

BULLETIN

Vol. 3 No. 5 June 2, 1999



CENTRE FOR POLICY STUDIES



(SANKAR FOUNDATION)

WE, THE PEOPLE OF INDIA.....

Our polity is afflicted with thrombosis. The political arteries of the system are choked and there is little hope of immediate revival. The caretaker government at the centre is groping in darkness for direction. Neither the BJP, now heading the government, nor the Congress that hopes to get into power, is sure of the outcome of the forthcoming general elections. The regional parties whose strength has leapfrogged from 27 in 1989 to over 120 in 1998 hope to retain their political clout in spite of their numerical inferiority. The TDP with a mere double digit score in the 11th Lok Sabha could manage to get four ministerial berths and Speakership in the 12th Lok Sabha while the AIADMK, also of double digit distinction, could overthrow the Vajpayee government after extracting its pound of flesh.

National, regional or local, our political leaders are a class by themselves. They know when to change colour and how to make a quick buck. The salaries and allowances of our Governors, Ministers, Members of Parliament and of state assemblies have been steeply hiked and about their perks, the less said the better. The salaries and allowances of the government and public sector employees always keep rising thanks to pay commission reports and inflation indices. Our airplanes and air-conditioned coaches in trains are unable to meet the passenger rush. Starred hotels, bars and posh restaurants are all the time over-crowded with dim lights, loud music and high rates enhancing the status of the elite classes. Motor vehicles big or small, are fast on wheels and loud in noise converting our roads, designed and laid by the British, into battlegrounds and at times into graveyards. These and many such status symbols of modern India are daily given a cinematic flavour over our multi-channelled television only to confirm that anything can happen in Indian politics and Indian cinema!

Behind this mask is the stark reality of poverty, unemployment and growing human misery. Over 300 million Indians, according to the World Bank, struggle for a square meal a day. Remember that too when the foodgrain production has crossed the 200 million mark. For these poor people a cup of milk once in three days is a luxury in spite of the 'white revolution'. Our rural poor

spend 82% of their hard earned income on food. Half of all children under five are malnourished and one third of new borns are of low weight because of their mothers' anaemia. Every hour a woman and every ten minutes a child are dying in India for want of medical care or nutrition. Millions of young men and women are in urgent need of employment. Fifty one years of freedom and twelve general elections have not brought any smile to more than half of India's population.

Elections and political stability are undoubtedly very important. But more important and urgent is the challenge facing the nation. 'We the people of India' have given to ourselves a Constitution in 1950 assuring ourselves of liberty, equality, justice, fraternity and dignity. It is time we asserted our rights and displayed our duty towards the less fortunate and disadvantaged fellow citizens. The tears that Gandhiji sought to wipe from Indian eyes have during these fifty one years swollen into rivers of misery threatening to devastate the entire nation. If only every well placed Indian vows to uplift one or two of his countrymen through voluntary service and effort most of our people will be freed from the shackles of poverty and backwardness. We the people of India may not succeed in getting a stable and honest government. It may again be a hung Parliament or fractured verdict. Politically we may still be helpless. But there are many things. beyond elections and political leaders, which we can do and which we must consider as most important. If those with clarity of vision and commitment to the goal take up the task of reconstruction, beginning at the village, ward and local levels, the transformation will come about sooner than later. Welfare and viailance committees must be formed in every area, whether it is a town or a village, combining the wisdom and experience of the elderly and the energy and enthusiasm of the youth. Unless we spread the meaning and message of true democracy to every home and village, India will continue to be a mere electoral democracy to the delight of the statistician and the advantage of the vested interests. The time for action is now.

-The Editor

"Riches can suffocate if they are not used in the right way, whether they are spiritual or material."

-Mother Teresc

WHY TEHRI DAM COLLAPSE IS INEVITABLE?

-Prof. I. Shivaji Rao

As a former member of the Union Environment Ministry's Expert Committee that rejected the Tehri project, I wish to state that crucial issues like landslides, siltation, seismicity, dam-design, dam-safety and disaster management were fully discussed with project authorities and several eminent experts before taking a scientific decision. The former Prime Minister Mrs. Indira Gandhi considered this dam as highly detrimental to public interests and placed It in the category of silent valley project in Kerala and Lalpur dam in Gujarat which were ultimately abandoned. Mrs. Gandhi directed that the project must be thoroughly reviewed from the environmental angle so that a final decision can be taken on further funding of the project. From a preliminary study of the technical reports of the project, environmental review report of Sunil Roy Committee, the Comptroller and Auditor General report and the Environmental action plans submitted by the project authorities to the Environment Ministry for getting an unconditional clearance, it was found that the seismic potential of Tehri was highly underestimated and consequently the dam was under-designed. In fact there is a tot of misunderstanding among experts about the interrelationships between various selsmic parameters to be used for structural safety of the rock-fill and concrete dams of the project. For creating proper environmental awareness among the general public some of these problems are briefly outlined.

 As per sanctioned Tehri project report of 1969 the rock-fill dam was designed to withstand an earthquake of magnitude +7 on the Richler scale by using 0.15g as cleared by the Central Water Commission. But National Geophysical Research Institute recommended 0.56g for an anticipated earthquake of +8 on the Richter scale. Roorkee University experts recommended 0.25g for a maximum credible shock of magnitude +7. The Comptroller and Auditor General (CAG) pointed out lack of unanimity among experts on dam safety factors. He found that by November 1988 the project was not financially viable as originally contemplated. The project authorities stated in February 1988 that the design of the dam will be revised for seismicity of a higher order. The CAG warned that any subsequent change in the design of the dam based on a higher safety factor would considerably escalate the cost of the dam and adversely affect its financial viability. Consequently the consulting experts, the Civil Engineers, the contractors and the

Clean earth, pure water, fresh air, open space and bright sunshine are essential for the preservation of the body and that we do not fear any of these elements. In fact, illness follows when the body becomes comparatively deficient even in one of these........

—Gandhiji

politicians behind the project are not willing to revise the design of the dam to make it safe from the technical, environmental and social perspectives.

- 2. The design of any dam is based on the magnitude of the maximum credible earthquake that might visit the area during its litetime of about 100 years taking into consideration the presence of faults, shearzones, thrusts, joints etc.; which are highly vulnerable to earthquakes. The project site lies near the edge of the Indian tectonic plate which is getting pushed underneath the libetan plate. The most catastrophic earthquakes occur along such fault margins or plate boundaries of the circum-pacific belt. Environmentalists would not have perhaps opposed such a darn from safety angle if it was located anywhere else in the vast stable regions of the country except the most seismically active zone in the Himaiayas iiddled with thrusts, faults, shearzones and major landslides.
- 3. Goyal and Devendra Kumar, Chief Engineers of the Tehri project presented in a technical paper in July 1989 that while high seismic co-efficient of 0.55 for Watana Dam in Alaska and 0.50 for the Karurt dam in Iran were used for design of the dams a very low figure of 0.15 was used for Tehri dam located in the same treacherous seismic belt. It clearly shows that the dam is highly under-designed and is bound to collapse due to a major earthquake. The seismic coefficient is a numerical value obtained by dividing the Peak Ground Acceleration (PGA) due to an earthquake at a place by "g". The acceleration due to gravity.
- 4. The Tehri project has a 260 meter high rock-fill dam and a 103 meter high concrete dam. For magnitude 7 the slopes of the dam are fixed at 2.5:1 upstream and 2:1 downstream with a base width at 1125 meters on the river bed, by using pseudo-static approach for a seismic coefficient of 0.15. Using magnitude-distance-acceleration equation proposed by Mc.Guire, the PGA at Tehri was calculated as 0.25g for an earthquake of magnitude 7. However when the seismicity of Tehri was raised to magnitude 8.5 the above equation made it imperative to increase the size of the dam abnormally and hence it was abandoned in favour of Brunes' formulation which was again applied for design of the dam in a distorted way.
- 5. Several expert committees in tayour of the dam adopted seismicity of Tehri as 7.2 magnitude on the Richter scale equivalent to intensity 9 on the Mercalli scale but placed the corresponding PGA at 0.25g. But our expert committee headed by Bhumbla rejected all the unscientific views and raised the seismicity of Tehri to magnitude 8.5 equivalent to intensity 12. While the PGA due to a quake at magnitude 7.2 is 0.44 g, it is more than 1.5g at magnitude 8.5 When the earthquake generates a PGA of over 1g the effect of gravity is neutralised and the objects on earth fly into the sky. In the case of Tehri project the sand gravel, and loose stones of the

Bulletin of the CENTRE FOR POLICY STUDIES

rock-fill dam will be firrown into the sky when a maximum credible earthquake of 8.5 magnitude occurs during the life-time of the dam and 3 such earthquakes are anticipated in Tehri region.

- 6. The project proponents argue that the size of the dam calculated for magnitude 7 holds good even for magnitude 8.5 although the energy of explosion increases correspondingly from 90,000 tonnes of TNT to 2,86,15.850 tonnes of TNT. Experts know that the energy of explosion due to a guake of magnitude 7 is equivalent to that of 5 Hiroshima bornbs while that due to magnitude 8.5 is equivalent to 1500 such bombs. Surprisingly the experts assume that the damoging impact will be the same in both the cases and hence assert that the design of the dam shall not be altered due to change in seismic potential of Tehri. That is why Tehri dam is bound to collapsel in fact the Tabas earthquake in Iran located in the circum-pacific seismic bell caused an earthquake of 7.4 magnitude with horizontal acceleration of 0.8g in September 1978 and caused devastation of the surrounding towns and villages of Iran resulting in 20,000 deaths and collapse of 15,000 houses. The Kobe earthquake of Japan located in the same circum-pacific belt experienced an earthquake of magnitude +7 in January 1995 and caused widespread destruction of many sky-scrappers, bridges and highways and the railway lines got severely deformed. It shows that the intensity of earthquakes on Mercalii scale is 10 with PGA of about 0.75g. The Kobe earthquake thoroughly disproved the tall claims of earthquake-resistant design and false presumption of the Engineers that there is an upper-bound for the intensity of Groundshaking, irrespective of the magnitude of the earthquake.
- 7. For a given region subjected to a major earthquake, there exists a relationship between the magnitude, intensity and PGA which are used for the design of a dam. While the magnitude of an earthquake on the Richter scale is measured by the energy of explosion, the intensity of an earthquake is measured on the Mercalli scale in terms of its damaging effects. Since the Richter scale is a logarithmic scale, an increase by 1 point on the scale indicates a 10-fold increase in the magnitude of the earthquake. The relationships between the intensity, magnitude, Ground acceleration and the effects are presented in the following table. (Science Reporter, December 1991).

Inten- Name		Description of Effects	Accele- ration GA) mm/se	Magni- tude
sity (1)	(2)	(3)	(4)	(5)
VIII	Destructive	Masonary fissured, chin neys topple down, pool constructed buildings ar damaged.	rly e	6.2 to 6.9

ΙX	Ruinous	Ground begins to crack, pipes break open	5000	
Х	Disastrous	Ground fissured badly. Most of the buildings des- troyed. Railway lines bent		7 to 7.3
XI	Very disast- rous	Practically all buildings destroyed	9800	7.5 to 8
XII	Catastrophic	Total destruction, objects thrown into air, ground rises and falls like storm tossed sea		8 5 to 8.9

- 8. According to Gansser, Tehri lies in the major thrust zones of Himalayas while Nurek is located faraway in the prominent structural lineaments of Dushambe in Russia. Nurek site has a low seismic potential of magnitude 5 while Tehri has a very high seismicity of magnitude 8.5 and hence Tehri dam should never be equated with Nurek dam. The contention that since Bhakra. Mangta and other dams in the Himalayas are still safe and hence nothing will happen to Tehri is not correct because Tehri site is located in a seismic gap and hence the accumulated strains have to be released in the coming years.
- 9. According to the Mexican and Russian experts, a major dam collapses if it is constructed over an area with seismic potential above 9 intensity because of the inevitable failure of the sub-soil formation in the foundations. According to the effective slope method outlined in the design manual of the U.S. Army Corps of Engineers, the Tehri dam will collapse if it experiences an earthquake of magnitude 8 and the Union Government accepted seismic potential of Tehri as magnitude above 8 in the Richter scale.
- 10. The dam may collapse even due to massive landslides, mountain-slope movements on the reservoir margins, embankment failures of other reasons. Some of the underground nuclear explosions in the neighbouring countries, in addition to reservoir induced seismicity can precipitate major earthquakes. Consequently the 260 meter deep water mass will gush out as flash-floods and destroys Deoprayag, Rishikesh, Haridwar, Meerul, Ghaziabad and many parts of New Delhi. It the earthquake occurs during rainy season and causes collapse of other dams in this seismic bell, the combined tlashfloods will transform lakhs of villages, towns and cities in the Gangetic belt in India and Bangladesh into virtual burial grounds. This may cause avoidable death of about 2 crores of people and financial loss of nearly Rs. 50,000 crores.
- 11. Out of 8925 large dams in the world, 535 tailed including 202 disasters. Out of 433 dams in India, 40 failed including 13 disasters pushing the dam burst risk to 3%. In spite of environmentalists' protest, Italian Government constructed Vaiont dam which resulted in a

"Hygiene is less a science than a virtue."

—Rousseau

rock-fill dam will be thrown into the sky when a maximum credible earthquake of 8.5 magnitude occurs during the lite-time of the dam and 3 such earthquakes are anticipated in Tehri region.

- 6. The project proponents argue that the size of the dam calculated for magnitude 7 holds good even for magnitude 8.5 although the energy of explosion increases correspondingly from 90,000 tonnes of TNT to 2,86,15,850 fonnes of TNT. Experts know that the energy of explosion due to a quake of magnitude 7 is equivalent to that of 5 Hiroshima bornbs while that due to magnitude 8.5 is equivalent to 1500 such bombs. Surprisingly the experts assume that the damaging impact will be the same in both the cases and hence assert that the design of the dam shall not be altered due to change in seismic potential of Tehri. That is why Tehri dam is bound to collapse! In fact the Tabas earthquake in Iran localed in the circum-pacific seismic bell caused an earthquake of 7.4 magnitude with horizontal acceleration of 0.8g in September 1978 and caused devastation of the surrounding towns and villages of Iran resulting in 20,000 deaths and collapse of 15,000 houses. The Kobe earthquake of Japan localed in the same circum-pacific bell experienced an earthquake of magnitude +7 in January 1995 and caused widespread destruction of many sky-scrappers, bridges and highways and the railway lines got severely deformed. It shows that the intensity of earthquakes on Mercalli scale is 10 with PGA of about 0.75g. The Kobe earthquake thoroughly disproved the tall claims of earthquake-resistant design and talse presumption of the Engineers that there is an upper-bound for the intensity of Groundshaking, irrespective of the magnitude of the earthquake.
- 7. For a given region subjected to a major earth-quake, there exists a relationship between the magnitude, intensity and PGA which are used for the design of a dam. While the magnitude of an earthquake on the Richter scale is measured by the energy of explosion, the intensity of an earthquake is measured on the Mercalli scale in terms of its damaging effects. Since the Richter scale is a logarithmic scale, an Increase by 1 point on the scale indicates a 10-fold increase in the magnitude of the earthquake. The relationships between the intensity, magnitude, Ground acceleration and the effects are presented in the following table. (Science Reporter, December 1991).

Inten- Name		Description of Effects	Accele- ration	Magni- tude		
sity		(PGA) mm/sec²				
(1)	(2)	(3)	(4)	(5)		
VIII	Destructive	Masonary fissured, chin neys lopple down, pool constructed buildings ar damaged.	rly e	5.2 to 6.9		

ΙX	Ruinous	Ground begins to crack. pipes break open	5000	
Х	Disastrous	Ground fissured badly. Most of the buildings des- troyed. Railway lines bent		7 to 7.3
XI	Very disast- rous	Practically all buildings destroyed	9800	7.5 to 8
XII	Catastrophic	Total destruction, objects thrown into air, ground rises and falls like storm tossed sea		3.5 to 8.9

- 8. According to Gansser, Tehri lies in the major thrust zones of Himalayas while Nurek is located faraway in the prominent structural lineaments of Dushambe in Russia. Nurek site has a low seismic potential of magnitude 5 while Tehri has a very high seismicity of magnitude 8.5 and hence Tehri dam should never be equated with Nurek dam. The contention that since Bhakra. Mangia and other dams in the Himalayas are still safe and hence nothing will happen to Tehri is not correct because Tehri site is located in a seismic gap and hence the accumulated strains have to be released in the coming years.
- 9. According to the Mexican and Russian experts, a major dam collapses if it is constructed over an area with seismic potential above 9 intensity because of the inevitable failure of the sub-soil formation in the foundations. According to the effective slope method outlined in the design manual of the U.S. Army Corps of Engineers, the Tehri dam will collapse if it experiences an earthquake of magnitude 8 and the Union Government accepted seismic potential of Tehri as magnitude above 8 in the Richter scale.
- The dam may collapse even due to massive landslides, mountain-slope movements on the reservoir margins, embankment failures of other reasons. Some of the underground nuclear explosions in the neighbouring countries, in addition to reservoir induced seismicity can precipitate major earthquakes. Consequently the 260 meter deep water mass will gush out as flash-floods and destroys Deoprayag, Rishikesh, Haridwar, Meerut, Ghaziabad and many parts of New Delhi. It the earthquake occurs during rainy season and causes collapse of other dams in this seismic belt, the combined flashfloods will transform lakhs of villages, towns and cities in the Gangetic belt in India and Bangladesh into virtual burial grounds. This may cause avoidable death of about 2 crores of people and financial loss of nearly Rs. 50,000 crores.
- 11. Out of 8925 large dams in the world, 535 failed including 202 disasters. Out of 433 dams in India, 40 failed including 13 disasters pushing the dam burst risk to 3%. In spite of environmentalists' protest, Italian Government constructed Valont dam which resulted in a

"Hygiene is less a science than a virtue."

—Rousseau

disaster in 1963 as anticipated. Idaho dam in USA also resulted in a disaster. To ensure public safety and environmental safety the Canadian Ministry of Environment prepared dam-safety and disaster management plans for all the major dams. But Tehri project authorities who submitted a sketchy report in this regard refuse to submit a detailed report and organise mock-trials for evacuation of people from places like Deoprayag, Rishikesh, Haridwar and several other villages and towns in the Gangetic belt.

12. Richter, father of seismology based on several earthquakes of USA established the relationships between seismic parameters as follows:

	water having the same party				
Magnitude (Richter Scale)	5	6	7	8	81/2
Intensity,					
I(Mercalli scale)	61/2	71/2	91/2	11	12
Acceleration,					
a (cm)/sec²	50	150	500	±008	≥1000
Seismic					
Coefficient (a/g)	0.05	0.15	0.5	0.8	≥1
Period,					
T(sec)	0.25	0.3	≥ 0.4	2 1/2	1 ±
Duration, t(sec)	3	5	10±	20±	30±
the second course of the second secon					

(Based on C.F. Richter and B. Gutenberg, 1942, 1956)

Prof. Bruce Bolt warned about the misapplication of his concept of effective PGA by the consultants of Tehri dam for reducing its estimated PGA by 50%. Prof. L. Finn stated that the acceptable risk for design of dams in North America requires at least 84th percentile estimate of PGA in contrast to the 50th percentile adopted for the design of the Tehri dam. Dr. K. Campbel shows that the 84th percentile PGA for an earthquake of magnitude 8 would be 0.75g and for the type of geological setting in Tehri the PGA for a possible 8.5 magnitude earthquake would be around 1.0g. If the Kobe earthquake of magnitude 7 had a duration of 20 seconds, how can the Gazli test done for Tehri dom for a duration of 12 seconds become valid when the anticipated earthquake of magnitude 8.5 generally corresponds to a duration of 30 seconds? Hence the Gazli test cannot ensure safety of the Tehri dam.

In order to give an unconditional environmental clearance for the project, a detailed environmental impact report including a dam-burst scenario and disaster management plan should be prepared for holding a public debate by the people so that the controversies among the several experts can be resolved by the exercise of common sense and a final decision taken to modify or abandon the project in the larger interests of the nation. The latest Rudraprayag earthquake indicates that Tehri will experience 200 times more destructive earthquake within 3 to 4 decades when millions of people will be killed and properties worth Rs. 50,000 crores will be destroyed including Rudraprayag, Rishikesh and Haridwar and other towns in the Gangelic belt.

(Lecture delivered at the Centre for Policy Studies on April 3, 1999)

SURGERY IN THE 21st CENTURY

—Dr. C.V. Krishna Rao Retd. Director, Medical Education, Govt. of A.P.

There has been an all round change in every field in the last 25 years, medicine in general and surgery in particular. Change is inevitable and the same is much more dramatic in surgery, and to mention a few like Cardiothoracic, Neurosurgical, Cancer surgery etc. As the world is going to enter the next millennium, it is worth while to look back into the surgical achievements in the present century, have an overview of the changing scenario and predict or forecast what is in the offing in the coming century. Organ replacement or transplantation. detection of early cancer, mass screening camps extending Medicare centrifugally is done by various agencies, like Government, Social Welfare, Voluntary Organizations etc. The goal in this century is to achieve 'Health for All by 2000 A.D.'. Though the idea is good, it is evident that Health for all at any time in the future is not practicable. Hence it should be a continuous process to work out how best to improve upon the existing facilities so that the public enjoy sound health, at least free from preventable diseases. Preventive medicine must find its due place in the delivery of Medicare, as it is cheaper than expensive curative Medicare. It is commendable to note that every department is supporting the health sector for achieving this goal, as there is no department without a human being.

In the present century diseases like peptic ulcer, parasitic infections, malnutrition, advanced cancer. communicable diseases, trauma, complications of certain general diseases like diabetes, hypertension etc. occupied top position. Till such time that antibiotics are introduced, modern anaesthetic facilities come into vogue, treatment of shock is established on strict scientific footing, and the contribution of two world wars paved the way for rapid progress in medicine and surgery in particular. Though many lives were lost, in a way they benefited the medical tield to save many more lives in future. Blood transfusion became a boon to perform complicated marvellous surgery. The introduction of endoscopes of different types, Key hole surgery, short period of hospitalization, considerable reduction in morbidity and mortality and finally creating confidence in public to face major complicated surgical procedures is in a nutshell, the brighter side of the picture.

Looking on the other side of the coin the most frustrating aspect is that Medicare and medical education is fast declining at public or Government sector and catching up fast in the private sector. Today undoubtedly any private institution is on bottom footing than a government institution and this general deficiency is due to lack of adequate budget to pump in more funds or finances to keep with demanding needs. Clinical medicine is relegated to background and its place is taken by laboratory investigation 'oriented' medicine. The cli-

nicians, including surgeons hardly find time to interact with patients to get relevant history, to examine the patients to their satisfaction and offer in the end 'human touch' to the so-called prescription or 'Surgical procedure.' With Kickbacks, unwanted investigation and diagnostic procedures and probably, an occasion where correct surgical procedure is not performed. Treatment has become prohibitive to a common man. The hospitals are assuming the status of 'five star' and corruption and commercialization is taking upper hand. Medicine is no longer a noble profession but has become a major venture to earn a quick buck. As on today, investment on health sector seems to be much more lucrative than any other business. The way the corporate hospitals are coming up and so also nursing homes and private hospitals, even non-medical personnel can participate to offer medical education and Medicare. Since the Government is unable to come up to the expectation of the public and prone to public criticism, it is desirable to transfer medical education and tertiary medicare to private sector and concentrate on primary and secondary care as is being done in developed countries. The role of a general practitioner or a family doctor is fast disappearing. And in its place specialization and super specialization is getting in. To avoid the consequences of Consumer Protection Act and medical negligence or litigation, the medical profession is heading towards 'defensive medicine' and this is bothering the Public on one side and doctors on the other side. The expert medicine is getting centralized in bigger cities and urban centers, where 75% of the population is denied the expert medical advice. Doctors have become choosy like any other persons working in other departments. Hi-tech equipment, special training, ideal conditions to execute surgical procedures are still not within the reach of the common man. Job satisfaction, adequate remuneration or salary is the basic requirements of doctors, including surgeons. This is one reason why the professionals are going outside the country resulting in so-called brain-drain. Indians are no inferiors to any others and given proper opportunities and supports, they fare as well if not better than their counterparts in developed countries. Right infrastructure should be created to execute surgical procedures. Computers, and Robots are going to support the surgeons in future. Health awareness in public is rapidly picking up.

In the coming century trauma and opportunistic infections secondary to AIDS are going to be challenging problems to medical profession. To these will be added geriatric, introgenic diseases and viral infections. Introducing selective education at an early age on health and related problems is the necessity of the day. Reorientation of medical education is necessary. Fortunalely, genotherapy is actively considered to overcome unsolved problems. Barring brain transplantation, transplantation of every organ appears to be technically and scientifically possible. The backbone for surgical progress

"Growing old is a bad habit which a busy man has no time to form."

—Andre Maurois

is 'experimental surgery', which is not given as much importance in this country compared to other developed countries. Every hospital should have an experimental wing, so that the staff working can devote leisure hours in experimentation. Corruption at every level is the worst evil, not only confined to one department; but to all departments, all over the world in some measure or not. No stone should be left unturned to bring down corruption as much as possible if not totally eradicate once for all. Corruption is like infection and the same is presently and polishedly called 'Scam'. Kickbacks, exploitation of unfortunate suffering public, lack of compassion or human touch, etc., are bothering the profession. Proper and timely medical advice is the need of the hour. The erstwhile 'general or family practitioner' concept should be brought back and the medical students must be first a 'basic doctor' and later specialists and super specialists. Stern action must be taken against those who do not follow 'Hipocratic oath' and dig into unethical practices. Neither the patient nor the one who looks after health should be mechanical but must be humane. Doctors in general and surgeons in particular are trying their best to bring back the sick into the mainstream. Machine, i.e., Robots can correct diseases much better than human beings, and the human touch behind such Robots is indispensable. The future is bright, optimistic and a right thought directed in the right direction is the proper thing in the next century to make medical application, including surgery absolutely safe for one and all. To conclude, 'a person's life span is theoretically on an average is hundred years'. Life is transient like lightning or the bubble in the water. No one can say when this body will perish. There is no fixity in life and everything is destiny.

(Extract of a lecture delivered at the Centre for Policy Studies on May 19, 1999.)

SRI KRISHNA - I

-Sri Challa Sivasankaram

Indian spiritual renaissance took seed on the advent of Sri Krishna as avatar. The period of his advent was confused; utter bewilderment and lack of direction marked the period. Man was incapable of leading life as man. Asuric inclinations overpowered him. For instance, Kamsa who was the maternal uncle of Sri Krishna fell prey to Asuric (demonic) forces. He torgot that he was a King, brother of Devaki. He had an obligatory duty to lay rules for a life of peace, law and order for himself and his subjects. The ruled lost by then the exemplary son-father relationship existing between them and their ruler. The trusteeship-patriarchal principle that

"We should have had socialism already, but for the socialists."

-Bernard Shaw

juided the king yielded to the pressures of time that transformed beyond recognition into Tamasic and Asuric.

When the sky was screened behind the dark clouds of selfishness, when the heart of the law-abiding was awake to the whispers and dewdrops of knowledge, when the tamasic, rajasic were making haste for effecting their black (illegitimate and unlawful) deeds, when noon was playing hide-and-seek to pierce through the slouds to send his beams of light calm and delight, when he heart of Kamsa was throbbing with fatalistic fears of leath at any time at the hands of his nephew, there the twatar dawned in the prison of his uncle.

His avatatic mission of laying a foundation for equal- y. fraternity, camaradarie, universality and elimination of the unsocial element and reinstation of rule of law ushered in soon. He laid bare his true form. His Viswaroopam before his parents; already signs of vicfory over evil were rampant and portentous of ensuing ushering of haloyondays. Vasudeva, the person who is instrumental in giving him this dark body resplendent with a light inwardly burning like tens of millions of suns was quivering with fear that Kamsa might axe this wonder infant into pieces was induced by the avatar to take the intant to Yasoda and Nanda on the other side of iver Yamuna, dark-watered river. He had to negotiate he river to reach the Nanda Kingdom hurriedly lest he and his son should fall prey to the axe of Kamsa. There a donkey bayed. His (donkey's) raucous bark might awaken the guards of Kamsa who might with their lethal weapons follow him (Vasudeva) which would make his affort abortive. So, Vasudeva bowed low before the donkey, washed his feet with tears of tear and prayed bediently to be silent for some time. This instance suports the spirit's universality or universal oneness of self and god's immanence in one and all. In the donkey also, the same spark of universal Fire sought refuge. Irishna created such occasion for the Kshatriya King to kneel before a donkey to portray his Vedanta's fundamental principle of worshipfulness of all.

Soon, they crossed the Tamasic hurdle in the form of arnuna. Tamas was negotiated and pushed behind, entered the land of joy, peace, love and fellow feeling. The arena for Krishna's leelas was entered. This was the stage for the wonder boy to establish a form of government which would not base its rule on colour, creed, credo, race and community, haves and have-nots.

By then, Indra usurped the place and position of Varuna. Indra became unrivalled. The world of Gods converted itself to dance to his beck and call. His whims and fancies hardly allowed the decisive role of morals and ethics. Flesh and flesh appearement got upperhand, sense and sensibility, rule and rhyme were

relegated. Naked tyranny had throffled the voice of reason, norms, and human values, sanity and discretion were at discount. Earth had to propilitate, appearse, assuage to the extent of annihillating ones own sett-respect and freedom of movement.

Sri Krishna, the wonder boy was growing in his divine way Ageless and beginningless though he was within the frame he attained by the human standards, he was roughly five years old behaving as a full-fledged beina, able to destroy demons that were unleashed by Kamsa to attack and undo him. By five years of age Krishna came to stay as the unacknowledged leader at the peasant community of the Gokulam. His word was writ for some. He was worlder for some. His counsel was wisdom's outcome for some. So the ordered the peasantry of Gokulam not to pay tribute to indra as they used to, previously, by offering sacrifices, rituals whose ultimate aim was appeasing Indra and getting in return some boons and rain. Power corrupts. Albsolute power corrupts absolutely. Indra could no longer tolerate this unprecedented defiance from a docile people who were as peace-loving and humble as the cows they tended. Many of the houses of the peasants were roofless, the remaining thatched huts and tenements covered by leaves could hardly offer canapy to the people inara found this an opportunity to unleash forrential downpour on the defiant peasantry to bring them to book and get them realised of their mistakes.

The citadel of age-old order was showing signs of cracks, the synagogues and shibboleths of custom were doubted, their validity had come to be questioned, so the brave dwellers of Gokulam stood solidly behind Krishna, come what may. Krishna litted the Govardhana mountain to ward off the rain so that innocent victims of Indra's wrath would live unaffected by his blatant act of revenge, Indra, the unprincipled pleasure hunter was taught a lesson, realised his mistake and came down to earth to prostrate at the feet of Sri Krishna. Indra enjoyed the patronisation of Vishnu, who in the avatar of Sri Krishna seemed determined to teach a lesson so that he might behave in the way compatible with his position. (To be continued)

REPORT ON THE HEALTH AND COMMUNITY DEVELOPMENT PROGRAMMES

—Dr. G. Prabhakar

(Joint Director, Health & Projects, Sankar Foundation)

26-3-1999 :

A batch of 20 Women leaders from Sadhana NGO working in Paravada visited Sankar Foundation Hospitals on Observation visit.

29-3-1999: Guest at Eye Hospital

Dr. Namperumalswami, Director, Aravind Eye Hospital, Madural visited Sankar Foundation's Eye Hospital

Dr. Namperumalswami went around the Hospital and expressed his happiness and appreciation for the excellent work being done by Sankar Foundation. He mentioned that Aravind Eye Hospital also started as a small Institution in a humble way and today it has developed into a major Institution which is rated as one of the best in the country. Shri A. Sankar Rao, Managing Trustee and Shri Challa Sivasankaram, Trustee, felicitated Dr. Namperumalswami with a shawl, garland and a memento. Shri A. Sankar Rao, on behalf of the Foundation, expressed his gratitude to Dr. Namperumalswami, member of his family and Aravind Eye Hospital for providing regular guidance, advise and technical support to Sankar Foundation Eye Hospital, apart from supplying Aurolense (IOL) on regular basis.

29-3-99: Health Camp at Chodavaram

Sankar Foundation and Vikasa, a leading NGO at Chodavaram conducted Eye Camp, Gynaec Camp at Chodavaram. 155 patients with eye problems were screened and 46 patients were selected for Cataract surgery. 104 patients were screened with Gynaec problems and 26 were selected for surgery.

2-4-99: Health Camp at Purushottamapuram

Sankar Foundation and ACCEPT an NGO working in the field of HIV/AIDS, jointly organised an Eye Camp and Gynaec Camp at Purushottamapuram near Yelamanchili. ACCEPT is working in the field of HIV/AIDS and is conducting awareness and training programmes on HIV/AIDS and STD Clinics on the National Highway No. 5 from Anakapalle to Tuni covering around 35 Dhabas.

98 persons were screened and 16 persons were selected for Cataract surgery. 49 women were treated for various gynaecological problems.

5-4-99: Health Camp at Govindapuram

The Foundation conducted an Eye Camp, Gynaec Camp jointly with Amma Trust. 80 patients were screened and 21 patients were selected for Cataract Microsurgery. 48 women were treated for various gynaecological problems

Monthly TB Camp at Anakapalle

12 patients attended the camp and received medicines.

8-4-99: TB Camp

Monthly TB Camp was conducted at Yelamanchili TB nodal centre. 40 patients were provided free medicines.

9-4-99: Visit to Hospitals

20 women leaders from Mandala Yuvasakthi, an NGO at Somalingapalem visited Foundation's 3 Hospitals on Observation visit.

12-4-99: Health Camp at Pulabanda

Sankar Foundation and ORRC a leading NGO at Yelamanchili jointly conducted Eye and TB Camp at Pulabanda village near Vantlamamidi in Paderu Mandalam. 50 patients were screened and 13 patients were selected for surgery.

TB Camp at Vaddadi

Monthly TB Camp was conducted at Vaddadi TB nodal centre. 16 patients received medicines at the camp.

13-4-99: Observation visit

20 Field workers from SUSAG Farm near Madugula visited Sankar Foundation's 3 hospitals on Observation visit. These workers are working in the tribal belt of Madugula and helping Sankar Foundation's Environment Programmes.

15-4-99:

20 women leaders from Natural Environment & Education Development Society, Nakkapalli visited Foundation's 3 hospitals on Observation visit. The group was led by Shri A.V. Ramana, Secretary of the organisation.

16 & 17-4-99 :

30 Women Leaders of the Self Help groups working at Sabbavaram with Srividya Trust visited Foundation's 1 hospitals on Observation visit. These women leaders will learn about the free services and the facilities available at Foundation's 3 hospitals and will be able to refer patients from rural and tribal areas, to the Hospitals for firmely treatment.

19-4-99: Health Camp at Kothakota

Major Eye Camp was conducted at Kothakota with Viswa Vani NGO. 81 patients were screened and 23 patients with Cataract were selected for microsurgery.

20-4-99:

20 leaders of Women's groups representing Mythri Development Society for Women working at Devarapalii mandalam, visited Sankar Foundation's 3 hospitals on Observation visit.

24-4-99:

Monthly TB Camp was conducted at Anandapuram.

7 patients received medicines at the camp.

SADHANA FUNCTION:

Dr. G. Prabhakar attended, as Guest of Honour, the inauguration of the Office Building and Training Centre of 'Sadhana' a major NGO working at Paravada. Shi Bandaru Satyanarayana Murthy, Minister for Municipo Administration, Govt. of Andhra Pradesh was the Chief Guest and the function was presided by Shri Chalapati Rao, Yelamanchili MLA, Shri Prem Kumar, President, Youth Charitable Organisation, Shri K. Joginaidu, Secretary, SVDS, Shri P. Viswanath, President of the Federation of NGOs spoke on the occasion.

28-4-99

Dr. G. Prabhakar visited Vaddadi TB nodal centre and had discussions with Shri Prasad, Secretary ORRC and Mr. Gopala Krishna, Secretary, SADHANA about the Rural Health Programmes.

29th & 30th April 1999 :

Mr G.L.N. Prasad, Asst. Field Officer conducted surveys at Prasad Gardens, Kobbarithota and Kallupakalu slums to identify old people with Cataract.

30-4-99 :

Felicitations to Dr. Kanthamani, Opthalmic Surgeon from Madras.

Dr. Kanthamani, Opthalmic Surgeon and Consultant Opthalmologist, Appolo Hospitals, Madras, visiled Visakhapatnam on personal visit. Dr. Kanthamani was generous to offer her time and expertise at Sankar Foundation's Eye Hospital and she conducted Phaco Surgeries with IOL Implementation for Cataract at the Eye Hospital. It was a great pleasure and opportunity for the Eye Surgeons at Sankar Foundation's Eye Hospital to conduct surgeries with Dr. Kanthamani with latest technology. Dr. Kanthamani was felicitated by Shri A. Sankar Rao, Manging Trustee and Dr. R. Suryanarayana Raju, Opthalmic Surgeon in recognition of her services. Shri A. Sankar Rao conveyed his sincere thanks and grafitude to Dr. Kanthamani for the kind gesture of sparing her valuable time for Sankar Foundation's Eye Hospital. Dr. Kanthamani is the proud daughter of Sml & Sri P.V. Ramanaiah Raja, Industrialist, close friend of Shri A. Sankar Rao and Advisory Board Member of Sankar Foundation.

3-5-99 : Health Camp at Kinthali

Sankar Foundation jointly with Vikasa an NGO working in Chodavaram area, conducted Eye Camp and Gynaec Camp at Kinthali, an interior village in the fribal belt of Madugula. 56 patients were screened and 14 patients were selected for Microsurgery. 18 women with various Gynaec problems were treated.

TB Camp at Anakapalle:

Monthly TB Camp was conducted at Anakapatle Nodal Centre and 12 patients received medicines.

8-5-99: TB Camp

Monthly TB Camp was conducted at the TB nodal centre at Yelamanchili. 45 patients received medicines at the Camp and 13 new cases were registered for treatment.

12-5-99: TB Camp at Vaddadi

Monthly TB Camp was conducted at Vaddadi nodal TB centre. 14 palients received medicines at the Camp.

18-5-99:

Dr. G. Prabhakar was invited to the 'Seminar on Bio Waste Management' conducted by Andhra Pradesh Pollution Control Board, Hyderabad. Shri 1. Chatterjee, IAS, Member Secretary, AP Pollution Control Board presided over the Seminar. Shri S. Narasinga Rao, IAS, District Collector was the Chief Guest.

26-5-99: Training Programme

Dr. C. Nalini and Ms. V. Jyotishmali gave lectures on Empowerment of Women and Protection of Environment, at the Training programme conducted by ORRC at Chiltayyapalem Training Centre.

"Unless the leaders of the world discover their highest human dignity in themselves, not in the offices they hold, in the depth of their own souls, in the freedom of their conscience, there is no hope for the ordered peace of a world-community."

-Radhakrishnan

CENTRE FOR POLICY STUDIES

(Soudamini, 10-50-19, Siripuram, Visakhapatnam 530 003)

Patrons:

Shri Abid Hussain Shri K. Sivananda Murty Dr. M. Gopalakrisna Reddy Prof. B. Sarveswara Rao Prof. R.V.R. Chandrasekhara Rao

Trustees:

Shri K. Parvati Kumar Shri D.V. Subba Rao Dr. A. Prasanna Kumar (Director) Shri C. Sivasankaram Shri M. Ramdas Shri A. Sankara Rao

Srnt. A. Yesoda

Advisory Board:

Dr. B. Swarny Shri T. Vedantam Prof. T. Shivaji Rao Dr. (Mrs.) B. Swarajya Lakshmi

Mrs. D. Saraswali Devi

Shri A.S. Raja

Shri C. Hanumantha Rao Shri P.V. Ramanaiah Raja Shri V. Seetaramaiah Prof. K.V. Ramana

Prof. K.C. Reddy

Shri D.Ch. Tirupathi Raju

Shri Kasim Mehdi Shri K. Sridharan

Shri M. Varahalu Cheffy Shri K.S. Sastry