the observation Wells (analogous to GWL) falls down and seepage rate is found to increase.

Table 4.3 Head in Wells with Varying Stage Difference (ΔH) between Straight Flume (Canal) and Curved Flume (River) with Constant Canal Stage of 43.5 cm

S.N.	Well No.	Head in Well at river stage 20.5 cm and canal river stage diff. $\Delta H=23.0$ cm	Head in Well at river stage 15.0 cm and canal river stage diff. $\Delta H=28.5$ cm	Head in Well at river stage 11.0 cm and canal river stage diff. $\Delta H=32.5$ cm	Head in Well at river stage 3.0 cm and canal river stage diff. $\Delta H=40.5$ cm
1	W11	33.2	32.3	32.0	31.5
2	W12	31.0	28.9	27.6	27.2
3	W13	29.1	27.2	25.9	23.8
4	W14	25.0	23.0	21.3	20.0
5	W15	23.4	20.0	17.4	15.3
6	W21	33.3	32.3	31.5	29.8
7	W22	31.6	30.0	28.6	27.2
8	W23	28.9	27.2	25.5	23.0
9	W24	25.0	22.5	20.4	19.4
10	W31	33.2	32.3	31.9	31.0
11	W32	31.1	29.9	28.5	27.2
12	W33	28.6	27.2	25.1	23.6
13	W34	25.2	23.1	20.8	19.6
14	W35	23.0	18.7	16.2	14.5
Seepage Rate (m^3/sec)		2.6×10^{-5}	4.3×10^{-5}	4.9×10^{-5}	5.1×10^{-5}

Table 4.4
Non-Dimensional Head in Wells at River Stage (H_r) 20.5 cm,
Canal Stage (H_c) 43.5 cm and Canal River Stage Difference (ΔH) 23.0 cm

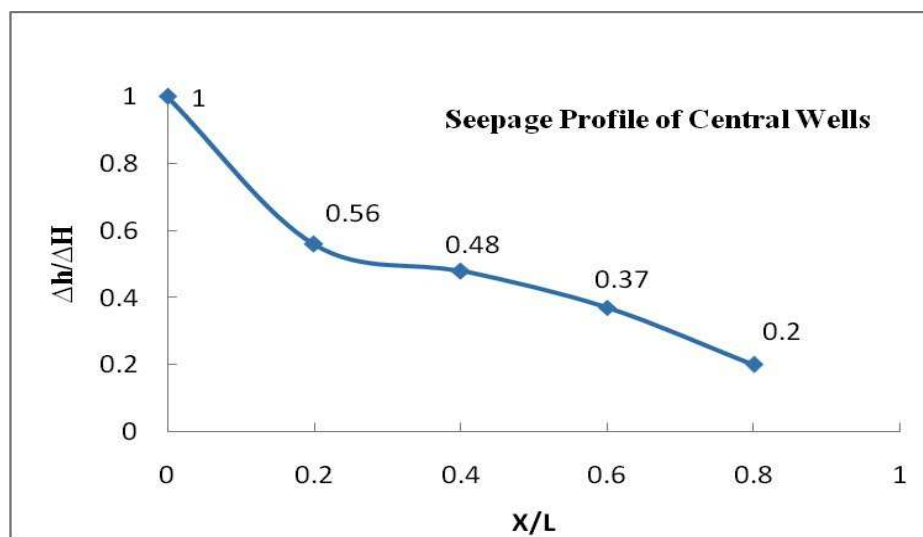
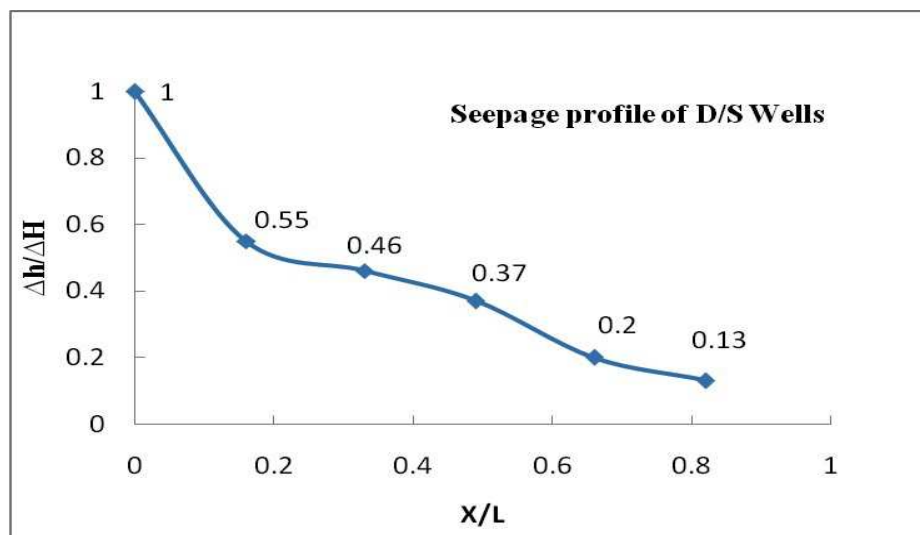
Position of the Well from the canal side			Head in Wells h(cm)	Head in Wells	Non-dimensional Head in
	Distance of	X/L			

	Well from canal (X) (cm)			above river stage $\Delta h = h - H_r$ (cm)	Wells above river stage $\Delta h / \Delta H$
Downstream Wells (section 1-1), L= 140 cm					
Canal	0	0	43.5	23.0	1.00
W₁₁	23	0.16	33.2	12.7	0.55
W₁₂	46	0.33	31.0	10.5	0.46
W₁₃	69	0.49	29.1	8.6	0.37
W₁₄	92	0.66	25.0	4.5	0.20
W₁₅	115	0.82	23.4	2.9	0.13
River (Hr)	140	1	20.5		
Central Wells (section 2-2), L= 110 cm					
Canal	0	0	43.5	23.0	1.00
W₂₁	22	0.2	33.3	12.8	0.56
W₂₂	44	0.4	31.6	11.1	0.48
W₂₃	66	0.6	28.9	8.4	0.37
W₂₄	88	0.8	25.0	4.5	0.20
River (Hr)	110	1	20.5		
Upstream Wells (section 3-3), L= 140 cm					
Canal	0	0	43.5	23.0	1.0
W₃₁	23	0.16	33.2	12.7	0.55
W₃₂	46	0.33	31.1	10.6	0.46
W₃₃	69	0.49	28.6	8.1	0.35
W₃₄	92	0.66	25.2	4.7	0.20
W₃₅	115	0.82	23.0	2.5	0.11
River (Hr)	140	1	20.5		

Variation in Slope of Phreatic Line, Free Seepage Height and Seepage Rate at $\Delta H = 23.0$ cm

	Slope of phreatic line		
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Section	Entry zone	Central Zone	Exit zone	Average Slope	Free Seepage Height cm	Seepage Rate m ³ /sec
Sec 1-1 (d/s)	0.45	0.11	0.07	0.155	1.3	2.6*10 ⁻⁵
Sec 2-2 (central)	0.49	0.13	0.18	0.201	0.6	
Sec3-3 (u/s)	0.45	0.11	0.10	0.162	0.3	



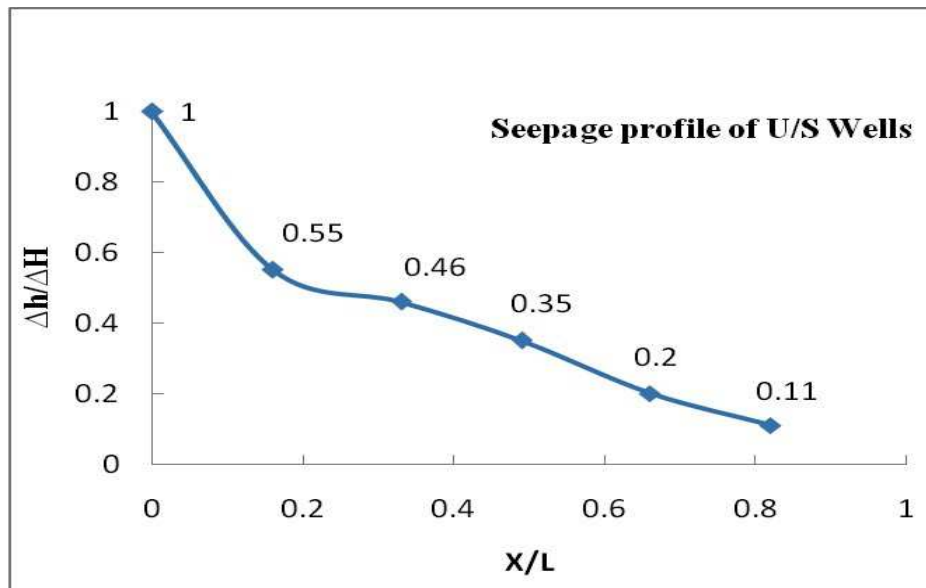


Figure 4.3 Variations of Non-Dimensional Head in Wells at $\Delta H=23.0$ cm

Thus, the results and discussions of the experiments in the field and laboratory to measure environmental impact of the Ganga diversion in terms of variations in base flow characteristics reveal that:

1. **GWL falls down as the discharge decreases (means stage decreases) in the Ganga. GWL in d/s of the barrage falls down at higher rate compared to that of u/s of the barrage due to diversion of the Ganga. The derived conclusion is that the decrease in GWL may cause increase in depth of dry soil zone in the basin. This may result into: adverse impact on growth of flora and fauna; low evapo-transpiration; fall in humidity and rise in atmospheric temperature adding thereby global warming. The cumulative effect of all these may result into reduction in agricultural production which may require to be compensated by increase in use of chemicals and fertilizers that will further increase the salinity of soil and hence increase in barren land area.**

2. **The slope of phreatic line, free seepage height, and seepage rate increases with the decrease in discharge. The derived conclusion is that with increase in slope of phreatic line, free Seepage height, and seepage rate in d/s of the river diversion, seepage velocity ought to increase. This may result into increase in: soil erosion leading to subsidence of bank, sedimentation and braiding in plains that may lead to meandering. The consequence will be increase in shifting of population in the d/s of the barrage as seen in the case of Farraka barrage. Increase in pore pressure due to rise in GWL in u/s may increase landslides as seen in case of the Tehri dam.**

3. The slope of phreatic line is higher in entry zone than that of central zone and exit zone. It means, resistance to flow in entry zone (surface to subsurface flow) is higher than that of central zone (subsurface to subsurface flow) and exit zone (subsurface to surface flow).
4. The slope of phreatic line is higher in u/s section compared to that of d/s section.

Conclusion

Dams and diversions have fragmented about 60% of the world's rivers flow. Reservoirs cover a total area in excess of 500,000 sq. km before research gave long term environmental impacts of river regulation. On the similar line, the discharge flowing in the main stream of the Ganga is being diverted into the Upper Ganga Canals at Bhimgoda barrage, Haridwar, India to the extent of about 3 to 95% in the various months. Such a heavy diversion causes sudden decrease in dilution factor in the downstream that adversely affects natural self purification process of the river. The sudden decrease in discharge also causes instantaneous fall in the river stage in downstream of the barrage. This leads to loss in momentum and energy of the flow. The nature and magnitude of the impacts of dams on affected communities and on the environment have now become established as key issues in the debate.

Therefore, the environmental impacts of the Ganga diversion have been assessed in this investigation by measuring variations in: base flow characteristics (in terms of ground water level, slope of phreatic line, free seepage height, and seepage rate); depth of flow; velocity of flow; sedimentation; erosion; and physico-chemical characteristics (in terms of DO, BOD, TDS, EC, Salinity, pH, and Temperature). On the basis of the present study, following conclusions have been drawn for the environmental management:

1. As the discharge decreases, the river stage falls.
2. *The deepest (in summer season) and the highest (in rainy season) ground water levels in the field 5.57 and 0.58 m at section 1 (upstream of the barrage) respectively, 7.50 and 1.02 m at section 5 (downstream of the barrage 14 km away from section 1) respectively, coincides closer to the time of the minimum and the maximum discharges flowing at the respective sections in the Ganga. Thus, as the river stage falls with the decrease in its discharge, the ground water level falls.*
3. *The maximum fall in ground water level from rainy season to summer season at sections 1 and 5 are 4.99 and 6.48 m respectively. Therefore, difference of their maximum fall in*

ground water level is 1.49 m (6.48-4.99=1.49 m) which is the highest that occur in the month of May, 2010; this is the month of nearly the lowest percentage release of water into the Ganga. Thus, as the percentage release of water in the Ganga decreases (means percentage diversion increases), the difference of fall in ground water level between the downstream and upstream sections increases. It means, when the percentage release of water in the Ganga is the minimum, the corresponding difference of the maximum fall in ground water level between downstream and upstream sections of the barrage is the maximum. It means diversion of the Ganga causes higher rate of fall in ground water level in downstream sections.

4. The variations in base flow characteristics in the laboratory experiments show that the maximum and minimum heads in the observation Well closest to river (curved flume) in downstream are 23.4 and 15.3 cm at the maximum and minimum river stages of 20.5 and 3.0 cm respectively. Similarly, the maximum and minimum heads in the observation Well closest to river in upstream are 23.0 and 14.5 cm respectively corresponding to the above river stages. Thus, the laboratory experiments also show that as the river stage decreases, the head in Well (analogous to ground water level in the field) decreases. The trend of variations in both the field and laboratory data show that ground water level proportionately goes down with the fall in river stage due to diversion of the river.

5. With decrease in the river stage (in the model), head in other observation Wells (i.e. in Wells W14 to W11 and W34 to W31 located at longer transverse distances from river in the model analogous to far off points in the river basin in actual field) also decreases, off course, impact is lesser compared to closer observation Wells (i.e. W15 and W35). At the maximum and minimum river stages of 20.5 and 3.0 cm, the corresponding average slopes of the phreatic line in downstream are 0.155 and 0.238 respectively. Similarly, at the maximum and minimum of the above river stages, the corresponding average slopes of the phreatic line in upstream Wells are 0.162 and 0.246 respectively. This shows that as river stage decreases, slope of phreatic line increases. This indicates that with the fall in river stage, larger area of the basin is affected.

6. The maximum variations with the time over the year in physico-chemical characteristics of the Ganga are found at the farthest section 5 located at 14 km distance from section 1. These maximum variations are: DO increases from 8.29 to 10.29 mg/l; BOD decreases from 2.94 to 1.49 mg/l; TDS decreases from 136.6 to 69.0 mg/l; EC decreases from 287.0 to 136.5 μ S/cm; Salinity decreases from 0.14 to 0.05 %; pH decreases from 7.7 to 7.2; and Water Temperature decreases from 27.0 to 15.6 °C. The maximum variations in physico-chemical characteristics with the space within 14 km stretch from sections 1 to 5 are in the

month of May, 2010. These maximum variations are: DO decreases from 8.67 to 8.29 mg/l; BOD increases from 2.17 to 2.94 mg/l; TDS increases from 113.4 to 136.6 mg/l; EC increases from 248.0 to 287.0 $\mu\text{S}/\text{cm}$; Salinity increases from 0.12 to 0.14 %; pH increases from 7.6 to 7.7; and Water Temperature increases from 21.1 to 27.0 °C. Thus, as flow of the Ganga advances in downstream of the barrage after diversion, the quality of water deteriorates; however, the deteriorations are not significant within 14 km stretch of the river.

7. Variation in Salinity and pH values with the time and space are meager. pH of the Ganga water is nearly at neutral value throughout the year within 14 km stretch.

8. The variations in physico-chemical characteristics with the space when observed beyond 14 km in longer stretches upto 915 km at Varanasi, it becomes significant after 550 km at Kanpur. The maximum variations with the space are less than that of the maximum variations with the time over the year within 14 km stretch; however, it becomes higher after 550 km. Thus, adverse impacts on physico-chemical characteristics of the Ganga diversion at Bhimgoda barrage, Haridwar become significant after 550 km in this study.

9. On the basis of the above points 14 to 16, it may be further concluded that the water quality of the Ganga deteriorates with the decrease in discharge in the river due to diversion of its water, off course, the impacts become significant after a long distance in downstream.

10. The integration of the above conclusions signify that continuity, energy and momentum equations under natural spectra range with time and space needs to be maintained in rivers, the spirit of the environmental system, like that of free flowing rivers as stated in the scriptures in such a way so that free seepage height tends to zero, set the condition of the environmental management.

The study concludes that the river diversion causes adverse impacts on the environment. Thus, it is high time to see that rivers should not be diverted without proper research, planning and management. Where and how much water may be withdrawn from a river to avoid adverse environmental impacts, varies from place to place and is matter of further research. Therefore, the decision and policy makers should take proactive role for integrated approach in conserving water flowing in rivers for sustainable environmental management. Dams and barrages should be constructed according to the requirements of various communities in the downstream without overlooking adverse environmental impacts in their interest in the long run. We must broaden our understanding of law of conservation of energy in the backgrounds of pure philosophical spirituality. Nature is very delicate; if we

exploit and press it hard on one side, it is bound to react negatively on some other side and no technology can prevent it in the long run.

References:

1. Concise Oxford dictionary, 10th Indian Edition, 477.
2. Singh, V. P. (2008). "Water, environment, engineering, religion, and society." *Journal of Hydrologic Engineering*, 13, 118-123.
3. The scripture Quran, sura no. 21.30 and 25.54.
4. The scripture Atharva Veda, verse no.1.5.4 and 1.15.2.
5. The scripture Rig Veda, verse no. 3.33.1 and 10.91.6.
6. Spence, J.A. and Hynes, H.B.N. (1971). "Differences in benthos upstream and downstream of an impoundment." *Journal of Fisheries Research Board, Canada*, 28, 35-43.
7. Mittal, M.M. (1976). "Study of some aspects of 30⁰ deflected flow in straight wide open channel." A M.Tech. thesis submitted to Institute of Technology, BHU, Varanasi, India.
8. Report of the Ganga River Erosion Committee (1980), Govt. of West Bengal.
9. Chang, H.H. (1984). "Analysis of river meanders." *Journal of Hydraulic Division*, 110, 37-50.
10. Choudhary, U. K. and Singh, G. S. (1989). "Effluent dispersion in river Ganga at Varanasi, India." *Proceedings of second Pan-American Regional Conference, International Commission on Irrigation and Drainage, Canada*, 149 – 161.
11. Junk, W.J., Bayley, P.B. and Sparks, R.E. (1989). "The flood pulse concept in river- flood plain systems." *Proceedings of the International Symposium on Large River, Canada, Special Publication*, 110-127.
12. Maddock, L.P., Petts, G.E., Evans, E.C. and Greenwood, M.T. (1995). "Assessing river-aquifer interactions within the hyporheic zone." *Geomorphology and Groundwater, John Wiley & Sons, UK*, 53-74.
13. Banerjee, M. (1999). "A report on the impact of Farakka barrage on the human fabric - a study of the upstream and downstream areas of Farakka barrage." A submission to World Commission on Dams on behalf of South Asian Networks on Dams, Rivers and People.
14. Rudra, K. (1999). "Post –Farakka situation: effects at a glance." *Dams, Rivers & People*, 11, 12.
15. *Dams and Development: A New Framework for Decision Making-Report of the World Commission on Dams* (2000), Earthscan Publications Ltd, London.
16. Kingsford, R.T. (2000). "Ecological impacts of dams, water diversions and river management on floodplain wetlands in Australia." *Australian Ecology*, 25, 109-127.
17. Rosenberg, D.M., McCully, P. and Pringle, M. (2000). "Global-scale environmental effects of hydrological alterations: introduction." *BioSciences*, 50, 746-751.
18. Scot, E. S., Buttner, G., Szilagyi, F., Lajos, H. and Joseph, A. (2000). "Environmental impacts of river diversion: Gabcikovo barrage system." *Journal of Water Resources Planning and Management*, 126, 138-145.
19. Bednarek, A. T. (2001). "Undamming rivers: a review of the ecological impacts of dam removal." *Journal of Environmental Management*, 27, 803-814.
20. Deng, Z.Q., Bengtsson, L., Singh, V.P. and Adrian, D. D. (2002). "Longitudinal dispersion coefficient in single-channel streams." *Journal of Hydraulic Engineering*, 128, 901-916.
21. Viana, J.P. (2002). "Physical and chemical post- dam alterations in the Jamari river, a hydroelectric-developed river of the Brazilian Amazon." *Hydrobiologia*, 472, 235-247.
22. Choudhary, U. K. (2003). "The living similarity between the Ganga and the human-body." Published by Ganga scientific and technical council Ganga research centre, Ganga laboratory, BHU, Varanasi, India, 1st Edition.
23. Kristof, D. and Ducrot, D. (2003). "Environmental impact assessment of a barrage system using novel change detection methods." *IEEE*, 2, 2094-2096.
24. Bahuguna, B.K., Nautiyal, R., Nautiyal, P. and Singh, H.R. (2004). "Stream regulation: variations in the density, composition and diversity of benthic macroinvertebrates occurring in the up and downstream sections of the impounded zone of river Ganga in the foothills." *Tropical Ecology*, 45, 251-261.
25. Takahasi, Y. and Uitto, J. I. (2004). "Evolution of river management in Japan: from focus on economic benefits to a comprehensive view." *Global Environmental Change*, 14, 63-70.
26. Chakrapani, G.J. (2005). "Factors controlling variations in river sediment loads." *Current Science*, 88, 569-575.

Elemental Investigation of Gangajal by LIBS

Shuchi Srivastava⁸⁷

Abstract

An attempt has been made to investigate occurrence and bioaccumulation of metallic elements in river Ganga water at Allahabad using Laser Induced Breakdown Spectroscopy (LIBS) technique. The recorded spectrum shows the presence of atomic lines of the micronutrients (Ti, Si, Cr, Co, Br, Ba, Sr), macronutrients (H, N, Na, O, K, Ca, Mg, Cl, C) and toxic metals (Hg, Pb, Cd). The observed concentration of the detected elements in the river water shows the trend: $Ti > H > N > Sr > Hg > Na > Si > O > Mg > Cl > Br > Ba > Cr > K > Cd > Ca > Pb > C > Co$. The observation suggests that the use of such water for drinking may lead to potential health risk in long run.

Introduction

The river Ganga is one of the most important rivers of India. It has large drainage basin comprising an area of 861,404 sq km encompassing a large part of various states. The water of this river possesses extra properties in comparison to the water of the other rivers due to presence of micronutrients and macronutrients. The river water is becoming polluted day by day due to industrialization, urbanization, sewage waste, increase in population, dead bodies burning ash and agricultural practices. In the modern civil society, people have a great faith in religious activities, a large quantity of the worship material like flower etc are thrown into the river everyday. These wastes containing organic and inorganic chemicals and metallic elements are further deteriorating the quality of river water [1]. Metal ion derived from breakdown of rocks is controlled by several factors involving temperature, precipitation, water movement, soil movement, changes in redox potential and pH condition, absorption-desorption process, chemical complexation, hydrolysis, decay of vegetation and biochemical bacterial interactions. The accumulation of heavy metal in aquatic ecosystem has major problem of great concern in the river water [2]. The metallic elements have accumulation property like persistent, non-biodegradable and non-thermo degradable and cause severe impact on

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phytotoxicity of metals aquatic organism and human being without any visible sign possible intake through drinking water and aquatic food [3, 4]. These metallic elements cause serious health problem due to imbalance of concentration. Metals present in the river water in minute quantities become part of various food chains through irrigation and by biomagnifications process their concentration increases to such a level that cause toxic effect in human and other living organism [5-7]. Therefore detection of elements in river Ganga water is an urgent demand and is also very important for public health.

The quality of river Ganga water is determined by several earlier workers using various techniques such as atomic absorption spectroscopy (AAS), inductively coupled plasma optical emission spectroscopy (ICP-OES), mass spectroscopy (MS), inductively coupled plasma mass spectroscopy (ICP-MS), X-ray fluorescence (XRF) etc [8, 9]. The techniques such as AAS, ICP-OES, ICP-MS, and MS work well for liquid samples. However some matrices can be difficult to get into solution like ceramics as well as for materials like graphite. Also for high purity copper and precious metals, the digestion needed to get the solid into solution, can dilute the sample beyond the detection limits of these techniques. Digestion steps also give rise the possibility of contamination of the acids and vessels used for the digestion process. On the other hand, LIBS is an emerging technique used for the detection and identification of elements in a variety of samples such as solid, liquid, gas, gel, slurry etc [10]. This technique is very versatile because of its simplicity, rapid analysis, non-destructive, free from sample preparation and simultaneous multi-elemental analysis. In order to identify the latest status of the various elements and pollutants (toxic metals), we have applied laser induced breakdown spectroscopy (LIBS) technique to investigate the minerals present in the river Ganga water. The present manuscript describes our findings about the river Ganga water based on the observations of the recorded spectrum in the region 200 -900 nm.

Experimental details

Allahabad is an old and unique city of India where two big rivers of the country namely Ganga and Yamuna are carrying various industrial effluents, domestic sewage and waste with partial or no pretreatment. The water sample under investigation is collected from the surface water of river Ganga at Mori Nala, Daraganj, Allahabad.

The experimental set up used for the laser induced breakdown spectroscopy is shown in the fig 1. It consists of laser source, plasma collection optics, spectrometer and data acquisition

system. The laser source used was a neodymium: yttrium-aluminum garnet (Nd:YAG) laser, operating at 532 nm wavelength and capable of delivering a maximum energy of 425 mJ over a pulse duration of 3-4 ns and a maximum pulse repetition rate 10 Hz. The laser beam was focused at the surface of water sample with a quartz lens of focal length 15cm. The experiment was performed by varying the laser energy and repetition rate of the laser pulse. Finally, a good signal to noise ratio was found at 100 mJ laser energy and 10 Hz repetition rate. The characteristic light emitted from the laser generated plasma was collected with an optical-fiber bundle and fed into the entrance slit of a grating spectrometer (Ocean Optics, LIBS 2000+working in windows 2000 professional mode) equipped with a charge coupled device (CCD). The emission spectra of sample were been recorded by using a 1.5 μ s gate delay with spectral resolution 0.1 nm in the spectral range 200-500 nm and a spectral resolution 0.75 nm in the spectral range 200-900 nm. Each LIBS spectrum is the average of 50 laser shot in order to reduce shot to shot variation and to enhance signal to noise ratio.

Results and Discussion

The emission spectrum of river Ganga water has been recorded in the spectral region 200-900 nm using LIBS technique and is shown in figure 2. The recorded spectrum comprises of number of atomic lines of varying intensities. These spectrum lines have been identified using NIST spectral data [11]. The close scrutiny of the recorded spectrum shows presence of atomic lines of the macronutrients, (H, N, Na, O, K, Ca, Mg, Cl, C), micronutrients (Ti, Si, Cr, Co, Br, Ba, Sr), and toxic metals (Hg, Cd, Pb). The detected elements are presented in table 1 with their wavelength. As the intensity of spectrum line is an indicative of concentration, therefore the order of the concentration of the detected elements is: Ti>H>N>Sr>Hg>Na>Si>O>Mg>Cl>Br>Ba>Cr>K>Cd>Ca>Pb>C>Co.

The detected macronutrients hydrogen, nitrogen, oxygen and carbon play an important role in the formation of tissues and organs while sodium, potassium, and chlorine have common electrolyte function in the body. Sodium regulates the total amount of water in the body and transmission of sodium into and out of individual cells and also plays a critical role in body functions. Potassium in the body regulates the heart beat and the function of muscle. The magnesium deficiency stimulates oxygen free radical. This damaging agent promotes secretion of mucus glycoprotein in the gallbladder, which contributes to the gallstone formation. In human body calcium is important for osteogenesis.

The micronutrients elements like chromium, silicon, titanium, cobalt, barium, strontium, and bromine are essential for the activation of some enzymes. But higher concentration of these is harmful for the human being. For instance chromium is activator of insulin, so it takes major role in glucose metabolism enzymes (phosphoglutamase). But chromium in excess quantity causes skin disease and cancer. In addition, chromium toxicity results from accidental acute poisoning or occupational exposures. Causalities due to chromium toxicity are usually preceded by nausea, vomiting, shock and coma. Silicon is essential for normal growth and bone development. But its excess amount is responsible for the gallstone formation. Gastrointestinal disturbance caused by barium. Cobalt is a component of vitamin B₁₂ and protein. The strontium is beneficial in preventing the cavities, helpful in reducing loss of bone mineral in osteoporosis and reducing fracture. Bromine is important for the pituitary gland, whose hormones profoundly influence brain functioning and the production of hormone.

As the atomic lines of the elements cadmium, mercury, and lead are identified in the water sample therefore these elements are present in the river water sample. Since these elements belong to the nonessentials category and their large quantities will produce toxic or health hazardous effects. The accumulation of these elements can harm the organism itself or can be transmitted to the tropic level of the food chain, where a similar toxic process can take place. Ingested cadmium accumulates in the kidney. It causes toxicity owing to interaction with sulphhydryl groups of essential enzymes. Cadmium induces hypertension and cirrhosis of liver. It has also been linked with pulmonary emphysema and lung cancer. Mercury combines with sulphhydryl groups, which may be part of protein, such as an enzyme and becomes toxic to all the cells. Hence, mercury is a potent inhibitor of activities of enzyme containing sulphhydryl group at their active site. Lead causes kidney damage while chronic exposure may lead to interstitial nephritis. It interferes at several steps in haeme synthesis in the bone marrow by inhibiting the activities of enzymes ferrochelatase, α -amino laevulinate synthetase (ALAS) and α -amino laevulinate dehydrogenase (ALAD) and with the uptake of iron into mitochondria. Lead (Pb) also cause headache, neuropathy, encephalopathy, memory loss and CNS damage.

Conclusion

The present study demonstrates the capability of LIBS technique for the elemental analysis of water samples without sample treatment in short duration. The obtained results indicate that a constant monitoring of riverine system is needed before the level crosses its threshold and become toxic to the aquatic animals and human beings.

Acknowledgements

The authors are grateful to *Prof M M Joshi*, Ex-Head, Physics Department, Allahabad University for the fruitful discussion and to *Prof A K Rai*, for providing experimental facilities.

References

- [1] Gautam SP (2011) Integrated management plan for pollution mitigation of Ganga in Uttar Pradesh. Central Pollution Control Board, New Delhi pp1- 41.
- [2] Jain CK (2002) A hydrochemical study of a mountainous watershed: The Ganga, India. *Water Research* 36: 1262-1274.
- [3] Beg RK, Ali S (2008) Chemical contaminations and toxicity of Ganga river sediment from up and down stream area at Kanpur. *American Journal of Environmental Sciences* 4: 362-366.
- [4] Sharma RK, Agarwal M, Marshall F (2007) Heavy metal contamination of soil and vegetables in suburban areas of Varanasi, India. *Ecotoxicology and Environmental Safety* 66: 258-266.
- [5] Pandey J, Shubhashish K, Pandey R (2010) Heavy metal contamination of Ganga river at Varanasi in relation to atmospheric deposition. *Tropical Ecology* 51: 365-373.
- [6] Sharma R K, Agrawal M, Marshall F M (2008) Atmospheric deposition of heavy metals (Cu, Zn, Cd and Pb) in Varanasi city, India. *Environ Monit Assess* 142: 269-278.
- [7] Pandey J, Pandey U (2009) Accumulation of heavy metals in dietary vegetables and cultivated soil horizon in organic farming system in relation to atmospheric deposition in a seasonally dry tropical region of India. *Environ Monit Assess* 148: 61-74.
- [8] Singh M, Singh AK (2007) Bibliography of environmental studies in natural characteristics and anthropogenic influences on the Ganga river. *Environ Monit Assess* 129: 421-432.
- [9] Gupta A, Rai DK, Pandey RS, Sharma B (2009) Analysis of some heavy metals in the riverine water, sediments and fish from river Ganges at Allahabad. *Environ Monit Assess* 157: 449-458.
- [10] Singh VK, Rai AK (2011) Prospects for laser-induced breakdown spectroscopy for biomedical applications: a review. *Lasers Med Sci* 26: 673-687.
- [11] NIST National Institute of Standards and Technology USA. Electronic database. http://physics.nist.gov/PhysRefData/ASD/lines_from.html.

Table 1 Detected elements in river Ganga water

Wavelength (nm)	Element	Wavelength (nm)	Element	Wavelength (nm)	Element
229.62	CoII	431.91	CII	518.32	MgI
244.58	CoII	434.63	HgI	532.08	NI
247.83	CI	441.57	CdII	553.64	BaI
279.48	MgII	444.75	NaII	567.91	HgI
333.94	TiI	445.19	NaII	594.37	SiI
334.87	TiII	455.37	BaII	656.77	HI
344.29	KI	463.20	NI	716.00	SiI
375.82	FeI	469.95	CrI	747.18	NI
393.27	CaII	470.62	CrI	777.36	OI

399.54	CoI	480.41	KI	795.23	OI
407.44	SrII	485.17	TiI	821.72	NI
417.72	CrI	487.15	CaI	844.67	OI
422.75	CaI	493.33	BaII	868.40	Cl
424.79	PbII	500.33	TiI		

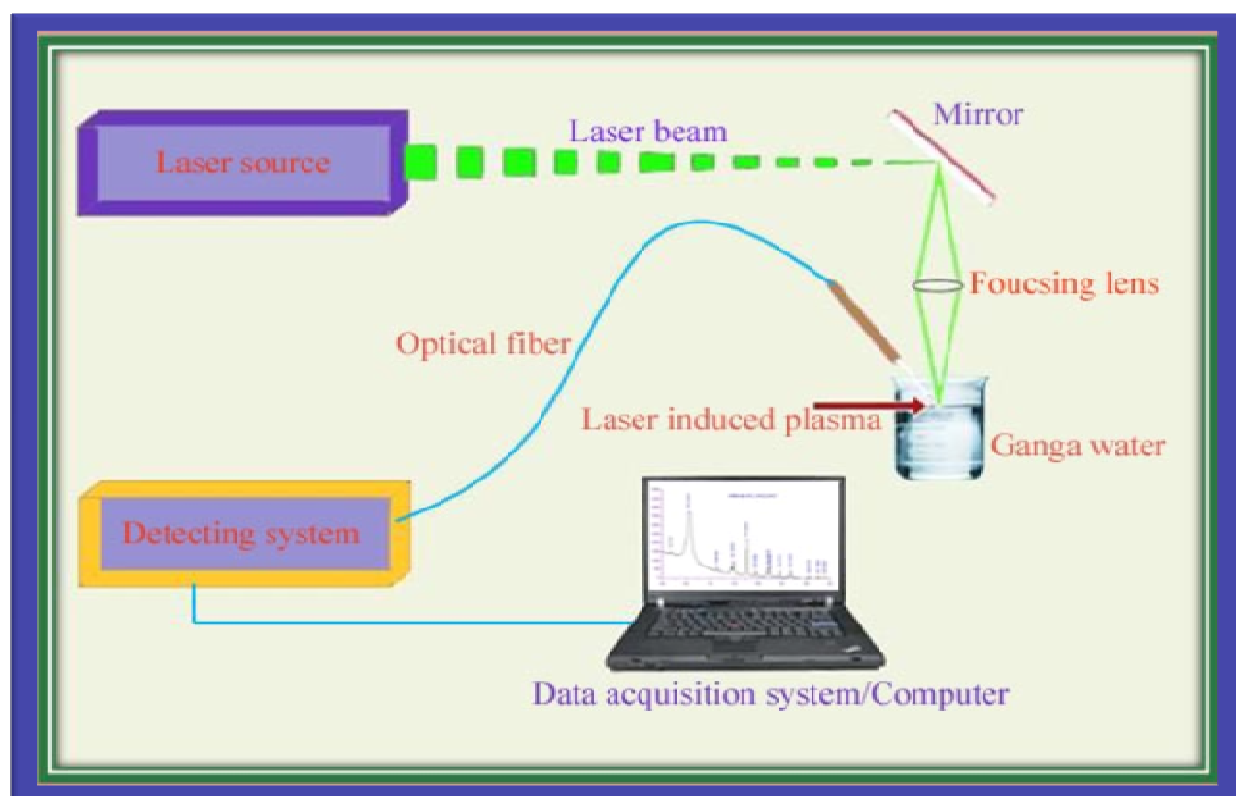


Fig. 1 Experimental set up for the LIBS technique

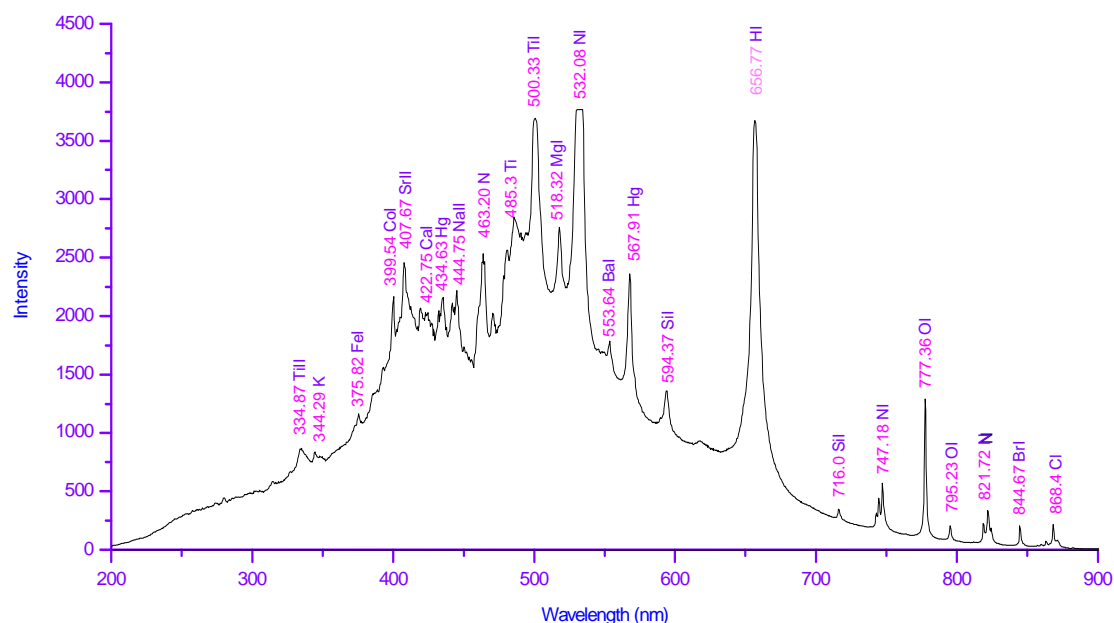


Fig.2 Typical laser induced breakdown spectrum of river Ganga water in the spectral region 200-900 nm

Current Status of Free Running Water around Allahabad

Kanchan Singh Saroj⁸⁸

Abstract

The present paper is the out come of the studies on the current status of running water around Allahabad made during the period from June 2013 to September 2013. The studies have been focused mainly on the rivers Ganga and Yamuna. The details include the chemical constitution of water, its importance, courses of rivers covering various districts, religions places, their basin areas, etc. The dissolved oxygen and BOD (Biological Oxygen Demand) values of only Ganga river from Haridwar to Diamond Harbour have been given in Fig. 2. Table I-II show the data on water level with date and time from June to September 2013; starting from Sangam to various other places down the stream near Allahabad. Table III depicts the running water status of river Tons. The danger mark level of all the rivers have been given for the major flood of 1978 and 2013 and it is evident that the flood of 2013 has not surpassed the danger level of 1978 (87.99

⁸⁸ Department of Environmental Science, University of Allahabad, Allahabad-21102. The paper is co-authored by Jeetendra Kumar Vaishya, and Anis Ahmad Ansari, Botanical Survey of India, Allahabad-211002. It was presented to the Seminar Organised by AVAP On 'Ganga: Status, Direction and vision' on 10th Nov. 2013 at Allahabad. The authors are thankful to Prof. D. N. Shukla, Co-coordinator (Environmental Science) of the Department of Botany, University of Allahabad, Allahabad for providing facilities; and also to Dr. Brijesh Kumar Diwedi and Dr. Vandana Srivastava for valuable guidance.

meter), the danger mark being 84.7 meter. Photographs of the water level of flood during 2013 along with other photographs showing garbage accumulation along river causing pollution and obstructing free flow of water alongwith the photographs of government and other agencies have been given.

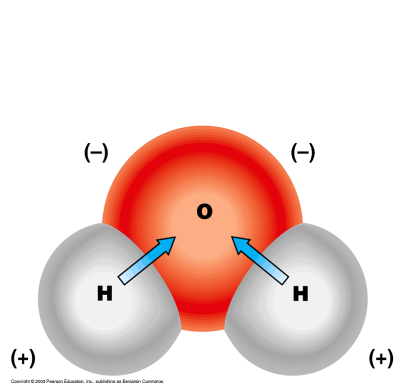
Introduction

Water:

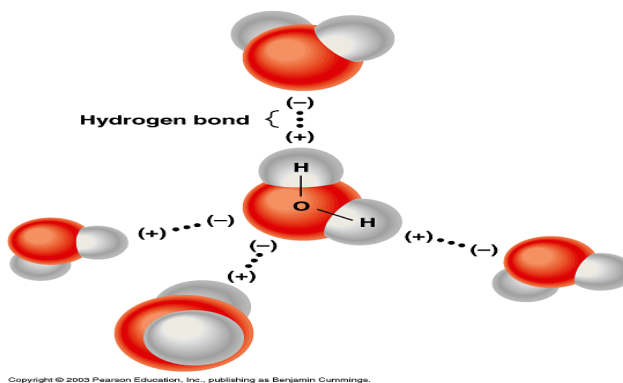
Water is possibly the most important chemical compound for living organisms. Water consists of 1 atom of oxygen combined with 2 atoms of hydrogen. Water makes up 70 to 95 percent of body weight of most organisms. Water is polar. Water molecules attract other water molecules. This property is cohesion. Water displays adhesion. Water expands when it freezes.

A polar molecule has an unequal distribution of charge-each molecule has a positive end and a negative end. All polar substances are attracted to other polar substances. Polar water molecules attract other water molecules as well as ions and other polar molecules. Because of this attraction, water can dissolve many ionic compounds, such as salt and polar molecules like sugar. Hydrogen bonds are weak bonds that are formed between the positively charged hydrogen atoms of one water molecule and the negatively charged oxygen atoms of another water molecule. This ability of water molecules to stick together is called cohesion.

Reasons for water scarcity: Rising demands of increasing population. Over extraction of easily available surface and groundwater resources. Increasing human impact on the environment and contamination of available water sources. Changing climate.



Covalent Bond



Hydrogen Bond

Allahabad Region: In Allahabad, the Ganga water is used for Industrial and irrigation purposes. The level of Ganga does not remain same through out the year. It decreases a lot from March to July. River beds are clearly seen during peak Mela days in January to March .There is great cry for raising the water level which is sometimes done by releasing the water from Narora dam. Allahabad is a holy place in Hinduism. The Ganga is joined by numerous rivers such as the Kosi, Son, Gandaki and Ghaghra, the Ganges forms a formidable current in the stretch between Allahabad and Malda in West Bengal



Ganga is polluted in many ways in Allahabad. City drain water goes into big drains which flow towards Ganga in Rajapur, Rasulabad and Daraganj. Some sewage treatment plants have been established, one is near Daraganj besides bakshi band. Thousands of pilgrims and local people go for bathing due to religious beliefs. They carry with them waste of sacred ceremonies for flowing in Ganga. They carry their eatables in polythene bags, etc. which are thrown at banks. During their bath people use plastic containers and plastic bottles which are left in the river itself. Hundreds of pilgrims get their heads shaved off on the bank and the hair is thrown in the river. Many public toilets are made on the bank. The resulted wastes pollute and reduce the river water flow. No proper action or steps are being taken by the administration. Besides, the industrial wastes include chemicals which are hazardous to health are also dumped in the rivers. Dead bodies of animals and humans are often flown into Ganga. The residue of cremated bodies along the rivers alongwith waste materials brought during cremation are thrown regularly into the sacred river.

All the above hazards increase during Magh or Kumbh Mela in the months of January to March every year when there is congregations of hundreds of thousands of pilgrims, who camp on its bank. Many saints and akharas come to the city. They perform various rituals and ceremonies, which results in accumulation of waste materials causing degradation of water and hindering free flow. On main occasions like Basant Panchmi, Makar Sankranti, Shivratri, etc. the crowd is enormous. These people bathe and take "DUBKI" in Ganga releasing toxic materials of soaps, detergents, etc. Thus a lot of waste gets accumulated during such occasion. People are careless about adverse effects of harmful substances due to superstition. They believe that Ganga is a holy river and it cannot get polluted due to all such materials and it can absorb all the impurities in it. If some body opposes or suggest alternatives then people in the name of religion suppress the opposition. Sometimes it also becomes a political issue.

There is a little published data available on mineralogy and textural behavior of the Ganga and its tributary River Tons. Moreover, there is no published data available related to the nature of sediment mixing at the rivers confluence. Therefore, this project work will break new grounds to understand the fluvial behavior of the Ganga and its tributary River Tons. Sedimentology of the Ganga and the Tons Rivers has been worked out utilizing the grain size analysis, sediment mixing pattern and mineralogical analyses of the sediments. Sediment-mixing pattern of the Ganga and the Tons River is calculated by the theoretical method. Minerals identification of the Ganga and the Tons River are found out with the help of stereo, petrological microscope and by X-Ray diffractometer. Heavy mineral assemblage of these Rivers studied to analyze provenance. Sediments of the Tons River are derived from sedimentary with little contribution of pegmatite and low rank metamorphic rock. Sediments of Ganga River are derived from multiple source area type consist the sedimentary, igneous and high rank metamorphic rocks.

Ganga

The Ganges is the most sacred among all the rivers in India, which has held India's heart captive and drawn uncounted millions to her banks since the dawn of civilization. The story of the Ganges, from her source to the sea, from old times to new, is the story of India's civilization and culture, of the rise and fall of empires, of great and proud cities, of adventures of man.....

The Ganges is the second largest river on the Indian subcontinent. The 2,510 km river originates in the western Himalayas in the state of Uttarakhand. It has long been considered holy by Hindus and is worshiped as the goddess *Ganga* in Hinduism. It has also been important historically many former provincial or imperial capitals are situated along its course, such as, Kannauj, Allahabad, Murshidabad, Baharampur and Kolkata. The Ganges basin drains 1,000,000–square-kilometre area and supports one of the world's highest densities of humans. The average depth of the river is 52 feet (16 m), and the maximum depth, 100 feet (30 m). The many symbolic meanings of the river on the Indian subcontinent have been spoken by our first Prime Minister of India Pandit Jawaharlal Nehru in his famous book “*Discovery of India*”.

Yamuna

The Yamuna's confluence with the Ganges is sacred to Hindus. Allahabad is a major pilgrimage center. Along the Yamuna's banks are many historic monuments, including the Taj Mahal at Agra. Formerly an important trade artery, the Yamuna is now the source of irrigation for Uttar Pradesh and Punjab states. The East Yamuna, West Yamuna, and Agra are the major canals on the river.

People say that the water of the Yamuna purifies a man in seven days after bath in its water. Yamuna, the great among the greatest rivers is also known as the Queen consort of

Lord Shri Krishna. Goloka the divine abode of the Lord is the home of Yamuna. When the Lord dictated Yamuna to descend on the earth, she first went round Shri Krishna. Thereafter, with great force, she descended on the peak of Sumeru Mountain. Her journey began thence towards the southern side of the great mountain chains. In the course of her journey Yamuna crosses many lofty peaks.

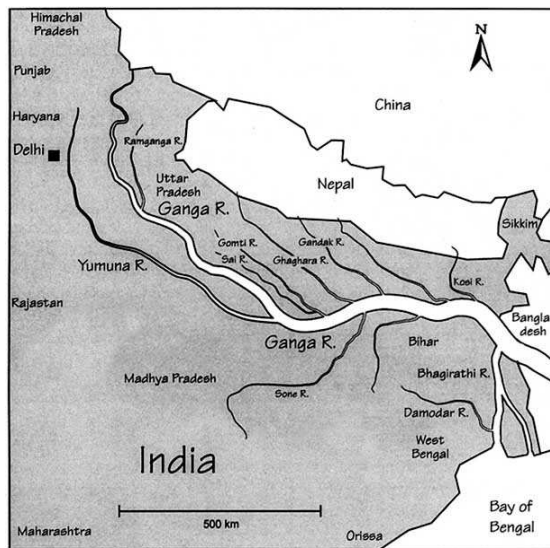
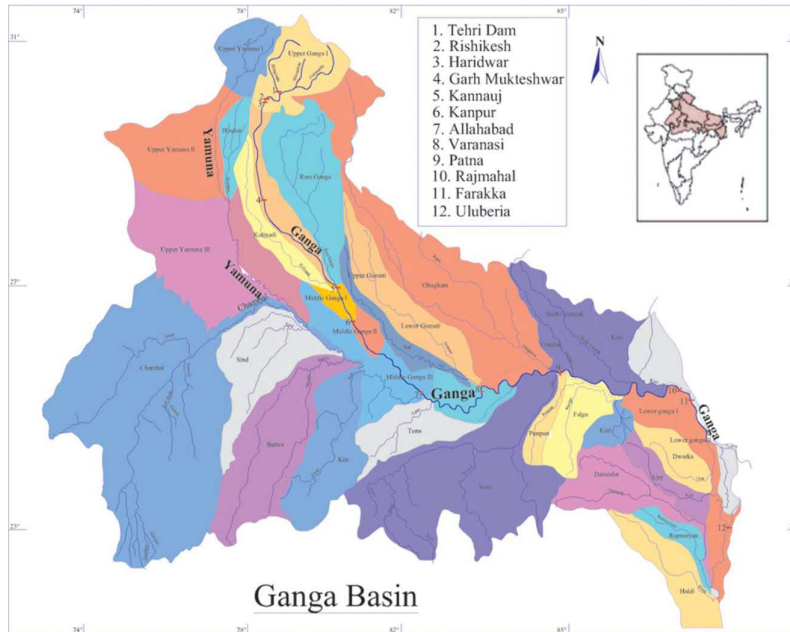


Fig. 1: Map of India showing the route of the Ganga & Yamuna river

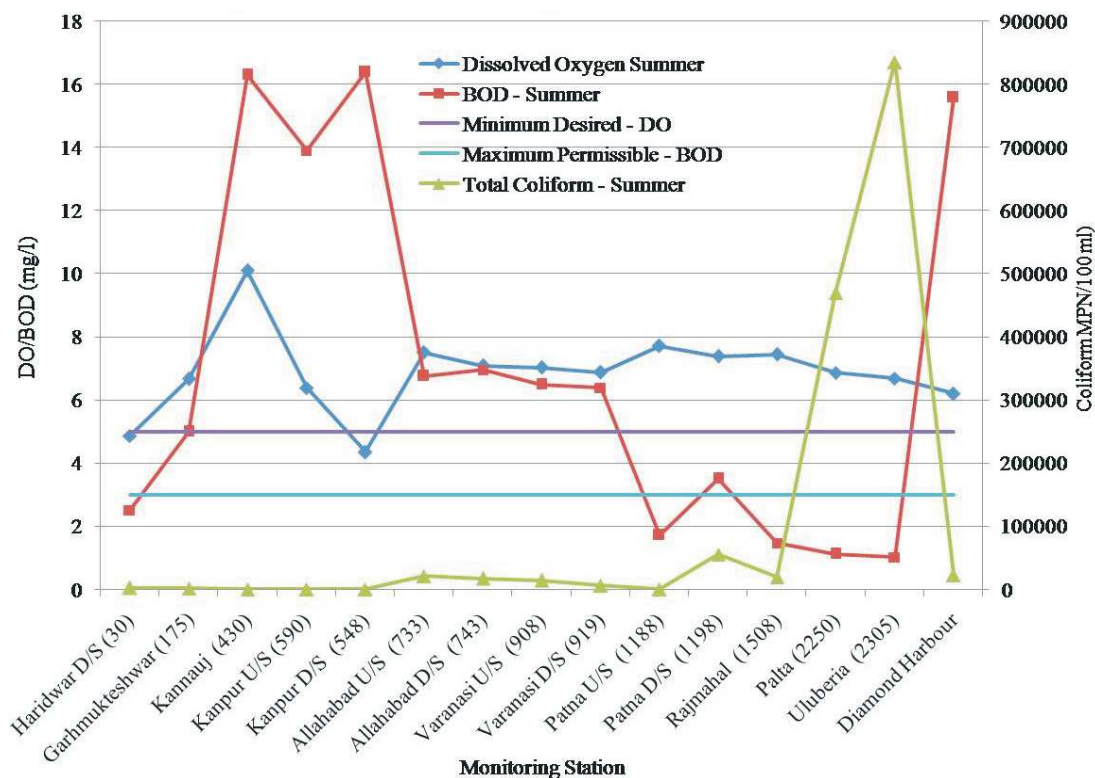


Fig. 2: BOD & DO of the Ganga River

The principal sources of pollution of the Ganga river can be characterised as follows:

Domestic and industrial wastes. It has been estimated that about 1.4×10^6 m³ d⁻¹ of domestic waste water and 0.26×10^6 m³ d⁻¹ of industrial sewage are going into the river. Solid garbage thrown directly into the river. Non-point sources of pollution from agricultural run-off containing residues of harmful pesticides and fertilisers. Animal carcasses and half-burned and unburned human corpses thrown into the river. Defaecation on the banks by the low-income people. Mass bathing and ritualistic practices.

भारत सरकार GOVERNMENT OF INDIA केंद्रीय जल आयोग CENTRAL WATER COMMISSION मध्य गंगा यमुना उपमंडल, इलाहाबाद MIDDLE GANGA YAMUNA SUB DIV., ALLAHABAD जल विज्ञानीय प्रेक्षण स्थलों का विवरण DETAILS OF HYDROLOGICAL OBSERVATION SITES						
S. No.	स्थल का नाम Name of Site	नदी का नाम Name of River	प्रकार Type	अधिकतम जलतल H. F. L. जलतल W. L. (in m.)	सतरे का बिंदु (मी.) Year Danger Level (in m.)	टिप्पणी Remarks
1	शहाजपुर Shahajpur	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	90.420	1978	
2	फाफामऊ Fafamau	गंगा Ganga	गेज Gauge	87.980	1978	बाद पूर्वामुक्त

भारत सरकार GOVERNMENT OF INDIA केंद्रीय जल आयोग CENTRAL WATER COMMISSION मध्य गंगा यमुना उपमंडल, इलाहाबाद MIDDLE GANGA YAMUNA SUB DIV., ALLAHABAD जल विज्ञानीय प्रेक्षण स्थलों का विवरण DETAILS OF HYDROLOGICAL OBSERVATION SITES						
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3	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	90.420	1978	
4	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	87.980	1978	बाद पूर्वामुक्त
5	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	88.020	1978	बाद पूर्वामुक्त
6	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	80.513	2003	
7	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	80.340	1978	बाद पूर्वामुक्त
8	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	89.455	1978	बाद पूर्वामुक्त
9	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	85.230	1985	बाद पूर्वामुक्त
10	गंगा Ganga	गंगा Ganga	गेज, निस्सरण, माद, जल गुणवत्ता GDSWQ	87.180	1978	बाद पूर्वामुक्त

Sangam Ganga river	01.09.2013	8.0 am	85.080 Meter
Ganga river Phaphamau	01.09.2013	8.0 am	84.370 M
Ymuna river	01.09.2013	8.0 am	84.910 Meter Naini
Ganga river Phaphamau	01.07.2013	8.0 am	80.100 M
Ganga river Chhatnag	01.07.2013	8.0 am	78.800 M
Ymuna river	01.07.2013	8.0 am	79.490 Meter Naini
Ganga river Phaphamau	15.06.2013	8.0 am	76.378 M
Ganga river Chhatnag	15.06.2013	8.0 am	71.020 M

Data given by Ajay Kumar Pandey (Shift in-charge Flood control office Beni Bandh Prayag Allahabad.

Table. II

River	Date	Time	Level
Ganga river Phaphamau	23-09-2013	3.0 pm	78.155 Meter
Ganga river Allahabad	23-09-2013	3.0 pm	75.46 Meter
Yamuna River	23-09-2013	3.0 pm	75.78 Meter Naini
Ganga River Phaphamau	22-09-2013	3.0 pm	78.27 Meter
Ganga River Allahabad	22-09-2013	3.0 pm	75.57 Meter
Yamuna River	22-09-2013	3.0 pm	75.90 Meter Naini
Ganga River Phaphamau	26-08-2013	4.0 am to 6.0 pm	86.040 Meter
Ganga River Allahabad	26-08-2013	4.0 am to 6.0 pm	86.820 Meter
Yamuna River	22-08-2013	4.0 am to 6.0 pm	86.600 Meter Naini
Ganga River	28-08-2013	4.0 am to 6.0 pm	86.275 Meter

Phaphamau			
Ganga River Allahabad	28-08-2013	4.0 am to 6.0 pm	85.58 Meter
Yamuna River	28-08-2013	4.0 am to 6.0 pm	86.080 Meter Naini
Ganga River Phaphamau	27-08-2013	4.0 am to 6.0 pm	86.61 Meter
Ganga River, Allahabad	27-08-2013	4.0 am to 6.0 pm	85.89 Meter
Yamuna River	27-08-2013	4.0 am to 6.0 pm	86.37 Meter Naini

Data collected from central water commission subdivisonal office Tularam Bagh, Allahabad

Table. III

Tones River Running Water Status Flood danger level 100.30 (Year 1978)		
Date	Range	Level
23-09-2013	(Range 24 hr.)	92.95 M
27-07-2013	(Range 24 hr.)	93.25 M
26-08-2013	(Range 24 hr.)	93.25 M
01-07-2013	(Range 24 hr.)	93.10 M
02-07-2013	(Range 24 hr.)	93.55 M

Data collected from the Executive Engineer office Tons Canal division, Allahabad

Result and conclusion:

During the course of present study regarding the current statutes of free running water around Allahabad city, it has been found that the river “Tons” hinders the flow of water from Ganga river resulting in accumulation of water causing flood and marooning of low lying residential areas in and around rivers, the main reason being the direction of flow of water from “Tons” river during rainy season. The discharge of stored water from Narora dam in bulk increase the force of water current of Ganga river causing flood during raining season.

The 2013 flood nearly reached the major flood during the year 1978 with the water level reaching at 86.82 meter (87.99 meter in 1978). The Bakshi dam played an important role in checking the entry of flood water in Allahpura and other adjoining areas despite damage, which has been managed in time.

Suggestion:

It is also observed that the catchment and lowlying areas are illegally used for construction of houses and garbages accumulated along the rivers at innumerable places, which greatly disturb the flow of water of these river systems. The daunting problem of check of sewage flow remains unsolved. The sewage treatment plant has not been working at required pace and at present it is functionless. Besides, causing pollution to the river water, the waste water of the Allahabad city poured in the rivers certainly reduces free flow of river water. Government offices and NGOs must concentrate for a long term sustainable approach to ensure cleanness and free flow of river water, remove pollution from all sources. Public awareness and participation of common people must be increased. Use of plastic, a non-biodegradable substance increases chocking of water flow in drainage system. Its use must be curtailed with alternative.

Efficient water management strategies and techniques (Conservation, Reuse and Recycle). Awareness in people regarding water management. Improved water treatment technologies and access to good sanitation and drinking water. Rainwater harvesting (capture and store rainfall and use if efficiently). Water and environmental related classes to be offered at the college and university level in all educational institutions.

References:

WWW.google.com

<http://ceouttarpradesh.nic.in>

<http://articles.timesofindia.indiatimes.com>

<http://allahabad.nic.in>

Ministry of Urban Affairs and Employment, 1996. Report of the Working Group on 'Urban Water Supply and Sanitation Sector for the Ninth Five Year Plan (1997-2002)', New Delhi.

Asian Development Bank. Water for All, The Water Policy of the Asian Development Bank, Manila.

John J. Boland and Dale Whittington. "The Political Economy of Water Tariff Design in Developing Countries: Increasing Block Tariffs versus Uniform Price with Rebate", in Ariel Dinar. *ibid*.

Penelope J. Brook and Alain Locussol. "Easing Tariff Increases: Financing the Transition to Cost-Recovering Water Tariffs in Guinea". Mimeo (OBA Book Homepage).

Ariel Dinar, 2000. The Political Economy of Water Pricing Reforms. Oxford University Press, Washington D. C.

Vivian Foster et al. "Water Tariffs and Subsidies in South Asia: Can Subsidies be better Targeted". *mimeo*. undated.

Government of India, 2002. National Water Policy, New Delhi.

Infrastructure Development Finance Company, 2004. India Infrastructure Report. 3i Network. Oxford University Press, New Delhi.

Planning Commission, 2002. Tenth Five Year Plan, 2002-2007, New Delhi.

P. S. Rana. "Pricing of water for Sustainability". *mimeo*. undated.

Ian Walker, et al. Pricing, Subsidies and the Poor. Demand for Improved Water Services in Central America. *mimeo*. undated.

Dale Whittington, 2002. Municipal Water Pricing: Getting Started on Tariff Reforms and Subsidies in South Asia. National Institute of Public Finance and Policy, New Delhi. *mimeo*.

The World Bank, 1997. Water Pricing Experiences: An International Perspective. World Bank Technical Paper No.386, Washington D. C.

Marie-Helene Zerach, 2000. Water: Unreliable Supply in Delhi. Centre De Sciences Humains, New Delhi.

Physico-chemical Properties of Ganga at Kanpur

DivyaRaghuvanshi⁸⁹

Abstract

Kanpur is an industrial city. River Ganga is the lifeline of Kanpur. It is a source of irrigation, industrial usages and drinking water to this city. But, it receives huge loads of wastewater from the tanneries, textiles etc. industries located along the river and domestic sewage also find its way into the river. The present paper intends to assess the physico-chemical properties of Ganga at Kanpur. The samples of water were collected from different sites along the river. They were brought to the lab and analysed according to the standard methods of APHA (1992). DO, BOD and COD is not meeting the permissible limits criteria of the agencies. This shows that water at Ganga is highly polluted. Government agencies should give serious concern and honest effort in solving this problem.

Introduction

River Ganga, originating from the ice peaks of Gangotri at an elevation of 3129m above sea level, covers a distance of 2525 km through several states on its way to Bay of Bengal. Today, over 29 cities, 70 towns, and thousands of villages extend along the Ganga banks. Nearly all of their sewage - over 1.3 billion liters per day - goes directly into the river, along with thousands of animal carcasses, mainly cattle (Bharadwaj et al 2011). Municipal sewage constitutes 80 per cent by volume of the total waste dumped into the Ganga, and industries contribute about 15 percent. The majority of the Ganga pollution is organic waste, sewage, trash, food, and human and animal remains. The impact of organic loading and industrial effluents on the ecological status and production dynamics and degradation in the condition of riverine system has been a subject of great concern all over the world.

Kanpur (26.460738°N 80.333405°E) is one of the major industrial towns of Uttar Pradesh. The discharge of effluents from tanneries, woollen mills, jute and textiles industries is of the order of 167 million litres per day. In addition to the industrial effluents huge quantity of municipal and domestic sewage is also thrown in Ganga everyday.

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The present paper intends to assess the impact of water pollution on the physico-chemical properties of river Ganga at Kanpur.

Materials and Methods

Ten water samples were collected from different sites along the river Ganga at Kanpur during pre-monsoon (April - May), monsoon (July - August) and post monsoon (October - November) phase in year 2012-2013. The analysis of all the parameters was done following procedures described by APHA (1992). For the estimation of biochemical oxygen demand (BOD), water samples were collected in the BOD bottles and kept in ice box before keeping in incubator during transit period. Initial oxygen was measured by Winkler's method.

Results and Discussion

Table: Physico-chemical properties of Ganga at Kanpur.

Parameter	Water Samples of River Ganga			Avg.±SD	Permissible limit	Standards
	Summer	Rainy	Winter			
Temp.(°C)	31.3	28.6	26.2	28.70±2.08	-	-
pH	8.9	7.8	8.6	8.43±0.46	6.5-8.5	USPHS
EC(μmho-cm ⁻¹)	232.6	296.0	199	242.53±40.22	300	USPHS
DO(mg/L)	2.4	5.0	6.1	4.50±1.55	4.0-6.0	USPHS
BOD(mg/L)	52.6	31.9	19.2	34.57±13.77	5.0	USPHS
COD(mg/L)	59.5	39.5	28.2	42.40±12.94	4.0	USPHS
TH(mg/L)	183.0	177.2	112.0	157.40±32.19	500	WHO
TA(mg/L)	189.3	154.9	176.2	173.47±14.18	-	-
Cl ⁻ (mg/L)	60.8	12.6	27.6	33.67±20.14	250	USPHS
TDS(mg/L)	267.0	272.0	242.0	260.33±13.12	500	USPHS

- **Temperature:** In the present study, the temperature was in the range of 28.70±2.08. It has been observed that high temperature is noticed in the months of April to June at all sampling sites due to the longer photoperiod, bright sunshine and dry wind. The temperature was lowest in the months of October to December due to the presence of cloudy sky and rainfall. Similar observations have been reported by Senthilkumaret

al. (2002), Santhanam and Perumal (2003), Gupta *et al.* (2008), Sundaramanickam *et al.* (2008) and Jayabhaye (2009).

- **pH:** The observed pH value was in the range of 8.43 ± 0.46 . In natural waters, pH usually ranges from 6 to 9. Lethal effects of most acids appear below pH 5 and those of alkali near pH 9.5. In general, pH was higher in summers than in winters or rains. High pH of water in the summer may be attributed to the utilization of free carbon dioxide in algal photosynthesis resulting in high algal population (Sunita Verma *et al.* 2012).
- **Electrical Conductivity (EC):** The observed EC value was in the range of $242.53 \pm 40.22 \mu\text{mho-cm}^{-1}$. The most influential water quality guideline on crop productivity is the water salinity hazard as measured by electrical conductivity (EC). The primary effect of high EC water on crop productivity is the inability of the plant to compete with ions in the soil solution for water (physiological drought). The higher the EC, the less water is available to plants, even though the soil may appear wet. (Joshi *et al.* 2009).
- **Dissolved Oxygen:** In the present study, the dissolved oxygen was in the range of $4.50 \pm 1.55 \text{ mg/L}$. Also, it was observed that the values of DO shows a periodic fluctuation, with maximum in winters due to the low temperature and low microbial activity and minimum in summers due to the enhanced microbial activity. Similar results have been reported by Chakraborty *et al.* 1959 in Yamuna, Venkateswarlu 1969 in Moosi, Tiwari 1983 in Ganga and Kaur 1995 in Pandu.
- **Biochemical Oxygen Demand:** BOD is the amount of oxygen required by micro-organisms to degrade the organic matters dissolved in the water sample. During the study period, BOD values were in the range of $34.57 \pm 13.77 \text{ mg/L}$ which far exceeds the permissible range. High BOD value is unfavored with zooplankton growth (Thirupathaiah *et al.* 2012 and Devaraju *et al.* 2005).
- **Chemical Oxygen Demand (COD):** COD determines the amount of oxygen required for chemical oxidation of organic matter using a strong chemical oxidant such as potassium dichromate under reflux conditions. In the present study, the value of COD was in the range of $42.40 \pm 12.94 \text{ mg/L}$ which far exceeds the permissible limit.
- **Total Hardness (TH):** Hardness is the capacity of water for reducing and destroying the lather of soap. It is total concentration of calcium and magnesium ions. Temporary hardness is attributed due to the presence of bicarbonates of calcium and magnesium ions while permanent hardness is due to the presence of sulphates, chlorides and nitrates of calcium and magnesium. The TH was in the range of $157.40 \pm 32.19 \text{ mg/L}$ which is within the permissible limits.

- **Total Alkalinity (TA):** It is the capacity to neutralise acid and it is attributed to the presence of carbonates, bi-carbonates and hydroxide compounds of Ca, Mg, Na and K. In the present study the TA was found in the range of 173.47 ± 14.18 mg/L.
- **Chloride (Cl⁻):** Chloride is one of the major inorganic anion in water and waste water. Chloride found during the study was in the range of 33.67 ± 20.14 mg/l which is within the range of permissible limits. The high chloride level is associated with the high level of pollution (Umavathiet *al.* 2007).
- **Total Dissolved solids (TDS):** High concentration of total solids in water is undesirable as it reduces the euphotic zone, light penetration, transparency and thus interferes with plankton community and primary productivity of the river and creates imbalance for aquatic life. In the present study, the value of TDS was in the range of 260.33 ± 13.12 mg/L. On an average the TDS was within the permissible limits.

Conclusion:

The present study reveals that most of the physico-chemical parameters were not meeting the permissible limits determined by various agencies. The increase in values of parameters such as DO, BOD, COD, Cl⁻, and total solids could be due to the domestic wastes and tannery wastes.

References:

- APHA: Standard methods for the examination of water and waste water. American public health association 18th Edn. New York. pp. 874-1133, 1992.
- Chakraborty R.D., Roy P, and Singh S.B, A quantitative study of the plankton and the physicochemical conditions of river Yamuna at Allahabad in 1954-55. Ind. J. Fish. 1959, 6 (1), pp. 186-203.
- Devaraju TM, Venkatesha MG. Singh S., (2005), Studies on physico-chemical parameters of Muddur lake with reference to suitability for aquaculture. Nat. Environment and pollution technology, 4, pp 287-290.
- Gupta N, Ramesh C, Sharma D, Tripathi AK (2008). Study of biophysico-chemical parameters of Mothronwala swamp, Dehradun (Uttarakhand). J. Environ. Biol., 29(3): 381-386.
- Jayabhaye U (2009). Studies on Physico-Chemical Parameters of Parola Dam in Hingoli District- Maharashtra. Int. Res. J., 2: 44-46. from different wetlands.
- Joshi D.M, Kumar Alok and Agrawal Namita, Assessment Of The Irrigation Water Quality Of River Ganga In Haridwar District, Vol.2, No.2 (2009), 285-292 Rasayan J. Chem.
- Kaur P, Effects of combined waste effluents on the ecology of river Pandu. 1995, PhD Thesis, Kanpur University, Kanpur.
- Santhanam P, Perumal P (2003). Diversity of zooplankton in Parangipettai coastal waters, southeast coast of India. J. Mar. Biol. Assoc. India, 45: 144-151.
- Senthilkumar S, Santhanam P, Perumal P (2002). Diversity of phytoplankton in Vellar estuary, southeast coast of India. In: The 5th Indian Fisheries Forum Proceedings. Jena SJK & M Mohan Joseph (Eds.). Published by AFSIB, Mangalore and AeA, Bhubanewar, India.
- Sundaramanickam A, Sivakumar T, Kumaran R, Ammaipappan V, Velappan R (2008). A comparative study of physico-chemical investigation along Parangipettai and Cuddalore coast. J. Environ. Sci. Technol., 1(1): 1-10.

- Thirupathaiah Medudhula, Ch. Samatha, Sammaiah Chintha; Analysis of water quality using physico-chemical parameters in lower manair reservoir of Karimnagar district, Andhra Pradesh; *International Journal Of Environmental Sciences* Volume 3, No 1, 2012.
- Tiwari D.; Pollution phycology of the Varanasi frontage of river Ganges". 1983, Ph.D. Thesis. Banaras Hindu University. Varanasi.
- Umavathi S, Longakumar, K and Subhashini, Studies on the nutrient content of Sulur pond in Coimbatore, Tamil Nadu, *Journal of ecology and environmental conservation*, 13(5), pp 501-504, 2007.
- USPHS, Toxicological profile for zinc and lead on CD-ROM. Agency for Toxic Substances and Disease Registry, U.S. Public Health Service, 1997.
- V. Bhardwaj, D. Sensing and A. K. Singh, *J. Earth Syst. Sci.*, 2011, 119, 117.
- Venkateswarlu V. An ecological study of the algae of river Moosi, Hyderabad (India) with special reference to water pollution I. Physicochemical complexes; *Hydrobiologia* 1969, 33, pp. 117-143.
- Verma Sunita, Tiwari Divya, and Verma Ajay; Interrelationships between Physicochemical Water Pollution Indicators: A Case Study of River Pandu; *World Academy of Science, Engineering and Technology* 72, 2012.
- WHO (1996). Guidelines for drinking Water, V.2, Recommendations World Health Organization, Geneva.

Role of Ganga Jal: Spiritual Well being in Hinduism and Buddhism

Dr. Vijendra Nath Pathak⁹⁰

Abstract

The Ganga Jal has an iconic place in the practice and belief of many religions for two chief reasons. Firstly, Ganga Jal washes away impurities and pollutants, secondly can make a person clean, externally or spiritually. Ganga Jal underlies its place in our cultures and faiths. Ganga Jal in Hinduism has a special place because it is believed to have spiritually cleansing capacity. There are eight sacred rivers in India, namely Ganga, Yamuna, Sarasvati, Krishna, Godavari, Narmada, Sindhu and Kaveri. This relates to both physical cleanliness and spiritual well-being. Kumbhamela is a pilgrimage of Hindu devotees and is held every three years at four different places. Maha Kumbh comes after every 12 years at the trans convergence point /amongst three sacred rivers naming Ganga, Yamuna and invisible Saraswati. Ardha Kumbh takes place at every 6 years at the same convergence points. Funeral grounds are always located near a holy river. Traditionally at the funeral process a small hole is drilled in an earthen pot, filled with Ganga jal Therapy, both external and internal, has been practiced for centuries to heal the sick. The Ganges (Ganga) is the longest river in India and flows through the Middle Land, that part of India where the Buddha lived.

Keywords: *Ganga Jal, impurities, pollutants, spiritually Well – being, Hinduism, sacred and water therapy*

Introduction

Ganga Jal has an iconic place in the practices and beliefs of many religions for two chief reasons. Firstly, cleanses. Ganga Jal washes away impurities and pollutants; it purifies an object to look as good as new and wipes away any signs of previous defilement. Ganga Jal not only purifies objects for ritual use, but also can make a person clean, externally or spiritually, pretended to come into the presence of his/her focal worship.

Secondly, water is a primary blocks of life. Without water there is no life, yet water has dual capacity to destroy as well as to create. We stand upon at the mercy of water just as we are at the mercy of our God or Gods. The significance of sacred water, the Ganga Jal manifests itself differently in different religions and beliefs but it these two qualities of Ganga Jal that underlies its place in our cultures and faiths.

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Hinduism:

Ganga Jal in Hinduism has a special place because it is believed to have spiritually cleansing capacity. To Hindus water is sacred, especially those imparted with flows of rivers, and there are eight sacred rivers in India, namely the Ganga, Yamuna, Sarasvati, Krishna, Godavari, Narmada, Sindhu and Kaveri. Although Hinduism encompasses so many different beliefs among those that most Hindus do share is the importance of striving to attain purity and avoiding pollution. This relates to both physical cleanliness and spiritual well-being.

Pilgrimage is very important to Hindus. Holy places are usually located on the banks of rivers, coasts, seashores and mountains. Sites of convergence, between land and river or two, or even better three, rivers, carry special significance and are especially sacred. Sacred rivers are always thought to be a great equalizer. The Ganges make the pure are made even more pure and the impure have their pollution removed if only temporarily. In the sacred water distinctions of caste are supposed to count for nothing, as all sins fall away. Kumbhamela is a pilgrimage of Hindu devotees and is held every three years at four different places in turn - Hardwar, Nasik, Prayaga and Ujjain. These places are believed to be where drops of *amrita* - the nectar of immortality - fell to earth during a heavenly conflict. And anonymous turn of Maha Kumbh comes after every 12 years at the Trans convergence point amongst three sacred rivers naming Ganga, Yamuna and invisible Saraswati. Ardha Kumbh takes place at every 6 years at the same convergence points.

The Ganga River secured the most vital place amongst the sacred rivers in India. The Ganga Jal is used in *puja* (worship) and empathetically a grout of Ganga Jal is given at the moment of dying. It is believed that those who bathe in the Ganges and those who leave some part of themselves (hair, bone etc) on the left bank will attain *Svarga* (the paradise of Indra). The river is said to flow from the toe of Vishnu to be spread into the world through the hair of Shiva.

Funeral grounds are always located near a holy river. Traditionally at the funeral process a small hole is drilled in an earthen pot, filled with ganga jal. The son of the deceased walks around the burning funeral pyre with the pot, dripping ganga jal forms a limiting line to prevent the soul of deceased from escaping back into the earth as a ghost. When the heat of the pyre cracks the skull of the corpse, the mourners bathe in the river and return home. On the third day after the cremation the ashes are collected and, on or after the tenth day they are cast into a holy river.

For Hindus, morning cleansing with water is a basic obligation. *Tarpana* is the point at which the worshipper makes a cup with his hands and pours the water back into the river

reciting mantras. After sipping some water, he may then apply the distinguishing mark of his *sampradaya* (tradition), and say the Morning Prayer, *Sandhya*. *Sodhana* is Hindu purification and is necessary for different reasons and at different levels. Physical purification is a part of daily ritual which may, in the case of *sadhus* (Hindu holy people who renounce the world seeking Brahman), be very elaborate. Every temple has a pond near it and devotees are supposed to take a bath before entering the temple.

The story of the Great Flood of Manu appears in Hindu scriptures. This is the story of how all creation is submerged in a great deluge but Manu is rescued by a fish that he once saved from being eaten by a larger fish. The fish told him to build a large boat and to take into it seeds and animals. The fish then towed the boat to safety by anchoring it on the highest of the Himalayas. He stayed on the mountain (known as Manu's Descent) while the flood swept away all living creatures and Manu alone survived.

Conceptual Phenomena of Holy Water:

The Matsya Avatara of Lord Vishnu is said to have appeared to King Manu (whose original name was Satyavrata, the then King of Dravida) while he washed his hands in a river. This river was supposed to have been flowing down the Malaya Hills in his land of Dravida. According to the Matsya Purana, his ship was supposed to have been perched after the deluge on the top of the Malaya Mountain. A little fish asked the king to save it and, upon his doing so, kept growing bigger and bigger. It also informed the King of a huge flood which would occur soon. The King built a huge boat, which housed his family, 9 types of seeds, and animals to repopulate the earth after the deluge occurred and the oceans and seas receded.

Etymology of the word Hindu also denotes water. Hind is the Persian name for the Indus River, first encountered in the Old Persian word Hindu (Hindu), corresponding to Vedic Sanskrit Sindhu, the Indus River. The Rig Veda mentions the land of the Indo-Aryans as Sapta Sindhu (the land of the seven rivers in northwestern South Asia, one of them being the Indus).

Health and Water:

The Vedic declaration says that water offered to Sun in the evening converts the drops of water to stones that cause death to the demons. For humans, demons are like all sicknesses like typhoid TB, pneumonia etc. When a devotee takes water in his hands while standing in front of or facing the sun and drops water on the ground the rising direct Sun's rays fall from the head to feet of the devotee in a uniform flow. This way water heated by Sun's rays and its colors penetrates every part of the body. This is the reason why the Vedas direct the devotee to offer water when the Sun is about to set. To alleviate fevers, sprinkling holy or consecrated

water on the sick person, chanting mantras is Udakashanti. While the water being sprinkled muttering a curse can affect a metamorphosis, the Hindu saints were able to curse or bless using this subhodakam.

Therapy:

Water Therapy, both external and internal, has been practiced for centuries to heal the sick. Usha Kaala Chikitsa is Sanskrit for water therapy. According to this ancient system, 1.5 litres of water should be consumed each morning on an empty stomach, as well as throughout the day. Water Therapy is considered to be a material way of taking an "internal bath".

Buddhism:

The Ganges (Gangā) is the longest river in India and flows through the Middle Land, that part of India where the Buddha lived. It was also sometimes called Bhāgīrathī (J.V, 255). The river's great size and beauty and its ability to both nourish crops and to sweep away villages when in flood meant that it was looked upon with a mixture of reverence and awe. A character in the Jātaka says: 'I revere the Ganges whose waters flow and spread.' (J.V, 93). The Milky Way was called the Celestial Ganges (Ākāśagaṅgā, Ja.II, 65). The commentaries give a completely fantastic description of the river's source and first reaches, saying that it starts from Lake Anotatta, rises up into the air and then passes through several rock tunnels before flowing into India. The Tripiṭaka says nothing about the source of the Ganges other than that it starts somewhere in the Himalayas. The Jātakas often say that when the Bodhisattva was an ascetic in his former lives, he went into the Himalayas and 'made a hermitage near a bend in the Ganges' (e.g. Ja.II, 145; II, 258). The upper reaches of the Ganges were called Uddhagaṅgā (Ja.II, 283), the Yamunā joins it at Payāga (modern Allahabad, Ja.II, 151) and the river eventually flows into the sea (A.IV, 199).

The Buddha often used the Ganges as a simile or metaphor in his teachings (e.g. M.I, 225; S.II,184; IV,298). When he wanted to give the idea of an incalculable amount of something he would say that it was as numerous as the grains of sand in the Ganges (S.IV, 376), a simile later often used in Mahāyāna literature. When he wanted to emphasize the effectiveness of his teachings for attaining Nirvāna he used the inevitable, unstoppable eastward movement of the Ganges to illustrate this idea. He said: 'Just as the Ganges flows, slides, tends towards the east, so too, one who cultivates and makes much of the Noble Eightfold Path flows, slides tends towards Nirvāna.' (S.V, 40).

When the Buddha left Pāṭaliputta (now Patna) during his last journey, he had to cross the Ganges in order to get to Vesāli. Today the river at this point is nearly a kilometer wide

and it was probably just as wide in ancient times too. The townspeople who had come to bid him goodbye walked up and down along the river bank looking for a ferry or a boat to use to cross the river. Some even began binding reeds together in an attempt to make rafts. Then, according to the Mahāparinibbāna Sutta, ‘as quickly as a strong man might stretch out his arm and draw it back again, the Buddha and his monks vanished from this bank and reappeared on the other bank of the Ganges’(D.II,89).

Bibliography:

- Bhugra, D. (1996). Hinduism and Ayurveda: Implications for managing mental health.
 Bowker, J (Ed)(1997). The Oxford Dictionary of World Religions, Oxford: Oxford University Pres.
 Clarke, P B (Ed) (1993). The World's Religions, USA: Reader's Digest.
 Craissati, J. (1990). Mental health care in India. The Psychologist, 3, 19-22.
 De Silva, P. (1996). Buddhist psychology and implications for treatment. In D. Bhugra (ed) Psychiatry and Religion: Context, Consensus, and Controversies. London: Routledge.
 Flood, Gavin (1996). An Introduction to Hinduism. Cambridge: Cambridge University Press
 Jung, C.G. (1958) Psychology and Religion: East and West. London: Routledge & Kegan Paul.
 Lipner, Julius (1998). Hindus: Their Religious Beliefs and Practices, Routledge
 Manne-Lewis, J. (1986) Buddhist Psychology: A paradigm for the psychology of enlightenment. In G. Claxton (ed) Beyond Therapy: The Impact of Eastern Religions on Psychological Theory and Practice. London: Wisdom.
 Scobie, G.W. (1975). Psychology of Religion. New York: Wiley.
 Smith, W.C. (1979). Faith and Belief. Princeton, New Jersey: Princeton University Press.
 Solomon, V. (1965). A Handbook on Conversions. Stravon.
 Wilson, B.R. (1970). Religious Sects. London: Weidenfeld & Nicholson.

Pollution in Ganga

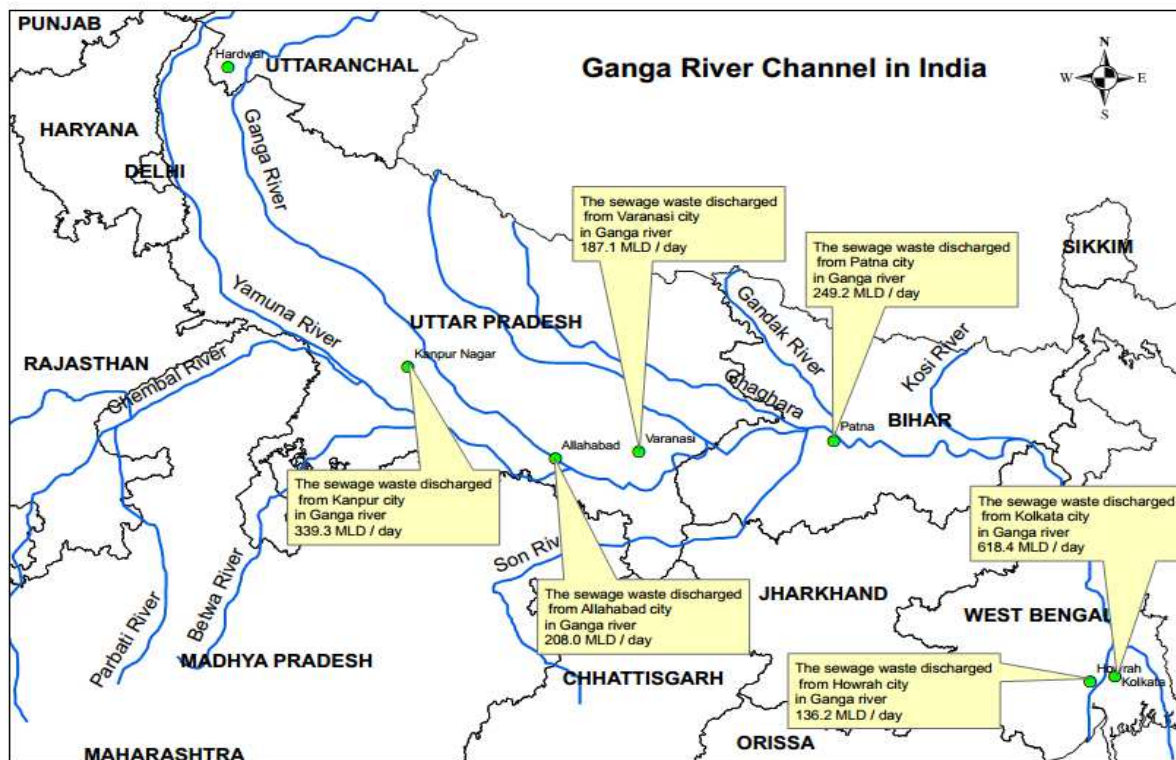
Ruby Pandey⁹¹

Introduction

Triveni Sangam, in Prayag (Allahabad) has two physical rivers Ganges, Yamuna, and the invisible or mythic Saraswati River. The site is in Prayag, India. A place of religious importance and the site for historic Kumbh Mela held every 12 years, over the years it has also been the site of immersion of ashes of several national leaders, including Mahatma Gandhi. On the bank of the Ganges at Daraganj, just before the confluence of ganga and Yamuna, the well known statistician Ravindra Khattree spent his early years when he attended Ewing Christian College, situated on the bank of Yamuna few miles before the confluence and the famous writer "Surya Kant Tripathi 'Nirala'" also spent his whole life at the same place (Daraganj). On the other bank of the river Ganges at Arail is located the Maharshi Institute of Management, named for Maharshi Mahesh Yogi who was a student at the University of Allahabad. The Harish Chandra Research Institute, named after the famous mathematician Harish Chandra from Allahabad, is also located on the same side - in the town of Jhusi.

The Triveni Sangam is believed to be the same place where drops of Nectar fell from the pitcher, from the hands of the Gods. So it is believed that a bath in the Sangam will wash away all one's sins and will clear the way to heaven. Devout Hindus from all over India come to this sacred pilgrimage point to offer prayers and take a dip in the holy waters. The sacred Kumbh Mela is held every 12 years on the banks of Ganga, Yamuna and Sarsvati at Sangam. According to Hindu tradition, the PrakristaYajna was performed here by Lord Brahma. That is why Allahabad was known as *Prayag* in ancient times. Allahabad (Prayag) is also called *Tirtha-Raja* (Prayag Raj), king of all holy places. It is said that Lord Rama visited Allahabad when he was in exile.

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Causes of Pollution In Ganga

It provides water to drinking purpose and irrigation in agriculture about 40% of India's population in 11 states. After 27 years and Rs. 1000 crore expenditure on Ganga River, it has a critical situation. In modern times, it is known for being much polluted, 30 polluted nalas flows in Ganga River from Varanasi city within seven kilometers.

A. Human waste

The river flows through 29 cities in which cities population living above ten lakh. A large proportion dump the solid and liquid wastes in Ganga river like domestic usage (bathing, laundry and public defecation), Sewage wastes, unburnt dead bodies through in Ganga river. Patna and Varanasi cities are more responsible to water pollution in Ganga and 80 % sewage wastes are responsible to water pollution of Ganga.

B. Industrial waste

Countless industries lies on the bank of the Ganga river from Uttrakhand to West Bengal like chemical plants, textile mills, paper mills, fertilizer plants and hospitals waste. These industries are 20 % responsible to water pollution and run off solid waste and liquid

waste in the Ganga River. It is very dangerous to water quality, their chemical properties and riverine life.

C. Religious factor

Festivals are very important and heartiest to every person of India. During festival seasons a lot of people come to Ganga Snans to cleanse themselves. After death of the people dumps their ash in Ganga River it is a tradition of India because they think that Ganga gives mukti from the human world. KumbhaMela is a very big festival of the world and billion people come to Ganga Snans at Allahabad, Hardwar in India. They throw some materials like food, waste or leaves in the Ganges for spiritualistic reasons.

Impact of Pollution

A. Riverine life

The Ganga river pollution increased day by day and from this pollution riverine life have been going to be lost in near future and this polluted water disturbs the ecosystem of the river. And irrigation and Hydroelectric dams give struggle to life in their life cycle.

B. Bio life

Some dams are constructed along the Ganges basin. Dams are collected a huge volume of water and this is hazardous for wild life which are moving in Ganga River. The Kotli Bhel dam at Devprayag will submerge about 1200 hectares of forest. In India wildlife has been warning that the wild animals will find it difficult to cope with the changed situation.

C. Human beings

An analysis of the Ganges water in 2006 showed significant associations between water-borne/enteric disease occurrence and the use of the river for bathing, laundry, washing, eating, cleaning utensils, and brushing teeth. Exposure factors such as washing clothes, bathing and lack of sewerage, toilets at residence, children defecating outdoors, poor sanitation, low income and low education levels also showed significant associations with enteric disease outcome. Water in the Ganges has been correlated to contracting dysentery, cholera, hepatitis, as well as severe diarrhea which continue to be one of the leading causes of death of children in India.

Ganga Action Plan

The Ganga Action Plan or GAP was a program launched by Rajiv Gandhi in April 1986 in order to reduce the pollution load on the river. Under GAP I, pollution abatement schemes were taken up in 25 Class-I towns in three States of U.P., Bihar and West Bengal. GAP I was declared complete on 31.03.2000 with an expenditure of Rs. 452 crore.

As GAP I addressed only a part of the pollution load of Ganga, GAP II was launched in stages between 1993 and 1996, 59 towns along the main stem of river Ganga in five States of Uttarakhand, U.P., Jharkhand, Bihar and West Bengal are covered under the Plan and included the following tributaries of the Ganges, Yamuna, Gomti, Damodar and Mahananda.

National River Ganga Basin Authority (NRGBA)

National River Ganga Basin Authority (NRGBA) was established by the Central Government of India, on 20 February 2009 under Section 3 (3) of the Environment Protection Act, 1986. It also declared Ganges as the "National River" of India. The chair includes the Prime Minister of India and Chief Ministers of states through which the Ganges flows..

Kumbha Mela Issue of Water and Pollution in River Ganga

According to Hindustan Newspaper, January 11, 2013, the Prime Minister has been monitoring the availability of adequate water from Tehri Dam in river Ganga at Allahabad during the Kumbh Mela. directions have been given to control the pollution load flowing in river Yamuna during the Kumbh Mela period

- At Sangam, Allahabad, the Biochemical Oxygen Demand (BOD) of Yamuna and Ganga is generally less than 6 mg/ltr but the main issue is of the color of effluents discharged by the pulp and paper industries into the river Ram Ganga and Kali (both tributaries of Ganga). Monitoring of water quality in river Ram Ganga and river Kali and their tributaries is being initiated on a daily basis by the State Boards of Uttarakhand and Uttar Pradesh with the coordination of CPCB. Action will be taken against the industries for violating the norms.
- Spiritual dip in holy Ganga at Kumbh is not clean. The pollution level in the sacred river has risen since Kumbh started at the historical city of Allahabad on January 14, 2013 and the water is no fit for bathing purposes, latest evaluation by country's

pollution watchdog the Central Pollution. The level of the Biochemical Oxygen Demand (BOD) levels - used to measure of the level of organic pollution in the water - had increased to 7.4 milligram per litre at the main bathing place, known as Sangam, since the Kumbh started.

A day before the Kumbh, the pollution level was 4.4 milligram per litre slightly more than the national standard for bathing quality of water of 3 milligram per litre. "Higher the BOD level worse it is for one's skin," said a CPCB expert. High exposure to dirty water can result in skin rashness and allergies. The official reason for the sudden rise of contaminants in the river was sudden increase in flow of human waste because of increased bathing during Kumbh. Around 10 million people have already visited the Kumbh and the UP government has employed around 10,000 sweepers to keep the city clean. Off the record officials admit that their drive to check sewage from industries in Ganga upstream of Allahabad has not worked as dirty sewage was still flowing into the river.

The Board has been asked by the environment ministry to monitor the pollution level in Ganga under its National Ganga Basin River Authority and conduct periodic check on polluting industries along the river bank. But, the dirt in the river is not a deterrent for people to take a dip at Allahabad. Hindus believe that the Ganga water has ability to clean and purify itself, a claim not scientifically proven. And, this belief has driven millions to the world biggest Hindu congregation and another 15 million are expected to visit in the 55-day long festival to end on March 10.

CPCB Action for Prevention of Pollution of River Ganga

Training cum Awareness programme on Saltless Preservation of Hides/ skins was organized by CPCB at Lucknow and Kanpur, which was attended by representatives from slaughter houses, tannery & allied units and officers of UPPCB. The programme was oriented towards the ongoing efforts pursuing basin-wise approach for reduction of dissolved solids in wastewater from leather processing industries in particular by invoking salt less preservation of hides/ skins.

CPCB has initiated a Techno-Economic Feasibility for setting up of Common Recovery Plant & Common Effluent Treatment Plant for Pulp & Paper Industries identified clusters at Muzaffarnagar, Moradabad and Meerut. CPCB also made a reconnaissance survey from Gomukh to Uluberia (West Bengal) for identified the point source and its impact on River.

This reconnaissance survey is conducted in association with ShriRajinder Singh, Member, NGRBA.

Conclusion

This study is dedicated to Ganga River at Allahabad site which is flow in northern India and it is a proud to Indian population. This study is successful with analysis with previous study on the Ganga River and here positive results to clean Ganga.

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गंगा लिफ्ट-पम्प नहरों से सिंचाई: समाधान या समस्या

डॉ० रमेश चन्द्र तिवारी⁹²

भारत का कुल भौगोलिक क्षेत्रफल विश्व का मात्र 2.3 प्रतिशत है जो लगभग 32.9 करोड़ हेक्टेयर है। क्षेत्रफल के आधार पर भारत की औसत वार्षिक वर्षा लगभग 40 करोड़ हेक्टेयर मीटर है (लगभग 1.25 मीटर खड़ा पानी बरसता है)। इसके वितरण का लेखा-जोखा लें तो ज्ञात होता है कि कुल वर्षा जल का लगभग 17.5 प्रतिशत वाष्पोत्सर्जन से वायुमंडल में चला जाता है। लगभग 10 प्रतिशत वर्षाजल भूमिगत जल से जा मिलता है। लगभग 27.5 प्रतिशत वर्षा जल मृदा परिच्छेदिक (Profile) अर्थात् भूमि उपरिस्तर तथा भूमिगत जल के मध्य भूमि में फंसा रहता है। लगभग 45.5 प्रतिशत वर्षा जल पृष्ठीय बहाव (Surface Semoff) की भेंट चढ़ता रहता है। जो नदियों नालों सरोवरों तथा अन्य स्थानों पर भरा रहता है।

सम्पूर्ण पृथ्वी का लगभग 1.0 से 1.3 प्रतिशत जल चक्र में घूमता रहता है। शेष जल समुद्र में खारे जल के रूप में है। हमारे देश का कुल वर्षा जल का अंश 4.5 प्रतिशत ही है। मीठे जल का लगभग 80 प्रतिशत उपलब्ध जल हमारे यहाँ सिंचाई या अन्य कृषि कार्यों में प्रयोग किया जाता रहा है।

अभी भी सम्पूर्ण भारत की कृषिगत क्षेत्रफल का 70 प्रतिशत असिंचित या वर्षाधीन है। सभी सिंचाई का साधन बना दिये जायें तो भी अनुमान है कि 50 प्रतिशत खेती वर्षा के अधीन ही रहेगी।

ऐसी परिस्थिति में यह आवश्यक है कि सिंचाई जल का प्रबन्धन करके उपज बढ़ाई जाती रहे, अन्यथा बढ़ती हुई जनसंख्या को भोजन मिलना कठिन होगा अर्थात् पानी की गरीबी झेलनी पड़ सकती है।

पीने के पानी तथा सिंचाई की सुविधा बढ़ाने के लिए नदियों, नालों तथा जलाशयों का प्रयोग करना अत्यन्त आवश्यक हो गया है। जो जल नदियों से होता हुआ निरन्तर सागर में पहुँच कर खारा होता जा रहा है उसका उपयोग करना एक सही कदम है।

गंगा से निकाली गई बड़ी नहरों के अतिरिक्त गंगा जल को लिफ्ट पम्पों की सहायता से उठाकर नहरों के माध्यम से सिंचाई करने की प्रथा भी लगभग 4-5 दशकों से कार्यान्वित की गई है। मिर्जापुर से लेकर बलिया जनपद तक बनाई गई गंगा लिफ्ट पम्पों का अध्ययन किया गया है। लगभग 255 किलोमीटर में बह रही गंगा पर उस समय (1980 दशक में) 34 पम्प नहरें कार्यरत थीं। (चित्र .1 देखें बड़े गोले बड़ी नहरों के हैं) मिर्जापुर में स्थित सखौरा, नारायनपुर, चन्दौली में भटौली, गाजीपुर में देवकली तथा जमनिया पम्प नहरों से तो एक छोटी नदी की तरह गंगाजल उठाकर हजारों हेक्टेयर की सिंचाई की जा रही है।

⁹² पूर्व प्रोफेसर एवं विभागाध्यक्ष, मृदा विज्ञान एवं कृषि रसायन विभाग, कृषि विज्ञान संस्थान, काशी हिन्दू विश्वविद्यालय, वाराणसी।

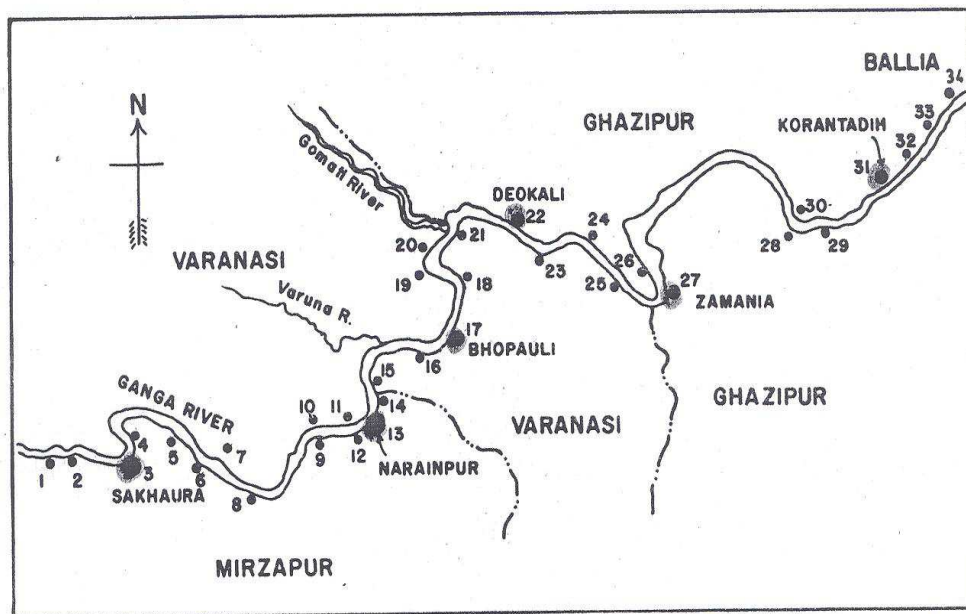


Figure 26.1: Location of Canal Lift-Irrigation

चित्र 1 गंगा नहरों का स्थान

मिर्जापुर से बलिया जनपद के बीच गंगा पर बने लिफ्ट पम्प नहरों में से पाँच बड़ी परियोजनाओं सखौरा, नारायनपुर, भटोली, देवकली, जमनियाँ तथा कोडाडीह को विस्तृत अध्ययन में सम्मिलित किया गया। इन लिफ्ट पम्प की नहरों के जल तथा नलकूप के जल का तुलनात्मक भौतिक-रासायनिक गुणधर्मों का विश्लेषण किया गया है। सारणी 1- में आकड़े दिये गए हैं।

सारणी -1 गंगा लिफ्ट नहरों तथा नलकूप जल का भौतिकी-रासायनिक गुणधर्म

	गुणधर्म	गंगा लिफ्ट नहरों का जल	नलकूप का जल
1.	पी.एच.मान	8.80	7.60
2.	विद्युत चालकता (डे.सा./मी.)	0.50	0.62
3.	विलेय ठोस पदार्थ (मि.ग्रा./ली.)	11.78	10.30
4.	सोडियम अधिशोषण अनुपात	0.46	0.62
5.	कुल नाइट्रोजन (मि.ग्रा./ली.)	1.74	0.92
6.	फास्फेट (मि.ग्रा./ली.)	0.46	0.31

7.	कैल्शियम (मि.इक्वी/ली.)	1.54	2.74
8.	मैग्निशियम (मि.इक्वी/ली.)	1.92	2.19
9.	सोडियम (मि.इक्वी/ली.)	1.1	0.85
10.	पोटैशियम (मि.इक्वी/ली.)	0.95	0.37
11.	कार्बोनेट (मि.इक्वी/ली.)	1.0	6.54
12.	बाईकार्बोनेट (मि.इक्वी/ली.)	4.65	3.0
13.	क्लोराइड (मि.इक्वी/ली.)	3.42	3.03

आंकड़ों से पता चलता है कि सिंचाई के लिए गंगा जल नलकूप की अपेक्षा अधिक सुरक्षित है। अंधाधुन्ध गंगा जल द्वारा सिंचाई से जहाँ भूमि को ऊसर बनने का खतरा है वहीं नलकूप सफेद रेह या लवणता प्रदान कर रहा है। पौधों के पोषक तत्वों की मात्रा गंगा जल में नलकूप से अधिक है। इसलिए नियंत्रित सिंचाई जल का प्रयोग यदि किया जाता है तो गंगा जल फसलों/त्पादन बढ़ाता है। गंगा जल में जहाँ कार्बनिक पदार्थ अधिक तथा गाद और बालू की भी अधिकता थी। जबकि नलकूप के जल में मृत्तिका (चिकनी मिट्टी) अधिक थी और कार्बनिक पदार्थ कम मात्रा में था।

फसलों पर सिंचाई जल का प्रभाव

गमलों में किए गए परीक्षण से यह पता चला है कि मूंग, धान, गेहूँ की उपज गंगा जल सिंचित गमलों की नलकूप सिंचित गमलों की अपेक्षा अधिक थी। पोषक तत्वों की मात्रा गंगा जल में अधिक होना इससे स्पष्ट हो जाता है।

गंगा लिफ्ट सिंचित क्षेत्र के कृषकों ने क्या बताया :-

गंगा लिफ्ट नहरों से जिन क्षेत्रों में कई वर्षों से सिंचाई की जा रही है वहाँ के कृषकों का व्यापक सर्वेक्षण किया गया था। किसानों के अनुसार इस सिंचाई के गुणदोष इस प्रकार हैं।

1. सिंचाई का जल अच्छा है।
2. इन क्षेत्रों में धान, गेहूँ, गन्ना, आलू तथा मिलवां सरसों (गेहूँ के साथ) का क्षेत्रफल अधिक है। थोड़े क्षेत्रफल में सब्जी भी उगाई जाती है।
3. दोनों की गुणवत्ता अच्छी है तथा धान गेहूँ की उपज कई गुना बढ़ने की बात किसानों ने बताया भूसा की उपज भी बढ़ी है।
4. किसानों की आर्थिक स्थिति लिफ्ट नहरों से अच्छी हो गई है।

गंगाजल सिंचाई के दोष :-

1. गंगा लिफ्ट नहरी क्षेत्र से दलहनी तथा तिलहनी फसलों की खेती का लोप हो गया है।

2. नहरों के समीप के क्षेत्र में भूमिगत जल ऊपर आता जा रहा है जबकि नहरों से दूर भूमिगत जल पर कोई विशेष प्रभाव नहीं पड़ा है।

3. भूमिगत जलस्तर ऊपर आने से बगीचे तथा वृक्ष सूखते जा रहे हैं। क्षेत्र वृक्ष विहीन हो जायेगा।

4. नए-नए खरपतवारों की भरमार हो गई है तथा खरपतवार एक विकट समस्या पैदा कर रहे हैं।

किसानों के सुझाव :-

नहरों से रिसने और फाजिल बहने वाले जल की निकासी के लिए नहरों के समानान्तर निकास नली का निर्माण किया जाय।

1. अधिक जलशोषण करने वाले वृक्षों को नहरों के किनारे लगाया जाये।
2. मांग के अनुसार ही समय-समय पर नहरें चलाई जाये जब-तब मनमानी न की जाये।
3. नहरों की बालू तथा गाद की समयानुसार सफाई की जाये।
4. नहरों की जलापूर्ति टेल (अन्तिम छोर) तक सुनिश्चित की जाये।
5. नहरों को पक्का किया जाय जिससे टूट-फूट जल-रिसाव कम हो।

यह वैज्ञानिक सत्य है कि सिंचाई जल का गलत और अन्धाधुन्ध उपयोग मृदा तथा पर्यावरण दोनों के लिए घातक है। इसके लिए गांव स्तर पर समितियाँ गठित करके नहर चलाने का समय, अवधि को उनकी सलाह के अनुसार किया जाय। यह सिंचित क्षेत्र के सभी गांवों की राय पर किया जाय। सिंचाई का क्रम-किसको कब सिंचाई करना इसको सभी तय करें। जिससे हेड से टेल तक सब को जल उपलब्ध होता रहे। जहाँ भूमिगत जल ऊपर आ गया है वहाँ नलकूप लगाकर पानी निकाल कर उसी नहर में पुनःभरण करके नियंत्रित करने की आवश्यकता है। इन क्षेत्रों में भी दलहनी व तिलहनी फसल लेने के लिए ग्रीष्म ऋतु का समय प्रयोग में लाया जाय।

नहरों से सिंचाई पर यदि सटीक नियंत्रण नहीं किया गया तो पूरा नहरी सिंचित क्षेत्रफल “आज नहीं तो कल” खेती के लायक नहीं रह जायेगा। जन-मानस का स्वास्थ्य भी प्रभावित होगा, पर्यावरण संतुलन बिगड़ेगा और अनर्थ हो जायेगा। सिंचाई जल के गलत प्रयोग से अतीत में संस्कृति खत्म होने के प्रमाण विश्व में हैं। हमारी यह जीवनदायिनी गंगा का मैदानी भाग नहरों के जाल तथा अंधाधुंध, बारम्बार सिंचाई से अनुत्पादक न हो जाये इस पर अभी से पहल की जानी चाहिए।