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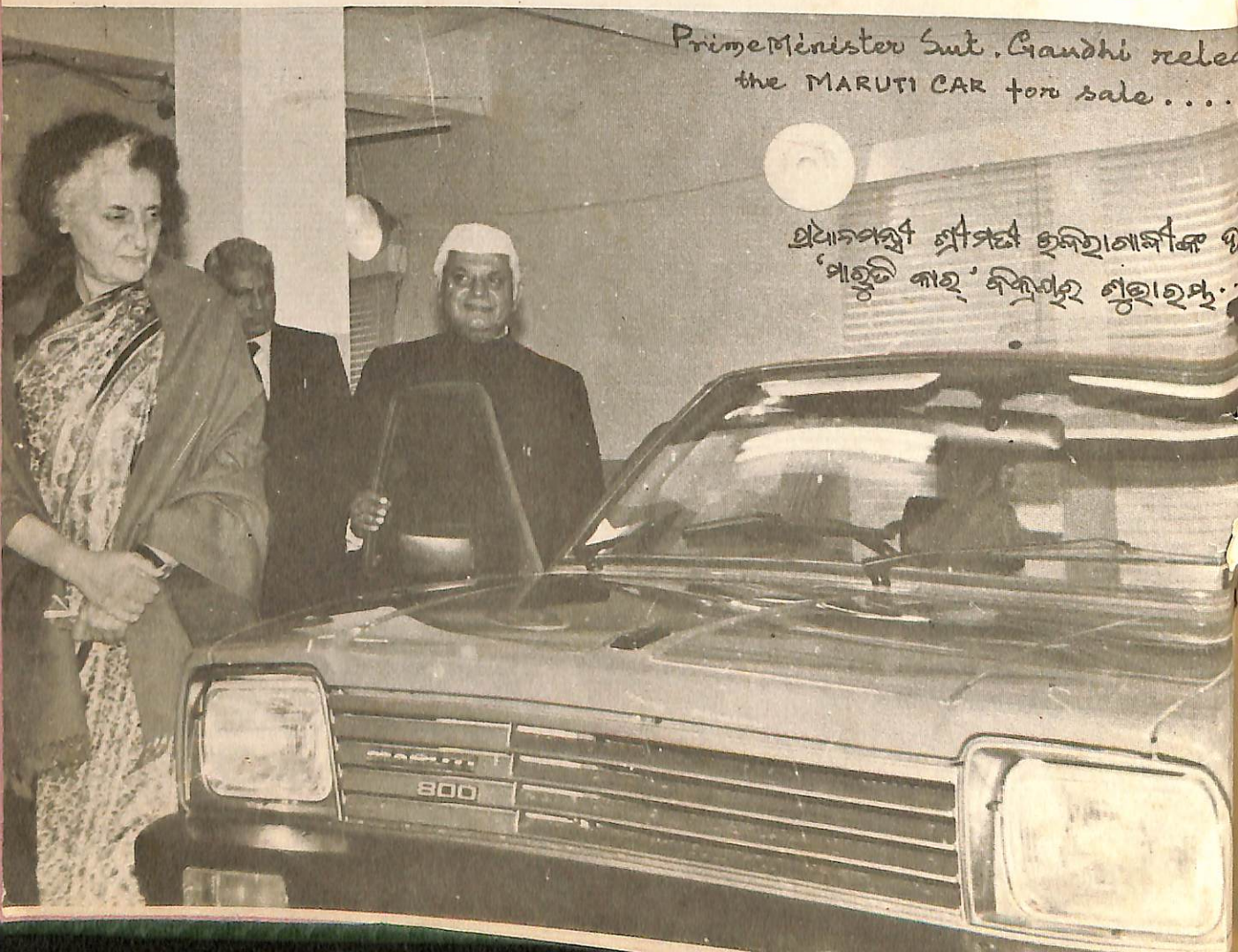
1985



ORISSA REVIEW



Prime Minister Smt. Gandhi donating for
Armed forces FLAG DAY FUND.



Prime Minister Smt. Gandhi released
the MARUTI CAR for sale....

प्रधानमंत्री श्रीमती इंदिरा गांधी का
'मारुति कार' की शुरुआत।

Orissa Review

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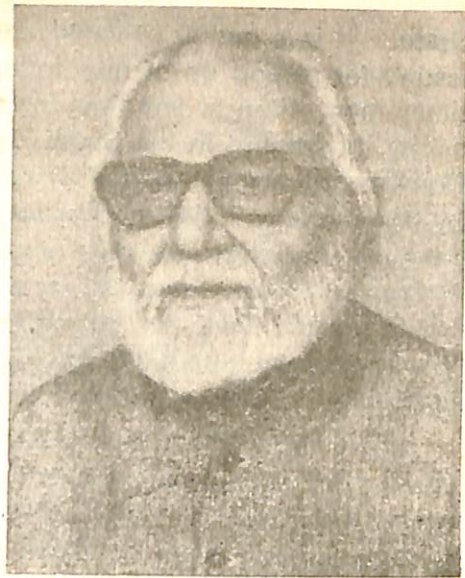
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ORISSA REVIEW seeks to provide a condensed record of the activities and official announcements of the Government of Orissa and other useful information. Many items appear in summarised form. Such items should not be treated as complete and authoritative versions. Although published on behalf of the Government of Orissa, Information & Public Relations Department, the views in the items expressed in the "ORISSA REVIEW" are not necessarily those of the Government of Orissa.

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Message of Governor



“ Brothers and sisters of Orissa,

On this historic day when the country is celebrating the 34th anniversary of our Republic, I take the opportunity of conveying my good wishes, to the people of Orissa. Right from the day, I assumed Office of the Governor, I have regarded myself, as the first servant of the State who has been given, the unique privilege of serving the cause of the people in general and that of the poor Adibasis and Harijans in particular. I am trying hard to identify myself wholeheartedly with the hopes and aspirations of the people of Orissa belonging to all walks of life. In return the people of Orissa have showered their love and affection on me in abundance. In the days to come, it will be my constant endeavour to serve the State to the best of my ability.

It is indeed a paradox that in spite of being blessed generously with the bounties of Nature like mineral deposits, water resources, sea wealth, excellent forest and rich cultural heritage in traditional art and craft, bulk of the population of the State, continues to live below the poverty line. My Government have launched a determined drive for eradication of poverty and for all-round development of the State. Implementation of the new 20-Point Programme of the Prime Minister has been given a very high priority. The Economic Rehabilitation of Rural Poor and National Rural Employment Programme have added a new dimension to our fight against poverty. Successful implementation of the anti-poverty measures and the 20-Point Programme would enable us to help the cause of the poor. I would call upon my dear brothers and dear sisters of Orissa to extend their co-operation for a meaningful and time-bound implementation of the 20-Point Programme and anti-poverty measures of the Government.

Agriculture continues to be the main stay of the people of Orissa. I am happy that the agricultural stagnation has at last been broken and a sustained drive is being made for optimum utilisation of land and water. Mahatma Gandhi had always said and believed that the real India lives in the villages. Our farmers will have to take to tripple cropping pattern, adoption of modern methods of agriculture, better use of inputs like seeds, fertilisers, pesticides and go in for extensive areas under cash crops like cashewnuts, soyabeans, pulses and oil-seeds. We are indeed fortunate that Nature has helped us with good monsoon with a prospect of reasonably good Kharif and Rabi crop this year. But, the successive onslaughts of natural calamities in the past have greatly undermined the economy of our State. We have to strive hard not only to repair the damage to our economy, but to strengthen its fabric by intensifying agricultural development and by bringing larger areas under irrigation as well as to enlarge the scope of agro-based industries.

It is heartening to see that the sky line of the State is fast changing with a new industrial resurgence. A number of prestigious central projects have come to Orissa and a number of large, medium and small-scale industries are coming up in the

State. It is a matter of satisfaction that the number of licence and letters of intent issued for setting up of new industries in Orissa during the past three years was three times more than at any time in the past. The State's increase in Plan outlay and per capita investment in the Sixth Plan has been much more than the Fifth Five-Year Plan. My Government has added a feather to its policy of industrial development programme by laying the foundation of a prestigious Charge Chrome Plant at Bamnibal recently with the blessings of our beloved Prime Minister. I would call upon the young entrepreneurs of Orissa to take full opportunity of the congenial industrial climate created in the State for setting up small scale and cottage industries which will be able to provide adequate employment. The call of the hour is to be self-reliant in all spheres.

To cope with the expanding industrial complexes the problems of acute shortage of power is also engaging the attention of my Government. The heavy complexes like NALCO, are constructing their own captive power plants. My Government has taken up Hydel projects of Indravati, Upper Kolab and Rengali. The Super Thermal Project at Talcher is also under serious consideration. When completed, they will meet all our industrial, agricultural and domestic requirements.

With a view to easing the problem of drinking water-supply in villages, my Government have identified the problem villages and it has been programmed to cover all needy villages with at least one source of potable drinking water-supply by the end of the Sixth Plan. The development of Tribal and Harijan welfare has been given a high priority and suitable educational Programmes have been undertaken. A special feature has been the adoption of adequate legislation and regulative measures for protecting the interests of Scheduled Castes and Scheduled Tribes against all forms of exploitation.

I am happy that the rich tourist potential of Orissa has acquired an international acceptability. The monuments of breath-taking splendour, extensive beaches, sparkling Chilika Lake, dense forest full of scenic beauty and wildlife are being promoted as tourist destination. Declaration of hotel as an industry has given a much needed boost to the construction of hotels and motels which is an essential infrastructure for tourism.

For the promotion of health of the people, all possible steps are being taken to meet the challenge of leprosy. Our district of Ganjam is one of the four districts of India which have recorded highest incidence of leprosy. The other three districts are adjoining Vijaynagaram and Srikakulam in Andhra Pradesh and North Arcot in Tamil Nadu. The constructive steps are being taken side by side to rehabilitate the immuned negative patients by providing them useful employment. Steps are also being taken to fight the menace of T. B. and Cancer. The Cancer Wing of the S. C. B. Medical College at Cuttack is being raised to an autonomous Cancer Institute.

While quite a lot has been done in the State, we cannot possibly afford to be complacent. We will have to re-double our efforts for accelerating the pace of development and reach the desired benefits to the poor and the needy.

I take this opportunity of appealing to all sections of my dear people of Orissa to dedicate themselves for building a strong, vibrant, prosperous and forward-looking Orissa. But this will require the whole hearted efforts of our people—men, women and children, to raise our poorest of the poor State in line with the richest of the States in the country with all the Natural resources and competent brain power at our disposal. I am nappy to see that the people of Orissa are generally free from narrow casteism, linguism, regionalism and communalism which are raising their ugly heads to disintegrate our Nation. We have acquired this synthetic outlook from the rational and generous socio-economic cult of all pervading Jagannath. The people of Orissa should make determined efforts to make their State a strong arm of Mother India. They should also be ready to contribute their share to defend its honour in the hour of need and to add to its glory and prosperity."

JAI ORISSA
JAI HIND
B. N. PANDE

Population and Development

Shri B. N. Pande
Governor of Orissa

While inaugurating an exhibition organised on the occasion of the conference of Legislators of Orissa on Population and Development on September 9, 1983 at Bhubaneswar, Shri B. N. Pande, Governor of Orissa made an indepth analysis of the problem of population growth in our country and called for a rapid change in the attitude of people in favour of small family norm. In achieving this objective, the Governor recommended educational and motivational programmes and appealed for the co-operation of all Political Parties and leaders of public opinion to help bring down the rate of population growth. Shri Pande is a distinguished scholar, author and writer. His address to the legislators will be of much interest to our readers.

Puranas described the episode of the creation of the world in an interesting story.

At the beginning of the Cosmos, only Lord Almighty was there. The Puranas described his presence in the words; "Ekoham Dwitiyo Nasti". Millenium after Millenium passed by and the Lord Almighty was fed up with the monotony. In order to break the monotony, he pronounced "Ekoham Bahusyam" i. e. I should be more than one. So he created Swyam-bhuba Manu. Manu got bored by being alone. So he requested the Lord Almighty; 'Kindly give me a companion'.

Thus Lord Almighty granted his request and created Shatrupa. He directed them to live together and entertain each other. After a while, Manu complained to Lord Almighty that Shatrupa was getting naughty, 'I have become an object of her teasing.' So save me from her company.'

The Lord Almighty granted the request and placed Manu and Shatrupa in secluded enclosures.

After sometime, Manu again approached the Lord Almighty and said "O' Lord, I cannot live without Shatrupa".

Genesis

Lord Almighty afrer admonishing Manu granted his request. After some centuries, the Lord Almighty again felt monotony. So he pronounced: "Ekoham Bahudhasyam" i. e. Manu and Shatrupa's procreations shall fill in the Universe. So, with the blessings of the Lord Almighty, the population of the world is now approaching five billions. Thus it is on account of the wishes of the Almighty that the world today is facing the problem of Population Explosion.

Dimension of Population Problem

India with a population estimated around 700 millions in 1983 is the second most

populous country in the world. With the world population total of around 4,000 millions one in every 7 in the world is an Indian. However, the land area of India of 3.27 million Sq Kilometers assigns it only a rank of six amongst large countries of the world. The U. S. S. R. with 22.41, CANADA with 9.98, China with 9.56, U. S. A. with 9.38, Brazil with 8.51 and Australia with 7.69 million Sq. Kilometers respectively have land areas much larger and population far too smaller than that of India, except China with three times of India's land area but with about one and quarter times the populations. Thus, India has a much more dense population than all other very larger countries and the continued large additions to the Indian population have resulted in a steep increase in the population density of 1.82 per cent per sq. kilo-meter, as of recent period. Where as the worlds population is estimated to be growing only at about 2 per cent per annum that of India has been growing at more than 2.5 per cent per annum in the recent periods. Of course, there are several countries in the world and even in Asia where the population growth rate has been more than 3 per cent. Interestingly, however, a population of 100 to 120 millions is added every decade to our population and this is much larger than the population of quite large number of Nations represent in the United Nations, the magnitude and dimension of India's population problem and the difficulties involved in raising levels of living of the masses become all too obvious.

Rapid Population growth, by itself, does not imply or result in stagnation in the socio-economic development and change in a country. What is more important to note is, whether any given socio-economic structure can stand the strain of a run-away population keeping in mind a clear picture of the human and materials resources available in the country. If all increased production of goods and services are eaten up by the additional population or sometimes even when the additional growth of population is more than the growth in economic and social development, there will be an actual lowering of the standard of living of the masses resulting in political upheavals and social chaos.

At the present rate of population growth, which is estimated to be around 2.5 per cent per annum, India is expected to double its population before the end of the century and cross the one billion mark. A study of the pattern of growth of India's population indicates that while between 1891 and 1921 the population of India increased by only 15 million, after 1921, the population has tended to growth at a much faster rate,

Strategy

Talking only of the population—influencing policies aimed at reducing fertility, India was the first country in the world to adopt family planning as an official policy in 1951. Jawaharlal Nehru, our late Prime Minister, clearly enunciated the policy of the Indian Government when he said: "This question of family planning is one of very great importance. It is necessary as a social obligation in the present circumstances of India and for the health and happiness of the family. The growth of population is intimately connected with our strategy for development in India". Prime Minister Shrimati Indira Gandhi also voiced similar thoughts when she said: "To plan when population growth is unchecked is like building a house where the ground is constantly flooded. Family planning in our country is an essential part of our whole strategy of enlarging welfare. Greater welfare is in fact the only reason for family planning and we need it, not because we are against more children, but because we want every child to have the best opportunity possible in life. We want our children to inherit a better world than our own. This is the aim of every father and mother and this is the objective of planned development".

The family planning programme in India is "time-bound and target oriented". The programme is based on the principle of free choice and coercion is not involved. A sound base of family planning Education and motivation is being laid to ensure long-lasting results. The family planning programme is integrated with the maternal and child health and nutritional services so that opportunities are provided for ensuring the health of the mother and the children. The parents are thus assured of better chances of the survival of their children to adulthood. A net-work of services is provided

through the primary health centres and sub-centres to reach the remotest rural areas. A system of commercial distribution of Nirodh through 2,21,558 retail outlets makes it available to people, at highly subsidized rates. Efforts are also made to reach people in the organised sectors such as the industries, railways, mines, tea plantations, defence services, etc. The co-operation of voluntary organisations is obtained for better involvement of the people.

Man has generated three aspects of Population developments closely inter-related with scientific and technological changes which have profoundly affected, the attitudes, values, institutions and behaviourism. These may be termed the population explosion, the population implosion, population dispersion and the technoplosion elements of the "Social Morphological Revolution".

Population Explosion

The population explosion perhaps is only one of these explosion developments which is widely understood. It refers, of course, to the remarkable acceleration in population growth in economically developed countries during the three centuries of the modern era and in the less-developed countries, containing over two-third of man-kind mainly since World War II :

The facts of the population explosion may be briefly summarised. It required the preponderant proportion of the time man has been on the earth, from two million of four million years for man to generate a population of one billion persons, a number not reached until about 1850 A. D. But it required only 80 years to add a second billion by 1930 and 30 years to add a third billion by 1960 and only 20 years to add a fourth billion by 1980. It is likely that world population would reach 7 billion by the end of this century, in the developing nations having a population of 5.4 billion 2000 A. D. whereas population in the developed nations would be 1.6 billion (United Nations' World Population Prospects, New York, United Nations, 1960 p-23).

Population Implosion :

The population implosion, according to the United Nations Development Programme refers to the increasing concentration of population on relatively small portion of the earth's surface, a phenomenon, better known as 'Urbanisation'. This is a population development much more recent than the population explosion dating largely from mid-nineteenth century. Using the criterion proposed by the United Nations for urban (20,000 or more persons) little more than 2 per cent of the world's peoples were urban in 1800. At the present time, although the results of the recent census have not yet become available on a world-wide basis, world urbanisation is at a level of about 37 per cent, 66 per cent in the economically advanced areas and 25 per cent in the developing areas. By the end of this century, according to the latest UN projection, more than half of the people in the world may be living in urban areas, 81 per cent in the developed areas and 43 per cent in the developing areas.

Should this come to pass, it would be accompanied by the most profound changes in human values and in the way of life that mankind has ever experienced.

The population dispersion

Yet another aspect to which the demographic experts have drawn our attention is the—"Population Dispersion".

The Population Dispersion refers to the increasing heterogeneity of people who share not only the same geographic locals but also the same social, economic and political activities. By heterogeneity is meant diversity by culture, language, religion, values, ethnicity, race and life style.

Since the end of World War II, this trend has been accompanied by the "Revolution of Rising Expectations". In consequence, this generation is the first in man's history in which there are virtually no societies in the world which do not insist on freedom and independence if they have not yet achieved them, and there are virtually no minority groups in any nation which do not insist on equality of opportunity and which do not possess the vision of egalitarianism in a pluralistic society.

The Population Displosion is harder to qualify than the population explosion and implosion. Yet, it is clear that with the shrinking of the earth by recent scientific and technological advances in transport and communication that diverse peoples have had more contact and inter-act within the past century than in probably all previous history combined. Moreover, the same geographic areas after evolution of rising expectations have generated intense inter-group conflict through out the world on an un-precedented scale.

Population displosion by reason of the revolution of 'rising expectations' has increased inter-group tensions and open conflict throughout the world. The tribal conflict in Africa, the Black and White confrontation in the Union of South Africa, Rhodesia, England and United State also point to the revolution of rising expectations.' In India the agitation in Assam and Punjab point to the same direction. The tragic confrontation between Tamilians and Sinhalis in Sri Lanka is also the result of 'revolution of rising expectations.'

It is a matter of concern that in the developing nations which have invested; heavily in Family Planning Programmes over considerable periods of time i. e. India and Pakistan, little more than 10 to 15 per cent eligible couples have been reached and the birth rates have not yet materially gone down necessitating a more vigorous campaign.

Population Targets

The population growth rate must, of course, be considered a major factor in planning any economic development. It has conclusively been admitted that rapid population growth is a serious barrier to increasing *per capita* income.

When we analyse the progress of the Family Planning Programme in India, we find that it has not been uniformly good in all the States. Broadly speaking, Punjab, Orissa, Haryana, Maharashtra, Andhra Pradesh, Tamil Nadu and Kerala have done better than the other States. States like Bihar, Uttar Pradesh, Rajasthan, Assam, Madhya Pradesh, Jammu and Kashmir and

West Bengal have not made satisfactory progress. I mention here with pride that in 1975, the State of Orissa received the Karve Award, being adjudged as the best State in the family planning efforts.

The Government of India fixed family planning targets for the first time in 1966-67 and since then targets have been fixed each year. It is interesting that while none of the States in India had been in a position to achieve the all-India targets there were 36 districts which had exceeded the all-India target of 19.5 per 1,000 population in sterilisation and there were nine districts which had exceeded the I. U. C. D. target of 15.3 per 1000 population. Four districts, namely, Mayurbhanj in Orissa, Greater Bombay in Maharashtra, Kapurthala in Punjab and Hyderabad in Andhra Pradesh had exceeded the combined sterilisation and I. U. C. D. target of 34.8 per 1,000 population. It has been generally found that those districts which were better off economically and socially have, by and large, performed better in family planning. It has also been noticed that those States which are economically better off and are better administered have achieved greater success in family planning.

Future Outlook

The population of India is likely to reach the one billion mark by the turn of the century. So far, India's population has grown because of a rapid fall in the death rate. In future it will depend more on the fall in the birth rate. The death rate which at present is around 14.15, is likely to fall to about 10 by the end of the present decade. Further decline will be more difficult, and will take a longer time. The critical factor is determining the growth of population will, therefore, be the birth rate. If the birth rate falls rapidly from the present 39 to about 25 per thousand in a period of ten years or so, the population might reach the one billion mark only towards the end of the present century. It is not easy to comprehend all the social, economic and political problems which India will have to face when it will be required to feed, clothe, educate and find employment for a population twice its present size. The success of the family Planning Programme, therefore, is of critical importance.

But the success would require a change in the attitude of the people of India so that a two-child family becomes the way of life. But how to bring about a transformation in the attitude of the people is a critical question. In the western countries, this change was brought about after the industrial revolution and with the rising expectations of the people for a higher standard of living. Subsequently, such factors as the status of women in society, the high cost of the upbringing of a child, compulsory primary education of children, and others contributed towards a change in the attitude of the people favouring a smaller family. But if the demographic transition is to occur in India, only after her people attain a high standard

of living, or when there is universal general education, it may take too long and by that time our population might become too large and unmanageable. Hopefully, therefore, India and countries similarly situated would develop their own pattern to bring about a rapid decline in their birth rate. Perhaps a rapid change in the attitude of the people in favour of a small family norm can be brought about through an extensive educational-motivational programme, in which all political parties and social leaders join hands.

I earnestly appeal to the members of Orissa Legislature and social workers of Orissa to join hands with the Government to make this family planning and welfare programme a success.

Employment and Earnings in Agriculture

Shri R. K. Panda*
and
Dr. J. P. Singh**

In the economy of India, agriculture has importance both from the point of view of volume of employment and value of goods. But lack of regular employment opportunities in agriculture throughout the year stands as the main cause of low earnings of the farmers in our country. So, in the present context, it is necessary to get a clear picture regarding employment of labour in agriculture as it is the largest contributor to farm income.

The major objective of this study is to examine the nature of employment and earnings of small, medium and large farmers under irrigated and unirrigated conditions. Pipli Block of Puri District has been chosen as the area of study. It is hoped that the results of this study will help the policy makers in formulating an adequate programme of employment for the benefit of the farmers.

Methodology

The sampling technique adopted in this study is two-stage random sampling, the village being first stage and holding the second stage units. Taking Pipli Block as a whole, the villages were stratified into irrigated and unirrigated village. From each group, two sample villages were

selected at random. The holdings within each village were then stratified into three size groups, namely small (below 1.00 hectare), medium (1.01—2.00 hectares) and large (2.01 hectares and above). From each size group, five holdings were selected at random. The total number of holdings selected from the region was sixty. From the selected households, detailed information was obtained on schedules specially structured for the purpose. The study relates to the year 1981-82. The results of the study are presented and discussed below.

Results and Discussion

Family Labour

Family labour is the most important resource and when properly employed it enhances the total earnings of the household. Before an assessment is made in regard to the extent and pattern of employment of family labour, it is necessary to get an idea about real earners available in both categories of sample households. The following tables show the variation in number of family labourers available for farm work alongwith total number of earners per holding of different size groups.

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TABLE 1

Number of earners per holding in the varying size group of holdings

Size groups	Irrigated		Unirrigated	
	No. of earners	Persons employed in agriculture	No. of earners	Persons employed in agriculture
(1)	(2)	(3)	(4)	(5)
Small ..	2.12	2.06	1.88	1.57
Medium ..	2.45	1.95	2.11	1.41
Large ..	2.09	1.78	2.06	1.78
Average ..	2.22	1.93	2.02	1.59

The table shows that the earners per household are more in irrigated villages than in the unirrigated villages irrespective of size groups. The number of persons employed in agriculture is also more in the former case excepting in large size groups, where they are equal in both the categories. The large size farmers generally have got

less family labour engaged in farm work and hence employ more of hired labour in their fields.

Table 2* illustrates the extent of availability of family labour under varying size groups of the two categories of sample farms.

TABLE 2

Available family labour days (for agriculture) per farm and per hectare under varying size groups (in mandays)

Size groups	Irrigated		Unirrigated	
	Per farm	Per hectare	Per farm	Per hectare
(1)	(2)	(3)	(4)	(5)
Small ..	618	702.27	471	628.00
Medium ..	585	350.29	423	247.36
Large ..	534	248.37	534	264.35
Average ..	579	371.15	477	320.13

The above table reveals that, the availability of family labour both in irrigated and unirrigated farms works out to 579 and 477 mandays respectively. The corresponding figures per hectare are 371.15 and

320.13 mandays respectively. Thus the availability of family labour is more in irrigated farms than unirrigated farms, in all the sizes excepting large size group. This is due to the fact that family size

*Available family labour was worked out by multiplying 300 with the family members employed in agriculture

in irrigated farms is greater than that in unirrigated farms.

Employment

The working strength of the cultivating households does not decide the earning capacity in a rigid manner. It further depends on the number of days of employ-

ment of the members of the family. Low family labour employment leads to disguised unemployment.

Total farm Employment

Employment of family labour per farm and per hectare under different size groups of both farm categories is given in Table 3.

TABLE 3

Days of employment of family labour per farm and per hectare under varying size groups (in mandays).

Size groups	Per farm			Per-centage of difference	Per hectare			Per-centage of difference
	Irrigated	Unirri-gated	Differ-ence		Irrigated	Unirri-gated	Differ-ence	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Small ..	259.12 (41.92)	144.01 (30.57)	115.11	79.93	294.45	192.00	102.45	53.35
Medium ..	378.56 (64.71)	180.86 (42.66)	198.10	109.77	226.68	105.53	121.15	114.80
Large ..	393.67 (73.72)	291.85 (54.65)	101.82	34.88	183.10	144.48	38.62	26.73
Average ..	343.78 (59.37)	205.44 (43.06)	138.34	67.33	220.37	137.87	82.50	59.83

The number of days of employment of family labour per farm works out to 343.78 days for irrigated farms and 205.44 days for unirrigated farms. The corresponding figures per hectare are 220.37 and 137.87 days respectively. As between different size groups, the number of days of employment of family labour varies from 294.45 to 183.10 days in case of irrigated farms, while that in case of non-irrigated farms, it varies from 192.00 to 145.48 days. The number of days of employment of family labour as a percentage of the total available family labour days works out to 41.92 and 30.57 per cent in small size group and 73.72 and 54.65 per cent in large size group, both in irrigated and non-irrigated farms, respectively. Thus, the employment of family labour in case of small farms is extremely low. This can be attributed to the

fact that smaller farms do not have a reasonable size to employ all of their family labour. Large farms on the other hand not only employ most of their family labour, but also rely upon hired labour as well for various farm operations.

An examination of the table further reveals that, there has been increase in family labour employment by about 20 per cent due to irrigation. The medium farms among all the size groups derive greater benefit in this regard.

Non-farm employment

After having analysed the farm employment of family labour, we may now turn to the non-farm employment, because, the total employment consists of both farm and non-farm employment. The non-farm

Figures in parenthesis denote the percentage to the total available family labour days

employment for higher size groups is not very important in this area. Only the small size group of farmers get a sizeable off-farm employment by waging their labour. Very few people are engaged in retail trading, professional activities other than farming.

Most of the people remain idle, when there is no farm work.

The following table show the non-farm employment of family labour under different size group of holdings:

TABLE 4

Non-farm employment of Family Labour under different size group of holdings (in mandays)

Size group	Irrigated		Unirrigated	
	Days of* employment	Percentage to available family labour	Days of employment	Percentage to available family labour
(1)	(2)	(3)	(4)	(5)
Small ..	186.38	30.15	132.75	28.18
Medium ..	62.24	10.63	80.16	18.95
Large ..	40.33	7.55	73.94	13.84
Average ..	96.32	16.63	95.62	20.04

The above table indicates that the non-farm employment is very inadequate in both categories of sample farms. On average, it works out to 96.32 and 95.62 days both in irrigated and unirrigated farms, respectively. It is however interesting to note that, irrigation has not increased the scope of non-farm employment in any of the farm size group excepting in small size group, which is only due to the waging out of their labour. Wage employment in non-agricultural pursuits is essential for this farm size group in order to compensate for low employment in agriculture. Although some

members have got employment outside the farm as primary school teachers and other Government services, yet they have not been included as earning members in agriculture.

Thus, the overall employment picture per household for both farm categories is one of despair and one wonders how the people in these areas manage with such meagre employment. They may manage to subsist by pooling the meagre incomes got from all sources.

*It excludes employment in Government services, Company services, etc.

Hence, total employment per household is relevant. This constitutes both the farm and non-farm employment in agriculture. Table 5, shows the same.

Total days of employment

TABLE 5
Total days of employment of family labour in different size groups

Size Groups	Irrigated		Unirrigated	
	Total days of employment	Percentage to total available family labour	Total days of employment	Percentage to total available family labour
(1)	(2)	(3)	(4)	(5)
Small ..	445.50	72.09	276.76	58.76
Medium ..	440.80	75.36	260.62	61.61
Large ..	434.00	81.28	365.79	68.50
Average ...	440.10	76.02	301.06	63.30

Total employment days of family labour per household both in irrigated and unirrigated farms works out to 440.10 and 301.06 days respectively. Total days of employment as a per cent to total available family labour days are 76.02 and 63.30 per cent in both farm categories respectively. This shows that the employment opportunities are greater in irrigated farms than unirrigated farms. This is mainly due to better cropping pattern, higher yield rates and higher

intensity of cropping under irrigated conditions.

Extent of unemployment

The difference between the total available family labour days and the total employment days gives an estimate of the extent of unemployment of family labour that exists in the area. The following table brings out the extent of unemployment among the sample farms.

TABLE 6
Extent of unemployment of family labour under different farm size groups of both irrigated and unirrigated farms.

Size groups	Irrigated		Unirrigated	
	Days of un-employment	Percentage to total available family labour	Days of un-employment	Percentage to total available family labour
(1)	(2)	(3)	(4)	(5)
Small ..	172.50	27.91	194.24	41.24
Medium ..	144.20	24.64	162.38	38.39
Large ..	100.00	18.72	168.21	31.50
Average ..	138.90	23.98	174.94	36.70

Data presented in Table 6 reveals that, nearly 24 per cent of the available family labour in irrigated farms and 37 per cent in unirrigated farms are unemployed. Thus, the extent of unemployment is more in case of unirrigated farms than irrigated farms. Among different sizes, the unemployment in small farms is highest irrespective of the type of farm and it declines with the increase in farm size. Larger farms provide relatively greater employment

opportunities to the family labour due to their larger gross cropped area, better cropping pattern, devotion of more area to the labour intensive and remunerative crops, etc.

Earnings (Income)

Employment is a means to earn incomes and to get a command over goods for living. The source-wise household income is given in Tables 7 and 8.

TABLE 7
Household income by sources in different size group of holdings

Size groups	Irrigated			Unirrigated		
	Farm income	Non-farm income	Total	Farm income	Non-farm income	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Small	2,939.71 (3,321.87)	750.54	3,690.25	2,008.84 (2,671.75)	645.31	2,654.15
Medium	4,097.58 (2,453.64)	311.19	4,408.77	3,349.35 (1,958.68)	430.68	3,780.03
Large	5,206.34 (2,421.08)	209.60	5,415.94	4,076.60 (2,018.01)	345.75	4,422.35
Average	4,081.22 (2,732.19)	423.78	4,405.00	3,144.93 (2,216.14)	473.91	3,618.84

Figures in the brackets indicate income per hectare.

TABLE 8
Per capita and per worker income of farmers in different size group of holdings

Size groups	Irrigated			Unirrigated		
	Household income	Per capita income	Per worker income	Household income	Per capita income	Per worker income
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Small	3,690.25	702.90	1,740.68	2,654.15	494.25	144.78
Medium	4,408.77	918.50	1,799.50	3,780.03	908.66	1,791.48
Large	5,415.94	1,314.54	2,591.35	4,422.35	1,128.15	2,146.77
Average	4,505.00	954.45	2,029.27	3,618.84	807.78	1,791.50

Farm business income is one of the most important measures of farm efficiency, as it signifies the earnings of the farmers and their families for their capital investment, labour and marginal work. The non-farm income embraces the income of the farmers from specific sources, such as income from working as a labourer in other farms or allied activities, marketing of agricultural products, cattle dealings, bullock cart dealings, etc. It does not include the income of the Government Servants or the like. In case of labourers, the wages they get has been taken into consideration. But in other cases, the net amount, which the farmer gets after deducting the costs (but includes wage of his labour) is taken into account.

The tables reveal that, farm business income both per farm and per hectare is more on irrigated farms than unirrigated farms. Among different farm sizes, the average farm business income increases per farm, but decreases per hectare with the increase in farm size. Higher size group is associated with higher farm business income is due to the fact that, there is greater net income and greater scope for use of family labour in higher size and higher level of investment.

In respect of non-farm sources, the income derived by the unirrigated farms are however higher than that by the irrigated farms in the area. As between size groups,

the higher the size group the lower is the non-farm income. This is due to the fact that, some members of the lower size group work as daily labourers in other farms and get wages whereas in middle and large size groups, it rarely happens as some of the farmers in these size groups get off-farm employment through cattle-dealings, marketing of paddy, pulses, etc., and get some amount of income. There is however no significant difference in this regard between the two farm categories, indicating thereby the absence of the effect of irrigation on this source of income.

In terms of *per capita* and per worker income, farmers of irrigated region are found to be better than the farmers in the unirrigated region. This is true in case of all size categories.

Conclusions

An adequate programme of employment should be based on an understanding of current levels of unemployment. Our study has shown that, agriculture provides employment, a little more than fifty per cent to the family labours. So, half of the days, they are to remain unemployed. The level of such unemployment is quite high in unirrigated regions. But if irrigation facilities are provided, then they are likely to get more of employment. Apart from this, they should be employed in cottage and small-scale industries in order to get full employment.

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CENTRAL ASSISTANCE FOR ENVIRONMENTAL IMPROVEMENT OF SLUMS IN ORISSA

The State Government have been providing funds for environmental improvement of slums in Cuttack city. It was felt that more slum population in other cities of the State should also be covered under this Scheme. The State Government for this purpose approached Government of India for financial assistance. Government of India have released Rs. 11.00 lakhs for environmental improvement of slums in seven towns of the State. These are Bhubaneswar, Puri, Berhampur, Rourkela (Civil Township), Rourkela (Steel Township), Sambalpur and Jagatsinghpur. The Scheme would cover 15,000 slum population in these seven towns. Funds have already been released and work commenced. The slum population in Orissa is about 5 lakhs.

Puranic Tradition and Gandhian concept of ideal State

Dr U. N. Mohanty

With characteristic insight into the Gandhian way of life and philosophy Einstein had opined "Generations to come will scarce believe that such a one as this ever in flesh and blood walked upon this earth"¹. The irony of the fact is that within the brief span of 35 years of independence, we Indians have drifted so far away from the ideals propounded and practised by the Mahatma, that he has now been reduced to the status of the protagonist of an allegory. Pandit Nehru, the then Prime-Minister had told in a Radio broadcast to the Nation, immediately after the Mahatma's death "We can best serve the spirit of Gandhiji by dedicating ourselves to the ideals for which he lived, and the cause for which he died"². Later, some preliminary steps were undertaken to give concrete shape to Gandhiji's ideals. There were haphazard attempts at realising the Mahatma's dream of a Rama Rajya through institutions for Basic Education and training Centres for village level workers. Soon after, India's political colour changed. Indian leadership deviated from the Mahatma's ideals because of factionalism in party politics, desire for power and the influence of western materialism, resulting in keeping Gandhiji's dream a dream only.

Gandhiji was well aware of a strong rival group during his life time. He had once remarked, aiming at the critics of his movement for 'Charkha'—"People have laughed at my spinning wheel and an acute critic once observed that the spinning wheel would be

so discredited that when I die, the wheels would serve to make the funeral pyre"³. The post-independence leadership had, so to say abandoned all the ideals that the Mahatma cherished on his funeral pyre.

The aim of achieving independence was to get recognition for India as a State and a Nation as well in the field of international activities and to find a distinctive place of her own. We longed for the world's respect for our own dignified stand, But we lack that dignity to-day. Neither is there the distinction. India has now become a laboratory and test ground. In the past there was perfect religious harmony in India and she had been able to maintain her typicality owing to this harmony. But now we have become wholesale imitators. We have been going on aping others with least regard for our established heritage and our social norms. We invite farmers from Japan and West Germany to develop our agriculture, establish Universities of Agriculture in the footsteps of the Americans, consult the Agriculture experts from the USSR, import machinery and technological know-how from the U. K. West Germany and the USSR for our steel industry, establish Regional Teachers Training Centres like the American and I. T. Is. like the English and West Germans. We have also introduced the low-priced text-books of the U. S.A. and USSR in our country. Even we are proud of shaping our houses, offices and industries in the pattern set by the foreigners.

On the otherhand, a large number of villagers have been impoverished. The plight of the hungry multitude has worsened. The village farmer is neglected. Social norms have been demoralised. Politics is devoid of any sense of morality. The fire of discontentment and uncertainty has spread every where. Our very independence is endangered. The contemporary Indian society is divided. Communalism, Regionalism and Casteism have full sway. India, in short, is now a no mean's land. There is an unbridgeable gulf between the ruled and the Ruler. The higher rungs of society are busy looking after their own vested interests. Lust for power has made the leadership gone astray. They remain preoccupied in capturing and retaining power. As a result, most of the Indians are either deceived or neglected. We have lost our individuality by graduating our values through the materialistic views of the West.

Gandhiji bestowed us with the weapon of non-violence. Had we been able to use it conscientiously, India could have established a significant role in the International field. Pearl Buck, the Nobel laureate, had aptly observed "India will live and become great in our world, only as her people use this priceless force, the force of non-violence which the life of Gandhi exemplified for them." But it had not been possible. Jealousy, hatred, egotism, and immorality have been rampant in contemporary Indian society. Brazen show of violence has been an everyday affair. The common man cannot be held responsible for this degeneration. Gandhiji had observed. "There is a verse in the Bhagavad Gita which, freely rendered, means masses follow the classes"⁵. If the very people who are established at the highest social positions in politics and riches are immoral and indisciplined, naturally, the whole society would be murky and based.

At present we evaluate Indian civilization, culture and social ethics with Western materialistic views. We want to metamorphose Indian State craft blending it with Western ideals. Observing this tendency Gandhiji had criticised. "We are too much obsessed by the glamour of the West. We forget that what may be perfectly good for

certain other, and often diametrically opposite conditions in the East. Free trade, which may have been good enough for England would certainly have ruined Germany. Germany prospered only because her thinkers, instead of slavishly following England, took note of the special condition of their own land and devised economics suited to them."⁶

But the post-independence leadership was desirous of routing out all uniqueness from the face of Indian society, resulting in the present devaluation of social life. P. C. Ghosh, an eminent freedom-fighter has remarked "The real crisis that faces India to-day is the crisis of moral bankruptcy which is most glaring among the educated classes. If only men in the upper strata of the society try to set an example to others by their character then alone will it be possible to stem the rot that has set in. Otherwise by the inexorable law of Nature the country will sink to the depths of degradation towards which it is now rushing headlong"⁷. Gandhiji had warned the Indian intelligensia seeing their imitation of Western mode of life. "Western nations are groaning to-day under the monster god materialism. Their moral growth has become stunted. They measure their growth in dollar. * * * American wealth has become the standard, rather than truth, kindness, generosity, love, sensitivity and sharing the experiences of life freely and fully.

Gandhiji had based the India of his dreams on the eternal, traditional Indian ideals. He had stated. "I shall work for in whose making they have an effective voice, an India in which there shall be no high class and low class people; an India in which all communities shall live in perfect harmony. There can be no room in such an India for the curse of untouchability or the curse of intoxicating drinks and drugs. Women will enjoy the same rights as men. Since we shall be at peace with all the rest of the world, neither exploiting, nor being exploited, we should have the smallest army imaginable. All interests not in conflict with the interests of the dump millions will be scrupulously respected, whether foreign or indigenous. This is the India in my dreams."⁹. But this hope is

yet to be realised. The fruits of independence have been unattainable for most of our citizens.

Gandhiji had emphasised. "There is no such thing as Gandhism; and I do not want to leave any sect after me. I do not claim to have originated any new principle or doctrine. I have simply tried in my own way to apply the eternal truths to our daily life and problems"¹⁰. His life was dedicated to the worship of absolute truth and its applicability in day to day affairs.

India of Gandhi's dream or Rama Rajya was based on the principle of individualism. To quote him. "The first step to Swaraj lies in the individual. The Great Truth; as with the individual so with the universe, is applicable here as elsewhere. Government over self is the truest Swaraj. Swaraj of people means the sum total of the Swaraj (self-rule) of individual"¹¹. By this he attached much importance to morality in the nation's administration. In any country if every individual is inspired by the sense of morality in all his actions, then only it will be possible to establish Swaraj or Rama Rajya. Hence the steps required to regulate an individual's life are to be taken by a nation desirous of establishing true Swaraj.

Gandhiji's concept of Swaraj is founded upon ancient Indian heritage. Though democracy is established in India the individual's role in it is insignificant. The common man has no means to influence public administration except casting votes in the occasional elections. The leadership is always manoeuvre to centralise the administrative powers in its hands. The long hand, of political power have spread to all fields of social activities. The Indian leadership has been off its orbit, being influenced by Western Political ideology. Gandhiji once said. "We have long been accustomed to think that power comes through Legislative Assemblies. I have regarded this belief as a grave error brought about by inertia or hypnotism. A superficial study of British history has made us think that all power percolates to the people from Parliament"¹². But ancient Indian heritage recognised the common man's role in formulating political ideals. For this Gandhiji had said "power resides in the

people and it is entrusted for the time being to those whom they may choose as their representatives"¹³. But now Indian democracy is endangered as the common man has not been made aware of his rights and duties. For this our late President Dr. Zakir Hussain once remarked that democracy in India can deteriorate, it can be transformed into some thing opposite, into some form of totalitarianism, if we are not constantly on our guard"¹⁴.

The common man played an important role in Ancient Indian administration though the Sovereign was absolute. There are many instances in our Puranas that the opinion of the common man was valued much in selecting a King. For instance, in the Ramayana Valmiki recognised that sovereignty primarily, was vested among the people who had the right not only to formally sanction a King's succession to the throne, but also to stop it, if it went against their interests. Thus king Dasaratha had to seek the approval from his subjects of his proposal appointing Rama as Yuvaraja and king Sagara banished his eldest son Asamanja, for his practices were objected to by the subjects"¹⁵.

Now, religious intolerance and irreligiousness have been given importance in the name of secularism. On the one hand some claim that there is no place of religion and morality in politics or statecraft, whereas on the other hand others create social disturbances without taking the real essence of religion into account. Gandhiji disliked both these extremities. He had said. "Politics bereft of religion are a death-trap, because they will kill the Soul"¹⁶. For this he infused spiritualism into politics. He believed that a religion which could not be practised by the common man or which could not be put into practice in the political sphere was no religion at all. He explained. "For me, all the principal religions are equal in the sense that they are all true. They are supplying a felt want in the spiritual progress of humanity"¹⁷. It shows his recognition of the social responsibility of the religions. According to him. "I do not expect the India of my dream to develop one religion i.e. to be wholly Hindu, or wholly Christian or wholly Mussalman, but I

want to be wholly tolerant with its religions working side by side with one another. "18.

Gandhiji had deep reliance in Hinduism. He had welcomed the expansion of Hindu religious viewpoints. Once he said. "I take pride in calling myself a Hindu, because I find the term broad enough not merely to tolerate, but to assimilate the teachings of prophets from all the four corners of earth"19. He had a profound knowledge of various Indian religious scriptures. He had also studied the scriptures and creeds of all other religions. He accepted the Timeless human ideals only after analysing the issues by his own intellectual judgement. Commenting on the assumption of his being influenced by Tolstoy and Buddha Gandhiji had said. "I do not believe that my philosophy is an indifferent mixture of Tolstoy and Buddha. I owe much to Tolstoy and much to Buddha. I still somehow or other fancy that my philosophy represents the true meaning of the teachings of the Gita"20. He had accepted the Bhagavad Gita as his life's ideal. He has firmly declared that the Gita incorporated all the essence of Hindu religion. To quote him again. "It is the one open book to every Hindu who will care to study it, and if all the other scriptures were reduced to ashes, the seven hundred verses of this imperishable booklet are quite enough to tell one what Hinduism is and how one can live up to it. And I claim to be a Sanatanist, because forty years I have seeking literally to live up to the teachings of that book"21.

The European state-craft was the basic foundation of European civilization, as if no other social existence or probability was there. Civilization was often dismembered, as a result of internal disturbances or external aggression, unless it was protected by hook or crook. Preservation of State, even by throwing away the sense of righteousness and religion to winds, was the only protection of civilization. But in ancient India, Statecraft was considered one of the King's sacred duties. The tendency to stick to religious norms, even during the battle, was sacrosanct, So the battle-field was identified as "Dharmakshetra". Opportunities like deceit, self interest and hypocrisy had no use for a holoed king. Indian cultural norms despised temptation for indulgence in power

and authority on the part of a king. Victory over the senses and modesty were the key-notes of a king's dignity. Gandhiji followed this customary Indian ideal, while saying. "By political independence I do not mean an imitation of the British House of Commons or the Soviet rule or the Fascist rule of Italy or the Nazi rule of Germany, They have systems suited to their genius. We must have ours suited to ours. What that can be is more than I can tell, I have described it as Ramaraj, i.e. sovereignty of the people based on pure moral authority"22. Unfortunately there is not even a trace of this morality in present day politics in India.

Gandhiji hoped for such a system of administration wherein there was no opportunity for the rulers turning into autocrats. He said. "I hope to demonstrate that real Swaraj will come not by the acquisition of authority by a few, but by the acquisition of the capacity by all to resist authority when abused."23 In ancient India there was no place for autocracy on the part of a King. Indian thought has placed the king on a God's footing. According to Manu 'Mahati Debata Hyesa Nararupena Tistati'. The dignity of the cardinal duty of serving his subjects gave the king extraordinary authority. But when he deviated, his dignity was also razed to the ground.

The King's responsibilities have never been disputed in ancient India. European political thought considered the King vested with absolute power. None of his deeds was labelled illegal. 'The king can do no wrong' was the belief of the ancient European thinkers. But in ancient Indian ideals there was no absolute power with the King. Religion itself was our Rule of Law. The King was also subjugated to this law. The State was being ruled by the King according to the provisions laid down in the scriptures.

The King, consecrated by the formality of the coronation, promised to rule according to the norms of religion. In case he deviated he was denounced as a tyrant and immoral. In Indian politics both the King and his subjects were subordinate to the scriptures. The Social and Voluntary Organisations confirmed to the traditions. Gandhiji was in favour of such decentralised administrative

systems. He told that, "What I disapprove of is an organisation based on force which a State is, Voluntary organisation there must be."²⁴ He wanted to solve the local problems through the village bodies. Moreover these Grama Panchayats were responsible for guiding village life from every aspect. Now the Grama Panchayats are recognised as Statutory organisations, yet these are either defunct or mismanaged for a long period. So people lose any direct contact with the administration. Gandhiji once told, "The Government of the village will be conducted by the Panchayat of five persons, annually elected by the adult villagers, male and female, possessing minimum prescribed qualification."²⁵ But the gulf between the ruler and the ruled prevalent in pre-independent India still exists. Seeing this Late Dr. Zakir Hussain had said, "We have not eradicated the old tendency to look upon the government as the party that is in duty bound to give, and the citizen all his constitutional duties not withstanding as the party entitled to receive."²⁶ The ancient Indian King was a father figure for his subjects. Gandhiji followed this ideal in formulating his concept of the ideal State or Ramaraj. He quoted Thoreau "That Government is best which governs least." He was not in favour of subjecting all the aspects of social life to Government control.

The problem of unemployment and under-employment has been a concerous growth in the development of our country. Despite rapid industrialisation, this problem has become more acute. Hence Gandhiji emphasised the revival of cottage industries. India is an agricultural country with more than 70 per cent of her population solely depending on agriculture. As the Indian farmer is engaged in farming only for half of the year, the leisure, according to Gandhiji, should have been well employed in creative activities like cottage industries. He was aware that the poverty of the villagers reduced them to fearsome and immoral beings. The first steps to make them strong and moral is eradication of poverty. He expressed this feeling in a letter written to Pandit Nehru. "My ideal village will contain intelligent human beings. They will not live in dirt and darkness as animals. Man and women will be free and able to hold their own against any one in the world.

There will be neither plague, nor cholera, nor small-pox; no one will be idle, no one will allow any luxury. Every one will have to contribute his quota of annual labour."²⁷ Hence his apprehension that the extinction of village industries would completely ruin the 7,00,000 villages in India²⁸.

He never denounced establishment of big industries or mechanization, though he did not prefer rapid industrialization, forming his opinion on the conditions prevailing then in India. According to him, "Mechanization is good when the hands are too few for the work intended to be accomplished. It is an evil when there are more hands than required for the work."²⁹ He used to say that the machines are for the benefit and allround development of the man, but man is not created for the machine.

Nationalisation of different establishments is getting an acknowledged place in independent India. The result we see is discouraging. Gandhiji had warned against this aspect of nationalisation. "In Jawaharlal's scheme of free India, no privileges or the privileged classes have a place. Jawaharlal considers all property to be state-owned. He wants planned economy. He wants to reconstruct India according to plan. He likes to fly: I do not"³⁰.

The evils of drinking and gambling have been extensively dealt within ancient Indian traditions. Drunkenness caused annihilation of the Yadus and gambling was the cause of much indignity and discomfiture for the venerable Yudhisthira. Gandhiji considered drinking and gambling as the two most hainous sins. That's why he once told that if he were made the dictator of India, that too only for an hour, he would have ordered unconditional closure of all the liquor shops.³¹

Gandhiji aimed at adopting non-violence as a national policy. Now-a-days we spend a sizeable portion of the national income on defence and police establishments. When Gandhiji was shown the impracticability of adopting non-violence as a policy of a nation keeping in view the international scene, he had reiterated "I believe that a State can be administered on a non-violent basis if the vast majority of the people are non-violent. So far as I know India is the only country

which has a possibility of being such a State.³² He had implicit reliance in non-violence. Hence his words. "Non-violence is the law of our species as the violence is the law of the brute. The spirit lies dormant in the brute, and he knows no law but that of physical might. The dignity of man requires obedience to a higher law to the strength of spirit³³". He opined that a nation or a group which had made non-violence its final policy, can not be subjected to slavery even by the atom bomb³⁴.

Population explosion happens to be another serious problem of our country. The various programmes of population control, initiated by the Government have been far short in achieving the target set. Gandhiji remarked on birth control. "I have no doubt that those learned men and women who are carrying on propaganda with missionary zeal in favour of the use of contraceptives, are doing irreparable harm to the youth of the country under the false belief that they will be saving thereby the poor women who may be obliged to bear children against their will. The greatest harm, however, done by that propaganda lies in its rejection of the old ideal and substitution in its place of one which if carried out must spell the moral and physical extinction of the race³⁵". Indian traditional thinking considered abortion a deadly sin. Hence his advice to his countrymen for practising self-restraint to check population explosion, along with prosperity of both the physical and spiritual life of the individual.

To-day's politics has banished truth and morality. The present leadership, influenced by Western way of thinking believe that politics and morality have no connection with each other. They even go to the lengths of quoting the scriptures. But diligent studies have shown that morality was at the apex of political activities. Numerous puranic episodes show that the final culmination of immoral acts was degeneration and decay, though it might have served an immediate purpose, Lord

Krishna, an incarnation of God in the Mahabharata, had to face an ignoble end for some of his immoral deeds.

We attach much importance to the ends rather than the means we undertake. To achieve our end we indulge in any means, lest we may not arrive the goal at all. Dealing on the Mohatma's philosophy of life, Charles Drekmair said "In his political theory Gandhi concentrated on the means of achieving political ends to a degree uncommon in the history of Western thought.³⁶" If there is a single theme in his philosophy it is that the character of the means determines that of the result. We Indians are totally oblivious of this cardinal principle of *modus operandi*.

The legacy of Gandhian philosophical ideal to modern Indian political thought is in par with that of the Bhagavad Gita to Indian spiritual heritage. In spite of numerous annotated versions of the Gita, understanding all its teaching is incomplete likewise Gandhian philosophy can be analysed and interpreted in various ways. Gandhiji was in favour of shaping the Indian administration on the customary Indian tradition with necessary rectifications. He was always against the tendency of Westernization of Indian administrative system. He once told³⁷ "Modern civilization as represented by the West of to-day in my opinion has given matter a place which by right belongs to spirit."

It has therefore put violence upon the throne on triumph and held under bondage truth and innocence. "He wanted to have a political system as per our established, traditional democratic institutions.³⁸" For this he had decided unequivocally-"In the domain of politics, I should made use of the indigenous institutions and serve them by curring them of their proved defects.³⁹"

It is high time our leaders thought over the question of Indianization of our national activities in all fields or public life instead of giving it a face-lift of Western thought.

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BHITARKANIKA ROOKERY HAS, 26 BABY TURTLES

Olive Ridley turtles have been hatched and reared in captivity for the first time in the World. in India.

This was achieved by the Gahirmatha Research Centre in Bhitarkanika, near Cuttack in Orissa.

These turtles are from South Pacific. For some reason unknown to scientists, they flock in lakhs to the Orissa Coast to lay eggs. Predators, both human and wild, robbed the eggs for consumption.

Government of India sanctioned Rs. 1,00,000 to start a hatchery for the turtles, whose eggs thus became endangered, as soon as they appeared in the Orissa Seas in 1983.

Now the Bhitarkanika Centre has 26 baby turtles, growing up in its rookery.

The role of STATE BANK in the Industrial Development of Orissa

Shri Narayan Prasad Mohanty

Orissa with its vast mineral, forest, agricultural and marine resources continues to be one of the industrially backward State. The economy of the State is very much dependent on agriculture. Only about 14 to 15 per cent of the State income is derived from Mining, Manufacturing and small enterprises since 1960-61. The State's share in industrial production of the country has remained less than 2 per cent during all the plan period as against its share of 3.5 per cent of the country population. The share of industrial production in Orissa was 1.6 per cent in 1977-78 as compared to 4.8 per cent in Andhra Pradesh, 4.8 per cent in Bihar and 10.7 per cent in West Bengal. Despite its immense natural resources such as minerals, forest, water and man-power, Orissa continues to lag behind almost all the major States in the field of industrial growth measured in terms of gross *per capita* output as well as *per capita* value added by manufacture. The gross *per capita* output in industry for Orissa in 1977-78 was Rs. 241.18 compared to Rs. 612.84 for All-India, Rs. 1,357.55 for Gujarat, Rs. 776.76 for West Bengal and Rs. 1,614.88 for Maharashtra. Similarly its *per capita* value added by manufacture in the same year stood at Rs. 63.92 with Rs. 128.15 for All-India, Rs. 179.43 in West Bengal, Rs. 351.21 in Maharashtra, Rs. 267.52 in Gujarat. Factory employment per thousand of population was only 4.7 in Orissa as against 11.2 at All-India level.

This shows that the industrial sector still remains fragile in the economy of the State. The distribution of main workers by occupation in the State as revealed by 1981 census, is 47 per cent cultivators, 27.65 per cent agricultural labourers, 3.47 per cent household and manufacturing industries and 21.88 per cent other workers. The manufacturing sector in India contributes only 12 per cent towards Gross Domestic Product and it provides 9.5 per cent of the total main workers with employment, where as in Orissa the manufacturing sector contributes 9.3 per cent towards State Domestic Product in 1979-80 and sustains 6.48 per cent of the total main workers. A highly industrial country like Japan employees as much as 26 per cent of the economically active population in the manufacturing sector which contributes nearly 36 per cent towards the Gross Domestic Product.

On the eve of the First Five-Year Plan (1951-52) Orissa had few industries such as Cement, Textile and Paper, etc. Since before the beginning of the First Plan the total installed capacity of electricity was 9.6 M.W. Limited supply of electricity had a constraining influence on industrial expansion in the State.

During the First and Second Plan, efforts were made for creating infrastructure, as a prerequisite for setting up large and medium industries. For the development of village and small-scale industries for which the

State has special advantages, the Government adopted special measures such as supply of raw materials and marketing of finished goods, etc. The Government also took the initiative of starting pilot projects in small industries sector by participating in the equity capital to the extent of 90 per cent and the private entrepreneurs were given option to take over the units in due course. The structural allocation of investment on industries during First Plan was 5.9 per cent and in the Second Plan it was 4.5 per cent only as against total investment of Rs. 18.41 and Rs. 86.59 crores during First and Second Plan respectively.

During the Third Plan period greater emphasis was laid on industrial development in the State and some important policy and institutional measures were taken for promoting industries. Some of the Financial and Promotional institutions like Industrial Development Corporation (IDC) set up during the period were designed to operate as catalytic factors for promoting enterprise and for rechanneling investment on productive lines. Some of those industrial agencies were also expected to fill up the industrial gap in the capital market of the State.

The Fourth Plan emphasised more on the labour intensive industries to create maximum employment in the industrial sector. It also stressed on such industrial programme which would help in contributing maximum to the State income. As a result of which Rs. 9.43 crores was spent by the I. D. C. to create more employment opportunities. However, the units under I. D. C. are operating below their optimum capacity.

The Industrial Promotion and Investment Corporation of Orissa (IPICOL) was started during 1973-74 with the objective of taking various promotional measures, financial and managerial for stimulating the growth of large and medium industries in the State. During Fifth Plan period some joint sector projects like (a) Refractory Project, (b) Tool Room Project, (c) The Watch Assembly Unit, etc., were started by IPICOL to catalyse rapid industrial growth of the State.

In order to change the industrial scene of the State, a new industrial policy was formulated recently for accelerating industrialisation in the State. In order to give

infrastructure facilities the Infrastructure Development Corporation and the trading and export development corporation were started during the Sixth Plan period. IPICOL and Orissa Small-Industries Corporation (OSIC) jointly undertook measures for providing infrastructure facilities such as development of sites, construction of industrial estates and sheds for encouraging new entrepreneurs to undertake new ventures. However, in spite of emphasis laid on industrialisation of the State and some significant strides made in that direction, it still remains one of the most backward State in the country.

Table I shows that by the end of the year 1977-78, the number of registered factories in the State were as many as 1,510, out of which 553 units were reported to be closed. Of the remaining 957 units, only 95 units were large and medium sized and the remaining units were small. By the end of 1977-78, the total capital invested was Rs. 524.7 crores, employing about 1.16 lakh persons.

Table II shows the pattern of investment during the different plans of Orissa. It indicates that, the investment in industries and mining sector was meagre during all the plan period as compared to other sectors like Agriculture and Irrigation.

This shows that after 30 years of planning the picture of industrial development of the State is bleak and dismal one. In spite of vast natural resources, abundant of water and marine resources, Orissa continues as an industrially backward State. Still there is bright prospect of industrial development in the State.

Orissa is fortunate in having host of the major mineral resources which can contribute greatly for the industrial development of the State. These include iron-ore in Keonjhar and Sundargarh districts, Coal from Talcher, Manganese in Keonjhar district, Chromite in Cuttack district, lime stone in Sundargarh and Koraput districts, Vanadium in Mayurbhanj district, graphite in Kalahandi and Bolangir districts, bauxite in Koraput district. The State is also endowed with natural resources like dense forest, water and long coast line of more than 400 Kms. Several industries like rayon grade,

pulp-plant, paper mill including news print, sal seed oil extraction plant, plywood industry based on timber, wood-chips board can be set up. Rice bran and other oil extraction units can be planned in various parts of the State. Tremendous scope exists for the establishment of Caustic Chlorine and magnecite recovery units based on the salt harvesting in the coastal area. Marine based fishing industries can also be planned.

Role of the State Bank

There has been considerable expansion of banking system in the country after nationalisation of 14 Commercial Banks in 1969 and the introduction of Lead Bank Scheme by the Reserve Bank of India. The progress made in Orissa has been very impressive during last two decades, particularly during the decade ending 1980. The Table-III indicates the number of Bank was 173 in 1971 and it increased to 815 in 1980. The Bank deposit increased to Rs. 6.4 crores in 1960, Rs. 99 crores by the end of 1974 and Rs. 358 crores by the end of 1980. The bank advances also increased from Rs. 3.2 crores in 1960 to Rs. 219 crores in 1980. The proportion of bank credit to the deposits has been only 56.1 per cent in 1979 as against credit deposit ratio of 84.9 per cent in Tamil Nadu and all-India average of 68.3 per cent. The State Bank of India alone has 296 branches in Orissa as on June, 1982 as against 178 in June, 1979. The volume of deposit was 178.29 crores. The credit and investment to deposit ratio was 110.66 per cent in June, 1982.

Financing small-scale industries

The State Bank has played a very crucial role in developing small-scale industries and small business in Orissa. The State Bank of India amongst all other Commercial

Bank in Orissa has continued to increase the coverage under this sector. There are size Industrial Estate branches of the State Bank of India at Rourkela, Cuttack, Bhubaneswar, Takatpur (Mayurbhanj), Chandaka and Mancheswar. Financial assistance is given to all types of small units whether agro-based, forest-based, mineral, chemical base serving the local needs. Persons engaged in village and cottage industries, rural industries, handicrafts, etc., have been granted to improve their living conditions. 42.23 per cent of State Bank of India's loan units are in backward districts and about 28 per cent of its advance to small-scale industries have been devoted in these areas of Orissa, 54 qualified entrepreneurs for setting up small units, 15 entrepreneurs for setting up Agro service centres have been financed by State Bank of India in Orissa during 1982.

Under Lead Bank Schemes, the Commercial Banks have been assigned the task of bringing about economic development in specified areas by making detailed survey of the existing potential resources available and their utilisation to arrange for their optimum utilisation for the maximum benefit of the area. All the 13 districts in the State have been allotted to various Commercial Banks. The State Bank has alone allotted 6 districts which are all backward. The Lead Bank have already indicated economic activities which can be promoted and identified growth centres, where offices of banks may be opened. To provide financial assistance for the development of economic activities credit plans in the 12 districts have been prepared.

State Bank in Orissa is making efforts in keeping with the spirits of the time in reducing inequalities of life, to ensure a more equitable distribution of happiness and economic progress of the State as a whole.

TABLE I
Industrial growth in Orissa (organised sector)

Items	1961-62	1965-66	1968-69	1973-74	1977-78
(1)	(2)	(3)	(4)	(5)	(6)
1. Number of registered factories.	752	1,079	1,159	1,334	1,510
2. Value of Fixed capital (Rs. in crores).	52.0	328.0	408.0	412.1	524.7
3. Number of Persons employed.	30,210	80,346	83,202	98,142	1,158.44
4. Total Salary wages and Benefits (Rs. in lakhs).	4.4	16.7	31.4	54.4	82.1
5. Value of Gross output (Rs. in crores).	47.0	145.7	174.7	299.5	654.2
6. Value added by manufacture (Rs. in crores).	12.8	40.9	40.8	88.3	168.1

Source—Economic Survey of Orissa, 1980-81, Page 33

TABLE II
Pattern of Investment in different plans in Orissa

Sectors	First plan (%)	Second plan (%)	Third plan (%)	Fourth plan (%)	Fifth plan (%)	Sixth plan (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Agriculture & Allied services	28.0	9.2	9.7	10.0	14.2	21.4
2. Irrigation & Power ..	26.1	46.9	36.1	42.0	41.4	52.3
3. Co-operation and Community Development.	0.9	12.6	9.2	3.6	4.0	2.0
4. Industries & Mining ..	5.9	4.5	3.5	8.1	4.0	4.4
5. Transport & communication	14.7	7.0	17.3	7.0	8.5	7.2
6. Social Service ..	24.2	17.2	17.2	19.8	27.0	12.0
7. Miscellaneous ..	0.2	3.6	2.0	0.5	0.9	0.7
Total ..	100.00	100.00	100.00	100.00	100.00	100.00
Total investment in Rs. crores.	18.41	86.59	223.27	222.60	836.09	1500.00

Source—Government of Orissa Publications

TABLE III

Progress of State Bank of India, Bhubaneswar Circle for 3 years (1979—82)

		Rs. in crores		
		June 1979	June 1982	Growth
1. Number of branches	..	178	296	118
2. Deposits	..	110.34	209.97	99.63
3. Advances	..	60.37	178.29	117.92
4. Credit Deposit Ratio	..	54.71	84.91	30.20
(As against 60% stipulated by R. B. I.)				
5. Investments in securities of the Government of Orissa and bonds of the State Government undertakings.	54.07	..
6. Credit and Investment to Deposit Ratio	110.66	..
7. Priority sector Advances				
(a) Agriculture	..	30.61 (1,57,551)*	76.92 (3,05,322)	46.31 (1,47,771)
(b) Small Scale Industry	..	6.75 (8,937)	18.50 (27,348)	11.75 (18,411)
(c) Small Business	..	7.16 (18,530)	23.94 (38,793)	16.78 (20,263)
Total	..	44.52 (1,85,018)	119.36 (3,71,463)	74.84 (1,86,445)
*Figures in brackets indicate the Number of accounts.				
8. Percentage of Priority sector lendings to total advances.		73.74%	66.95%	..
(As against 40% required to be reached by commercial banks by 1985)				
9. Percentage of Agricultural advances to total advances.		50.70%	43.14%	..
(As against 16% stipulated by R. B. I.)				
10. D. I. R. Advances	..	1.40 (30,676)	5.18 (92,403)	3.78 (61,727)
11. D. I. R. Advances as percentage of total advances.		2.31%	2.90%	0.59%
(As against 1% stipulated by R. B. I.)				
12. 20-Point Economic Programme				
(a) Number of beneficiaries	..	94,099	2,13,725	1,19,626
(b) Outstandings	..	31.75	46.75	15
13. Number of Agricultural Development Branches.		15	27	12

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Adult Education :

In past and present

Shri Ramakanta Rout

The Education Commission of 1964—66 under the Chairmanship of Dr. D. S. Kothari defines education thus.—"Education does not end with Schooling, but it is a life long process. The adult to-day has need of an understanding of rapidly changing world and the growing complexities of society. Even those who have had the most sophisticated education must continue to learn the alternative is obsolescence."

There is a crying need of mass literacy programme in India at the present context. India is a country which is rich in problems. It is the largest reservoir of illiteracy in the world poverty, population explosion, high rate of wastage and stagnation, etc., are some of the main reasons for the present state of affairs.

Adult literacy drive is not an entirely new campaign. It had its origin in the ancient India. The epic poems as well as the puranic cantoes were read and recited in the mass gathering. Through most of the assembly consisted of illiterate people they are enlightened in digesting seymon therein. They, too, were aware of the current problems of their country. In Ethense and Sparta the epics of Homer was very interesting auditorial public. The system continued for a pretty long time in India. In Orissa the reading the Bhagabat by Shri Jagannath Das and the singing of 'Palla' are yet in practice. These are the best media in educating the mass.

With the British emperialism adult education came in an entirely new form, of course the social life as well as the way of the world was in a different twening now a day. Hence the adult education has taken a different form, its strategies, its operation and aims and objectives are altogether different. Although it is under not formal education it is not free from formality or in other words it is an organised non-formal education.

In India at present more than 60 per cent people go without any education. They are quite ignorant of their own surroundings, the external world, their own problem and the problems of the country as well. The welfare of the country is obstructed owing to such mass illiteracy. Hence the national demon need be vanquished from the scene on the basis of war footing.

It will not be exaggerate to add their Adult Education existed in our country in such an early date their even the so-called civilized nations were leading wild and nomadic life. Literacy, then, did not stand in the way of educating the mass. One could acquire knowledge without being literate. Ancient literature, philosophy science, religious and other branches of knowledge developed in India. Spiritua- lism was at its peak. The vedas were created in an unwritten form; so its popular name was SRUTI or the memory since it was memorised from generation to genera- tion. Hence before the birth of script all

such knowledge spread and the common mass was sharing this public learning in the festive occasions, in recreations and in rituals, etc. So to say ancient India exploited the best mass media to work out mass education scheme in a non-formal way and it had the greatest success since there was a spontaneous response from the recipient and there was a harmonious since between the teacher, who was accepted to be an ideal and the best guru and the taught who were movelly strong simple and open minded. During those days the agencies of education were the village bards or Ministrils Kathaks or story tellers, kirtans, Pallas, Yatras, Hats (Village market), etc. These were the best mass media in the past to educate the uneducated adults.

Village poets composed verses on the great heroes, famous battles and royal dynasty, etc., which passing from mouth to mouth got wide publicity. Mobile Singers and professional story tellers worked as religious preacher or the efficient teachers. Instructions on religion moral teaching and civic sense, etc., was given to the common people in the public meetings. In the place of common gathering, fair and market the Kathakas recited popular story from their memory, Minstrils sing. Popular puranic cantoes in musical accompaninant whose pathoes and heroic rhymes attracted the people very much. The palla performance is very interesting and popular in Orissa and the Baul in West Bengal. The professional Palla party consists of six members. The bard-cum-singer (Gayak) the drummer (Bayak) and four accompanists known as the Pallia. They discuss the puranic literature explain in simplest way and feed a great deal of wisdom thus to the rural audience. Yatra and theatre in India came in the later period and soured the similar purpose of mass media. The weekly served the similar purpose of mass media. The weekly or bi-weekly markets are the centres of get together in the country side. There are very old institutions in the country which not only serve the basic need of selling and buying things also to provide recreation facilities to the rural inhabitants. Notifications, documentary shows, Health-Sanitation programme, Idol dances Melodrama

films show and announcements, etc., are performed in the market places. The people enjoy it their code of conduct in life is influenced by the moral value as well as ideology in it. The Kirtan song is a kind of Vaishnab Sermons adopted by Shri Chaitanya Dev and his disciples to preach the religion to the uneducated rural folks. The religious teachers like Budha and Mahavir used to take up the Palli language as the medium of instruction. So did Shri Chaitanya Dev by adopting the simpler and lucid form of Vaishnab religion reforming the Hinduism which in course of time, gattered ample moss of prejudice and complicacies.

During foreign rule this practice was in dormant state. People being busy in their own problem of food and shelter forgot these secondary need. The adult education was stopped.

In British regime in the later part of the 19th Century adult education emmerged in some important cities such as Bombay, Baroda, Ettalwa, Calcutta, Madras and Hyderabad, etc. Gradually it gathered momentum. At first five crores finance provision was there for adult education improved. In the hands of voluntary organisations adult education had its full-swing in the urban setting. Rabindranath adopted adult education in Shantiniketan in the first quarter of the twentieth century.

After Independence adult education had a new shape. More stress was led on it, more fund provision was there. In the Five-Year Plans the emphasis on mass literacy campaign was urged. It was carried through Community Development Department. Its main organisations were the Community Blocks through S. E. Os. and L. S. Es. No. of night schools opened in the rural areas under the charge of the concerned Primary School Teachers. It was then popularly known as the National Adult Education Programme (NAEP). But owing to the apathetic attitude of the agencies and the non-involvement of the mass, operational defects, etc. the programme could not attain to the satisfactory level.

Hence ever National Adult Education Programme took a new turn on the 2nd October 1978. A National Board of Adult

Education and the similar State agencies were constituted by the Central and State Governments respectively. Under the concerned State suitable field agencies were set up to manage the literacy drive. Since the old agencies were in suicidal State or completely smashed the need for creating new agencies keeping an eye to the changing circumstances was felt. However a radical change in the whole process was made. The new text books were prepared, new methods were adopted and the instructors were properly trained to teach the adult learners. It was professionally oriented. Documentary films, drama, slogan such as "Each one Teach one, etc." were used for a full success of the scheme. The year 1978-79 was the preparation year. It was aimed that by 1983-84 the capacity to educate 35 millions persons could be achieved. The age-group was fixed between 15 and 35.

The strategies to be followed in the operation of the scheme should be carefully planned. It should include literacy, numeracy and techeracy. Education should be an integral part of individuals personality. The professional skills should be paid more

importance to the programme and this should vary region to region. Regarding the duration of course time, location, organisational as well as instructional arrangements need by flexible methodology should be psychologically oriented and the Instructor should be an ideal man of personality whom learners must regard. It should be very carefully planned and projected with alternation time to time.

Within specific time bound mass mobilisation of human effort, mass movement and co-operative approach to the scheme need be organised for liquidation of illiteracy.

The present Congress (I) Government accepted the former policy and gave the National Adult Education a new shape. A well thought out scheme was planned. The district and block level organisations were set up. The level linkage of 'Teaching' 'Learning' 'Working' and 'living' were interrelated, voluntary organisations came to the front to take lead in addition to the Governmental initiations. Now it is being operated in full swing in collaboration of both the Governmental as well as the non-Governmental effect. But the result is encouraging.

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Indian Space Programme and Insat I-B

Shri Biswaranjan Das

The launching of Aryabhata (1975), Bhaskara I & II (1979 and 1981), Rohini Satellites RS-I and RS-D 1 & 2 (1980, 1981, 1983) and APPLE (1981) satellites designed and developed in India and the three flights of the indigenous satellite launch vehicle SLV-3 (1980, 1981, 1983) which launched Rohini Satellites were some of the landmarks in country's space programme. Two important large scale experiments in satellite applications, the Satellite Instructional Television Experiment (SITE-1975-76) and the Satellite Telecommunication Experiments Project (STEP-1977-79) brought home experience for implementation of operational space systems for national requirements.

INSAT-IA (April 1982) was the first in the series of Multiple-payload National Satellite, but due to technical snags the spacecraft failed after 147 days of useful in orbit life. In October 1983, INSAT-IB took place of INSAT-IA and is parked in geo-stationary orbit, at 74° East (between the longitudes of Delhi and Bombay) and 36,000 Kilometres above earth's surface. Powered by solar energy from deployed solar sail the spacecraft has a design lifetime of 7 years. During this seven years in-orbit life the INSAT-IB will provide the following capabilities :—

(a) Twelve channels each of 36 MHz usable bandwidth operating in 6 GHz up-link and 4 GHz down-link. This will be in C-Band will provide

roughly 4,300 two-way telephone circuits. Out of 12 channels, normally 11 will be operational and only 4 channels will operate during eclipses.

(b) Two channels each of 36 MHz usable bandwidth at 6 GHz up-link and 2 GHz down-link. These will be in S-Band and will provide television broadcast channels for Direct Reception Systems installed in villages as well as television networking. In addition there will be five injected carriers for services such as national and regional radio networking, disaster warning systems, facsimile and news dissemination service and time/frequency dissemination service.

(c) One channel at 402.75 M. H. Z. up-link and 4,038.1 M. H. Z. down-link for collection and relay of meteorological, hydrological and oceanographic data.

(d) A very High Resolution Radiometer with visible and infra-red band channels with resolutions of 2.75 Kms. and 11 Kms. respectively and with half-hourly full earth coverage and also sector scan capability.

Telecommunication facilities will be provided through 4 Twin operational Earth Stations (Calcutta, Madras, Bombay and Delhi) 2 large, 15 medium and 10 small Earth Stations set up in different parts of the

country. These earth stations will be linked to telephone systems through microwave links or cable links. There will also be three transportable earth stations for emergency location use. Telephone services will be brought into operation in a phased manner 1,800 in the first year, 1,900 in the second year and remaining 500 in the third year.

Most important of the services of INSAT-IB will be the broadcast services for Television, Radio networking and Disaster warning.

Television Services

One of the two transponders in S-Band will provide direct TV broadcasting to special type Community Receivers in rural areas of the country. TV signals from the satellite will be received directly in villages using Direct Reception Systems (DRS). DRS consists of a 12 ft. diameter mesh antenna, an item known as front end converter which converts the T. V. signals from 2.5 GHz band to 70 MHz, a tail end unit which demodulates the signal separate out audio and video signals, amplifies them and feeds them to the T. V. receiver. States identified to be provided with DRS are Orissa, Andhra Pradesh, Bihar, U. P., Gujrat and Maharashtra. In Orissa 400 DRS are being installed in the districts of Balangir and Dhenkanal. There is exclusive T. V. Programme for these areas who will also derive benefit from the National Programme.

Each high power terrestrial T. V. transmitting Station existing in the country and those proposed to be set up are being provided with a Television Receive only terminal (TVRO) which is as a matter of fact larger than DRS terminals with 6.1 Metre mesh antenna. T. V. signals received through these TVRO terminals are re-broadcast by the terrestrial T. V. transmitters. All National Programmes are being re-broadcast in this process. By end of 1984 as many as 46 T. V. transmitters will be utilising this service. By availing satellite Microwave and co-axial cable Communication Service T. V. Programme from any part of the country can be relayed live and shown to T. V. viewers. At present only cricket match, some sports and limited

number of T. V. Programmes are being relayed from stations other than Delhi.

Apart from the high power terrestrial T. V. transmitters limited re-broadcast is being done through 21 low power transmitter now existing in the country. By end of 1984 as many as 134 such low power transmitters will be re-broadcasting T. V. programmes to entertain urban/semi urban population within a radius of 15 to 20 Kms. around such transmitters. It would not have been possible to provide T. V. viewing facilities to such a large population (nearly 70 per cent) in the country without the satellite services. Programmes for the INSAT T. V. Services are being up-linked from Delhi Studios through Delhi Earth Station. Programme capsules from other stations are being sent to Delhi for the purpose.

Radio net working

Apart from providing T. V. services, the S-Band transponders will also provide simultaneously national radio net working of terrestrial radio transmitters. To achieve this service, advantage is taken of the band-width not occupied by T. V. Signal in the transponder. Low level (20 LB below T. V. carrier) carriers are injected for the purpose. There will be ten such carriers—five per transponder. All-India Radio will use five of the total ten channels available, i.e., 3 in transponder 1 and 2 in transponder 2. To utilise Radio Net working service (RNS) each of the 94 AIR transmitters are being provided with system similar to DRS. The system known as Radio Programme Receive only terminal uses a 14 ft. mesh antenna an improved front end with higher frequency stability oscillator and an R. N. Receiver. Uplink will be provided from earth stations at Delhi, Bombay, Calcutta and Madras for relay of National News Bulletins and National Programmes from 94, AIR transmitters.

Disaster warnings

Another important Satellite service is the Disaster Warning Systems (DWS). The system will use one channel in each S-Band in the same process as indicated under Radio Networking. This type of transmission has the advantages that warning

messages can be transmitted without affecting the main service of T. V. broadcast. DWS terminals will be located in several disasterprone Zones. These will be depending on the type of disaster and each Zone will have more than 100 DWS terminals installed in the prone area. The DWS will be in active mode throughout the year but switched on by remote control from the transmitting earth station whenever a disaster signal is to be conveyed to the area or the Zone.

A selective addressing scheme is used in DWS. Prior to transmitting the disaster warning message to the areas likely to be affected, the receivers in those areas are addressed by sending a code. Receivers in each region/zone will have a unique code. After detecting the code (sent by Central Weather Office in earth station) as its own, the addressed receiver will turn on an audio alarm (siren type) to attract the attention of the local official. After a pause of one minute, the disaster warning message is transmitted and received at the desired terminals/receivers switched on by the code signal. After a lapse of ten minutes from the code, the service is switched off automatically.

DWS consist of a 12ft. mesh antenna (but more rugged than DRS), a front end and a DWS receiver (consisting of a small siren or horn and an 6 watt., audio amplifier with speaker). The DWS will have a power supply sub-system consisting of a battery charger, battery and regulated power supply unit. In case of failure of electric supply, battery provides supply for one week. This battery gets re-charged when then power supply is restored. This system is expected to be very efficient for direct transmission of warnings to the areas likely to be affected by severe weather. This satellite based disaster warning service is not liable to break down during adverse weather situations.

Indian Meteorology Department are installing 100 DWS in coastal areas of south Andhra Pradesh and north Tamil Nadu in the first phase. Area Cyclone Warning Centre/Cyclone Working Centre will be located at Madras and uplink will be provided by Madras Earth Station. After

establishment of the feasibility of DWS in Andhra-Tamil Nadu area the system will be expanded to include disaster prone areas of Orissa, Maharashtra and Gujrat. By this service, on receipt of timely warning, appropriate action can be taken to minimise loss of life and valuable property due to cyclonic storm and other disastrous weather situations that cause lot of devastations in the Country every year.

India Meteorology Department would also set up a chain of 100 land-based and 100 ocean-based automatic un-attended Data Collection Platforms (DCP) in far flung remote unaccessibles areas. These DCPs will transmit weather report on rainfall, temperature, humidity, etc., at fixed intervals which will be received in the Meteorological Data Utilisation Centre (MDUC) at Delhi. These data will be analysed with the photographs sent by INSAT-IB every half an hour and result will be fed to 20 Secondary Data Utilisation Centres (SDUCs) set up at different parts of the Country and to DWS in case the situation so demands.

Fascimile and News Dissemination Service.

Another service which is likely to be introduced via INSAT-IB is the fascimile and news dissemination service. An experimental project is being planned for implementation by the Ministry of Information and Broadcasting.

This service will also use one of the un-allocated channel of the type used for Radio Networking. Uplink for the service will be provided by Delhi Earth Station to which the Office of the Press Trust of India will be linked by normal telephone/cable service. Fascimile and News Receive only terminals similar to DRS terminal (a 12ft. mesh antenna, Front End Converters and receiver) will be located in newspaper offices who subscribe to PTI services. This will help small newspapers who cannot afford to PTI teleprinter service.

One of the services, that may be added to the plethora of INSAT Services, is the Time/Frequency Dissemination Service (TBS). This service will mainly be used for the purpose of synchronisations of frequency sources and clocks at various use agencies with respect to the standard

available at National Physical Laboratories (NPL). This will help Radio Astronomy Observatories, Airports, Navigation, etc. Oil and Natural Gas Commission will also utilise satellite services for command, control and management of off-shore well operation.

Reliability of Insat services

Though there was some technical snag in INSAT-IA, INSAT-IB is in perfectly healthy conditions and will be maintained by the Master Control Facility (MCF) at Hassan working round the clock. Government of India has already sanctioned launching of

the third INSAT-I space craft, the INSAT-IC. Two identical satellites INSAT-IB and INSAT-IC placed at 74° and 94°-E. respectively will be the space segment to provide round the year satellite services for the country. But efficiency and performance of INSAT services will entirely depend on the active and co-ordinated efforts of the user agencies like Ministry of Communication, Ministry of Information and Broadcasting, Indian Meteorology Department and agencies of State Government who are responsible for maintenance of the ground segments and infrastructure facilities for the services.

Senior Maintenance Officer
Information & P.R. Department

EMPHASIS LAID ON PROVIDING IRRIGATION FACILITIES

A conference of Project Officers of District Rural Development Agencies was held at Bhubaneswar on the 10th January, 1984. The conference was inaugurated by Shri C. Venkataramani. Shri K. Srinivasan, Secretary, C. D. Department presided.

The meeting undertook a detailed review of poverty eradication programmes like E.R.R.P., I.R.D., Prime Minister's Programme for small and marginal farmers, Rural Landless Employment Guarantee Programme, National Rural Employment Programme, rehabilitation of bonded labour, Dug well and pumpset energisation programme and the provision of irrigation to every block at the rate of 1,000 acres.

During the review, it was found that in the main anti-poverty programme of I. R. D. by the end of December this year, 1,19,000 beneficiaries had been covered against a coverage of 78,000 beneficiaries during the same period last year. Besides 32,000 beneficiaries have also been covered under E. R. R. P. About 8,500 beneficiaries under bonded labour scheme are also being rehabilitated through E. R. R. P. Master Plans for providing irrigation to the tune of 1,000 acres in each block are also under preparation. This programme is being undertaken with the help of funds from I R. D. and N. R. E. P. Under the Prime Minister's programme for small and marginal farmers the main emphasis has been placed on providing irrigation facilities, free supply of fodder and fuel trees and supply of mini kits.

During the conference, Shri R. K. Misra, Secretary, H. & T. W. Department explained the salient points of tribal development programmes.

Shri A. J. Alex, Director, Special Projects and Shri D. N. Padhy, Director, C. D. also attended the Conference.

IN THE EVENT OF A WAR

(A Statistics of morbidity and moratlity)

Dr. Pramod Chandra Pattanayak

The history has recorded 14,500 wars on this planet within last 5,500 years, taking a toll of 4,000 million of lives of mankind. But presently the mankind has developed such weapons which can kill these lives in matters of minutes in the event of a war, which will be a nuclear only. Indeed in the event of a nuclear war it is estimated that half of the population will perish after a very painfull feelings within first hour. The atom bomb which was thrown on Hiroshima at an altitude 550 meters, destroyed 60,000 houses within a radius of 8Kms. from the epicentre of its fall. The flame remained for six hours and caused sudden inflow of air at rate of 50—60 Kms. per hour. The metals like iron and copper, etc. including alloys around the centre of explosion melted causing the rise of atomospheric temperature to some hundred thousand degrees. This made the soil unsuitable for biological purposes. It killed 78,000 people instantaneously and 2,40,000 people subsequently by its theremal radiation. Recently a group of experts have hypo:hetically assessed the possible effects of nuclear war in terms of megaton, a measure for the warheads. According to their estimation a city of population over one million spreading over 240 Kms. if attacked with an one meagaton nuclear bomb will cause death of 2,70,000 people instantaneously due to shock wave and burns and the irradiation will claim another 90,000 people subsequently. A further 90,000 people will be injured physically and mentally. The city

will face further trouble in getting water and electricity supply. In their opinion if such a city is attacked with a 10—20 megaton warhead, this parametre may be doubled. The conditions of wounded and burnt survivors will be worst as they will be prone to various infectious diseases. The United States scientists estimate that in the event of a nuclear war about 10,000 megatons of nuclear weapons will be exploded in the northen hemisphere resulting in 30—40 per cent reduction in ozone layers of earth's stratosphere which protects all leaving being from the penetration of powerful ultraviolet radiations causing agricultural crops to perish and animals to die.

The above facts and figures in terms of morbidity and mortality are sufficient to be panicked, I suppose. It is high time for each citizen to think about his duty in preventing such a war in order to save this planet in general and to save himself in particular. Yet, another statistical figure may intensify the hatredness of my learned readers against the authorities who believe "If you want peace—prepare for war". From a report issued by W. H. O. it is understood that four people die every minute due to heart failure throughout the World. This demanded extensive research on heart disease compelling the authorities, World over, heavy preasure on their budget. As a result presently four dollars are spent every minute on research projects on heart failure. But the

money now spent in the projects on production and development of nuclear weapons is 2,50,000 times greater. Again, W. H. O. spent about 83 million dollars to stampout small-pox from this Globe which is only the cost of one strategic bomber. Presently U. S. A. has to be considered as the supreme so far as possession of war-heads is concerned and by 1981 this country had more than 5,000 warheads as envisaged from reports appearing in different journals.

Last of all, but not the least, other arsenal weapons like bactriological and chemical bombs are in the store which are not only lethal to the present population but has a far reaching bad effects for future generations too. Under the above circumstances dont you think you have a duty to perform ? May I suggest a line ? Prepare yourself for peace corps and ventilate your views to your friends and famliy members. You may be an individual of any walk of life it dose not matter. You are living in a society where you can putforth your appeal in the light of the above facts and figures to convince him against the war. This little attempt may appear as laughable against the mighty political and economical factors involved about it.

Range Investigation Officer
Clinical Investigation Laboratory, (SR)
Berhampur-1 (Gm.)

Nevertheless, every one of us should resent and shout against war so that it resounds in national and international forums.

Even the nuclear scientists in U. S. A. warn the World against the nuclear war. Dr. Carl Sagan, an eminent nuclear scientist of Cornel Universits has warned the people against the nuclear war. The scientists, Educationists, Philoshphers and deputies of U. S. S. R, the other super power are also advocating against the war. Then why this war psychosis ? Although the two super-powers are considered as "Two scorpions in a closed bottle" yet the human error of judgement can not be overlooked altogether

"Only the few whose base prosperity depends on the people grief make war's" said Desiderius Erasmus, a dutch philosopher many years ago. But this holds good for the present and future as well. An U.S. airforce official in warning the World against war states that the venue of first world war was ground which was shifted to air for the second World war. The venue of the next World war will be the space. I hope the readers do understand what it means ? Stamping out the species Homo sapiens, the human race from the planet.

PROGRESS OF FAMILY WELFARE PROGRAMME IN ORISSA

Family Welfare Programme in Orissa is now steadily progressing. During the month of December 1983, 16,166 sterilisation operations have been performed which include 14,658 tubectomy operations against 14,565 sterilisation operations in the month of October 1983. The cumulative performance during the current year till November 1983 comes to 90,307 sterilisation operations which includes 78,784 tubectomy operations.

The distribution of conventional contraceptives also increased during the month of December 1983. During the month of October 1983 5,82,362 condoms were distributed and during the month of December 1983 it increased to 67,61,111.

ଖଣ୍ଡଗିରି ଥାନା
KHANDGIRI POLICE STATION
खण्डगिरि पुलिस चौकी



ଶ୍ରୀମତୀ ଶ୍ରୀ ପାଣ୍ଡେଙ୍କ ଜନ୍ମଦିନକୁ ପ୍ର
ସ୍ତୁତ୍ୟର୍ପଣ ଶ୍ରୀ ପଟ୍ଟନାୟକ ଦମ୍ପତିଙ୍କ ଅଭିନନ୍ଦନ
BIRTH-DAY FELICITATION TO GOVERNOR Mr. PA

C.M. INAUGURATES.....



GOVERNOR SHRI PANDE
ADDRESSING THE
SILVER JUBILEE FUNCTION,
HINTAMANI BIDYA
NIKETAN... →



ଚିନ୍ତାମଣି ବିଦ୍ୟାନିକେତନ
ଜଗତ ପୁରୀ
ବିଦ୍ୟାଳୟ ପ୍ରମାଣ
୦ ମସିହା
୧୯୬୫



ଉତ୍ତୀର୍ଣ୍ଣ ବାହୁଡ଼-କେନିଷ୍ଟ
ଆକ୍ଷାସିଂହେନ'ରୁ ୧୦ମ ବା
ଉତ୍ସବରେ, ମାମାବହୁ ଶ୍ରୀ
ଶ୍ରୀମତୀ ପାଣ୍ଡେ.....
←

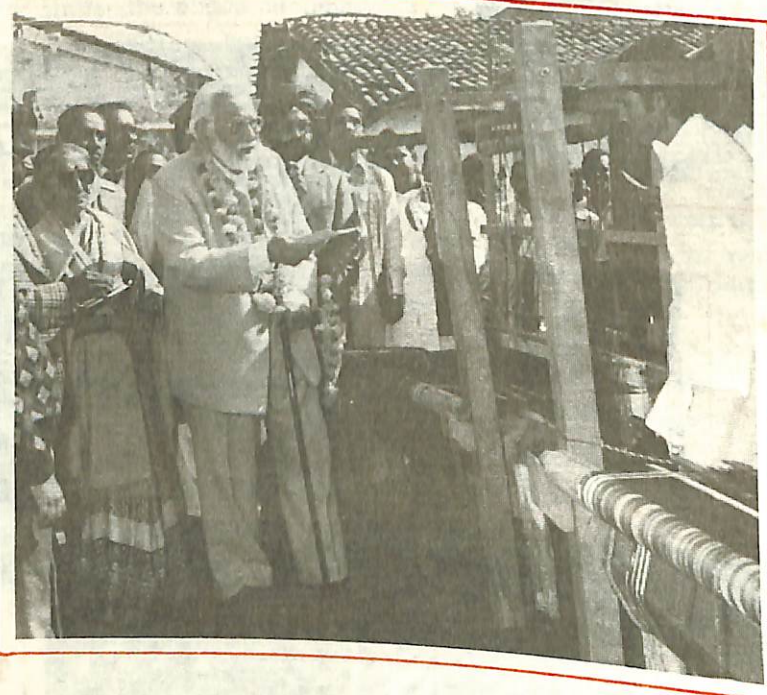
GOVERNOR SHRI PANDE
ADDRESSING AT THE
RDU LIBRARY, CUTTACK.



ଶୁଣୁଥିବାର ଉପଲକ୍ଷେ ଆଗମ୍ୟୁକିତ ସମ୍ବେଦ
 ସର୍ବଜନ କାର୍ଯ୍ୟକ୍ରମରେ ପ୍ରଦାନମୟୀ
 ଶ୍ରୀମତୀ ସାଧିଆ...



Minister Smt Indira Gandhi clapping
 Community singing by Delhi school of
 Children (Children's Day, 1983).

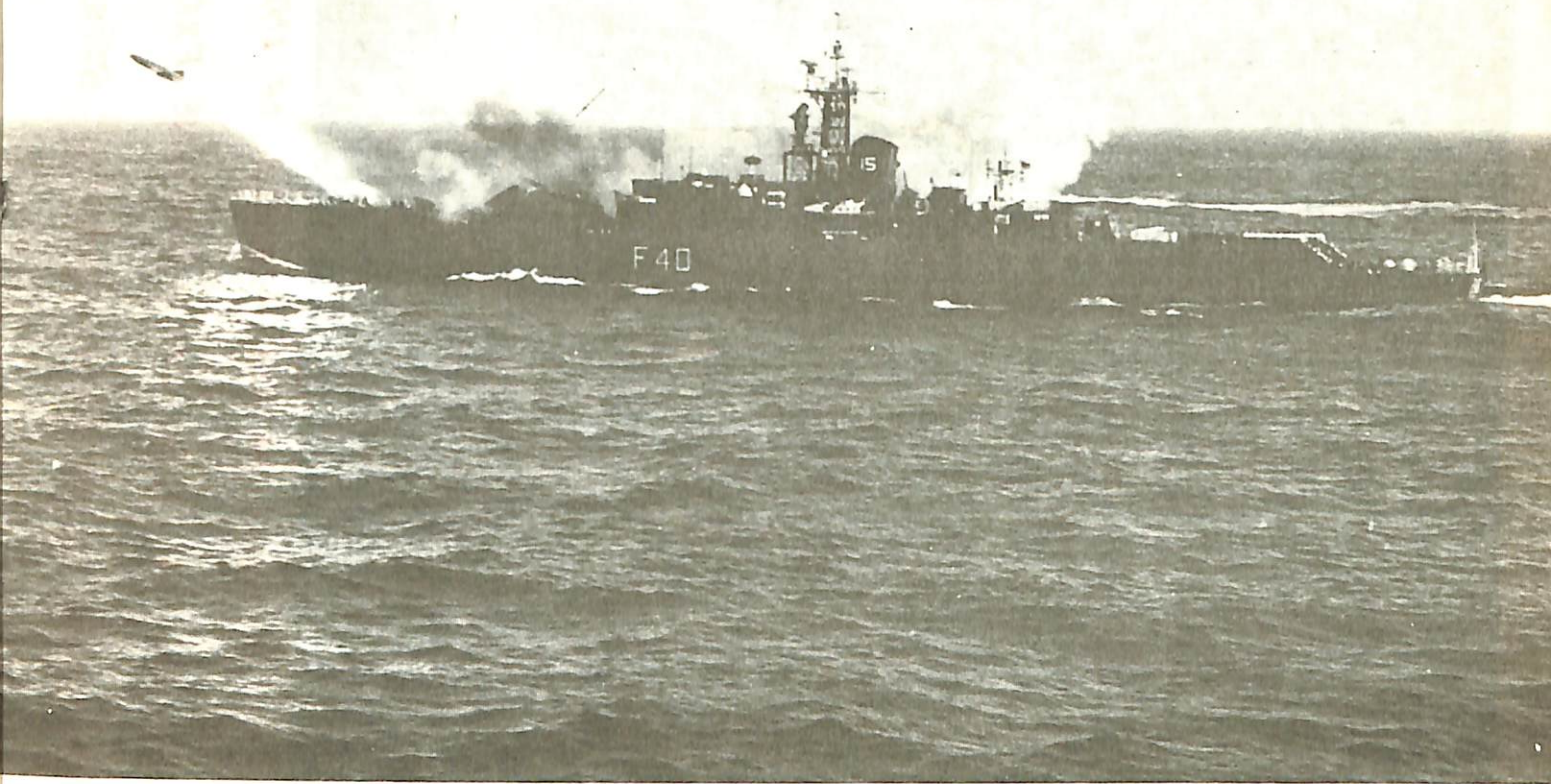


କଳାହାଣ୍ଡି ଜିଲ୍ଲା କଟକେରୁପୁରା ଗ୍ରାମ ୮
 ଦୁଷ୍ଟପୁ ବୁଝାକାର ସମବାୟ ସମିତିରେ
 ଡେରାଉ ଉତ୍ସାହାଳି ଶ୍ରୀ ପାଣ୍ଡୁ...
 ORISSA GOVERNOR VISITED HANDLOOM
 WEAVERS' SOCIETY, CHICHEIGUDA (KACHHANDI)

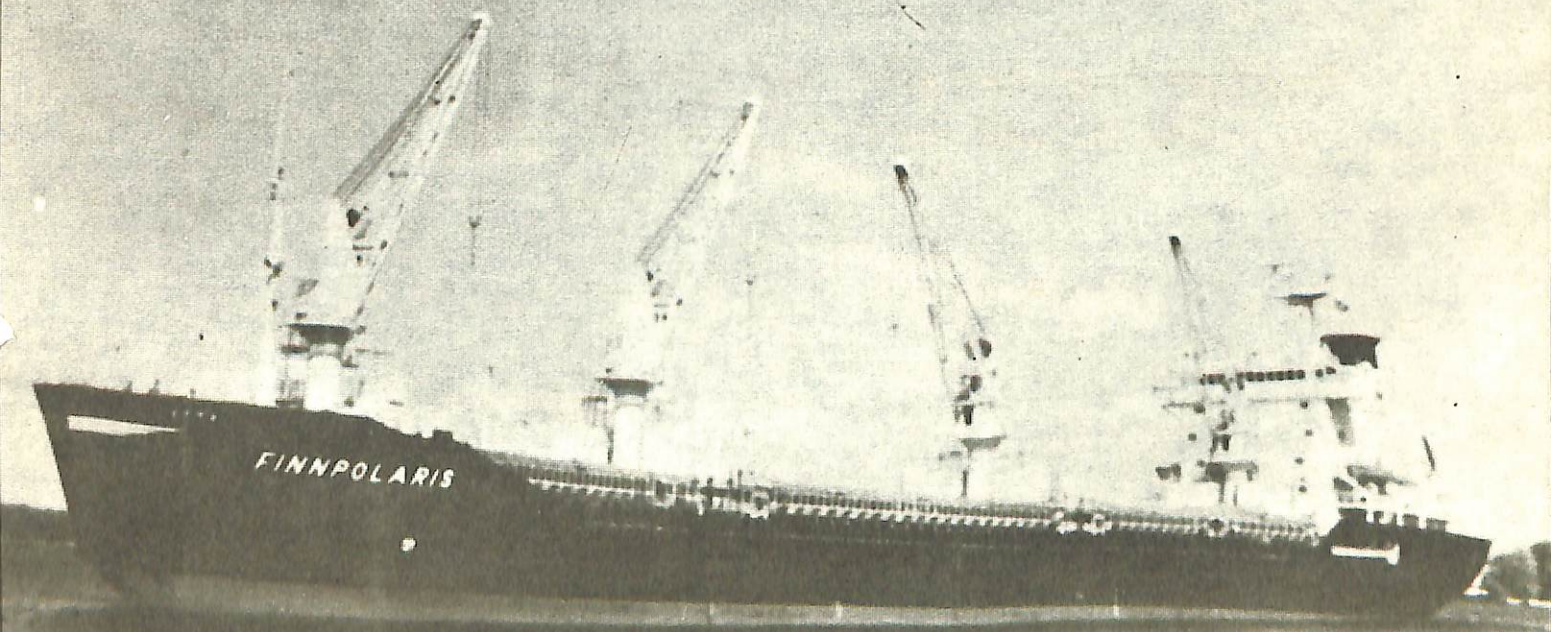
ଦାର୍ଶନିକତାରେ ଠାରେ ଆଗମ୍ୟୁକିତ ଶକ୍ତି ମଞ୍ଚଳ ଉତ୍ତର
 ଉତ୍ତର ବିଧାନ ସମ୍ମିଳନୀ ଉପାଧିକାରୀ ଉତ୍ତରରେ ମାମବର ଉତ୍ତରାଳି ଶ୍ରୀ ପାଣ୍ଡୁ...

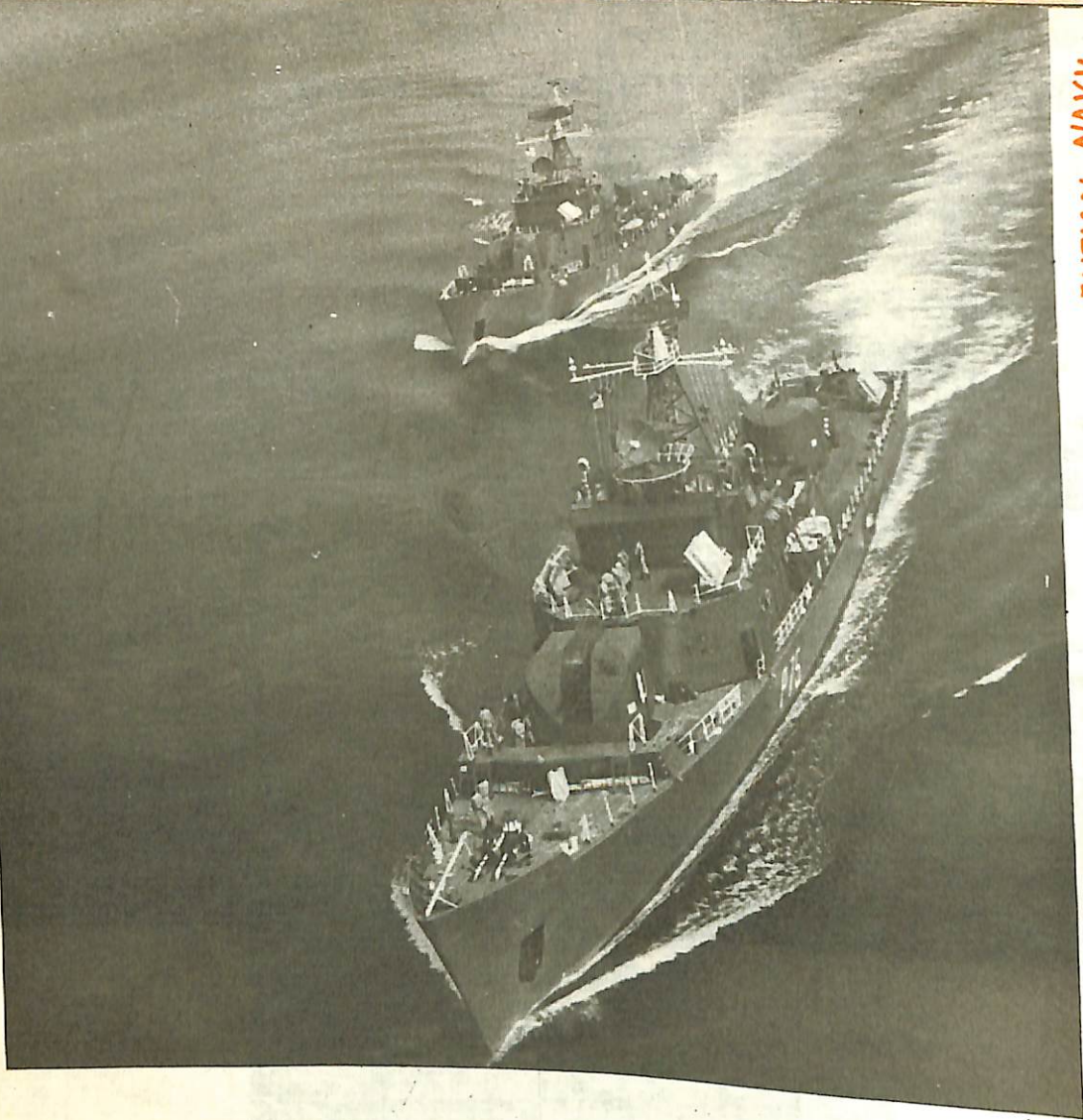


I.N.S. Talwar, a Whitby class Frigate of Indian Navy
ଭାରତୀୟ ନୌସେନାର ଥିବା ଏକ ଏସ୍. ଚେତ୍ଟୁର



FINNPOLARIS on the Third Indian expedition to Antarctica
ତୃତୀୟ ଭାରତୀୟ ଆଣ୍ଟାର୍କଟିକା ଅଭିଯାନରେ "ଫିନ୍ ପୋଲାରିସ୍"





TWO PETYA CLASS PATROL VESSELS OF INDIAN NAVY
 PROWLING THE SEAS ON A ROUTINE EXERCISE

ଉପଲବ୍ଧ ଅର୍ଥରୁ ସୁରକ୍ଷା ଦିଶେଇ ଭାରତରୁ ବାହାରିଲା

AMOV-25, Versatile A/S
 helicopter of INDIAN NAVY



ବାହ୍ୟ ଶକ୍ତିରୁ ମୁକାବିଲା ନିମନ୍ତେ

କାମାଡ-୨୫ ବହୁକାରୀ

RAYAGADA—A growing Industrial Town

Dr. R. C. Pattanaik

Rayagada derives its name from Ray—named after a tribal chieftain who ruled the area before the Nandapur Kings, established their dynasty.

This hilly subdivision situated in the south in Orissa, is surrounded by Andhra Pradesh of the east, Kalahandi district on the west. Gunupur subdivision on the north and Koraput subdivision on the south. Forested hills with steep slopes and deep ravines by its rivers characterise the physiography of this area which forms partly the parts of Decan Plateau and Eastern Ghats. The climate is monsonal. Rainfall occurs in most part during June to November. The magnificently wooded thick jungles enriched with a variety of flora and fauna which includes tiger, elephants, cheeta, chitol, bears and sambar, present a majestic view to a curious traveller roaming for the wonders of the jungle. The enormous forest produce and mineral wealth as encouraged ambitious entrepreneurs to establish various industries in this area.

The divergent species of plants, blooming in different parts of evergreen forests, hills and vallies is of special interest to the bioscientists. Through a preliminary survey it is found that many plants of medicinal importance are occurring in the nearby hills of Rayagada. The tribal physicians (locally known as 'disharies') use such plants for curing various diseases. A scientific investigation awaits this field of study to establish the relevance of an ancient tradition.

The Rayagada town with its hoary antiquities has now assumed a very important place in the industrial map of Orissa. It is a historic town, which acquired importance in the beginning of sixteenth century by becoming the capital of Nandapur Kingdom. The ruins of the forts, constructed at that time by Viswanath Deo, the then king of Nandapur are still existing near the tumbled down temple of the Presiding Diety, popularly known as Majhigharian, on the eastern side of the town. It is told that hundreds of queens of Late King Viswanath Deo performed the rite of Sati by jumping into the funeral pyre in a pit, near the aforesaid temple. The above sacred site is known as "Sati Kunda" today. It is a matter of deep regret that the District authorities under the direction of Mr. Willock, the then Agent of Vizagpatnam, destroyed most of the existing parts of said fort for the purpose of constructing a road through it in the year 1975. This link of course initiated the commencement of trade and commerce with other parts of the county. In the year 1937 the railway links were established connecting Raipur and Vizianagaram and in 1940 a direct road was proved with Koraput via Laxmipur. Now direct road links are available with Berhampur, Phulbank and Bhawanipatna by Orissa. Rayagada may be termed as Gateway of Koraput as Rail and road links are available from Rayagada. With the establishment of railway link to Damonjori, from this place the communication will grow still faster.

Because of availability of minerals and forest products, Rayagada is now growing as an industrial town in Orissa. Orissa's oldest Sugar industry, run by the Jeypore Sugar Company is situated at the southern part of the town. This industry gets its raw materials, from the vast sugarcane fields of Rayagada and its adjacent places. A distillery and a Ferro-Manganese plant is also run by the above company. The J. K. Straw Products Ltd. has established their paper mills at a distance of 10 Kms. in the north of the town. They get their raw materials, chiefly bamboo from Koraput and its adjacent district. The IMFA Ltd. has established their Ferrosilican and Carbide plant at a distance of 20 Kms. from Rayagada because of its rich mineral ore deposit. Although J. K. Paper Mills

and IMFA's Ferrosilican factory are not within the Municipality jurisdiction of Rayagada, they have got socio-economic relationship with the town to a greater extent. They equally influence the cultural atmosphere of Rayagada. Being connected directly with Andhra and Madhya Pradesh, the tradition and culture of the town is enriched by currents and cross currents of Southern and Northern India. Apart from these large scale industries, a dozen of small scale industries are coming up in the town. It seems that the town will advance and simultaneously will face a crisis of pollution leading to ecological imbalance of the environment and other adverse effects of industrialisation; in no time if sufficient precautionary measures are not taken up from the very beginning.

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Koraput, PIN-765001

E.R.R.P. COVERAGE CROSSES TWO LAKHS BENEFICIARIES

The Economic Rehabilitation of Rural Poor Programme which was launched in the State with a view to benefiting the poorest sections of the population and bringing them above the poverty line has already benefitted 200,686 beneficiaries. Out of the above beneficiaries 67,949 have been covered under land-based programme. Besides, 12,765 beneficiaries have been brought under Fisheries Programmes. Apart from the above, 75,016 beneficiaries have been assisted under Animal Husbandry Programme. 44,956, people have also derived benefits through artisan-based Schemes.

During the current year 114,713 beneficiaries are proposed to be covered. Out of the above 32,781 have already been covered during the first half of this year.

The problem of the Oriya Migrant Labourers : The Administrative Response

*Shri Subash Chandra Mangaraj
and
**Dr. Narayan Hazary

In recent times the migrant labourer has attracted official and non-official attention in this country. News of suffering of the migrant labourer has been appearing in the leading National and Local Dailies. These are also hotly debated in Parliament and the State Assembly of Orissa. The particular reason for this is the horrible condition of work imposed upon this category of labourer inside this country. The inhumanities inflicted on this category are not uniform in this country. They vary from place to place and work to work. But the common features of this barbarity are :-

- (i) Very poor payment—They are paid hardly Rs. 4 per day (The Oriya Daily the Samaja, dated the 16th October 1981).
- (ii) Long hours of work—They are made to work for 12 to 16 hours a day.
- (iii) No adequate food resulting in malnutrition—They are given 400 grams of stinking boiled rice and 25 paise for vegetable per day.
- (iv) No winter clothing—In winter and snow they suffer. In Kashmir and some other places they are made to work on snow, bare-footed and suffer from frostbite.

- (v) Wretched accommodation
- (vi) No adequate Medical facilities—In case of serious illness the labourer has to remain extra time to compensate for the time of his illness. In case of death no compensation is given to his legal heirs.
- (vii) Forcible confinement
- (viii) Insult and humiliation
- (ix) Physical assault, sometimes leading to disability and death. Muselemen are kept to terrorise the workers and to make them work accordingly to their will.

They are made to work 12 to 16 hours a day. When some of them protest, they are beaten and thrashed against stones. Some of them hold the feet of the contractors, weep and entreat the contractors to free them so that they could go home. The contractor's stock reply is Rs. 10/12 have been spent on you daily. Unless you return the amount, you cannot go. If somebody protests, he is beaten (The Oriya Daily the Samaja dated the 30th March 1981, Page 7).

If any labourer due to such brutalities escapes to his home, there is no end to his

*Research Scholar

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Plight. The suppliers being the well-to-do of the locality threaten to sue the labourer or take the help of police by brabing them or take the help of the village Mamalatkars to recover the full amount by selling their ancestral land or again sign a bond to work. Knowing the plight very well they still go as migrant labourer because they have no way out.

Where a person is suffering from hunger or starvation, when he has no resources at all to fight disease or to feed his wife or children or even to tide their nakedness, when he has no bargaining power, he has no option but to accept any work that comes to him to keep his body and soul together.

Some of the causes of migration are :—

- (i) abysmal and endemic poverty;
- (ii) surplus labour at village level and no adequate employment opportunity at home;
- (iii) low wage;
- (iv) monotony of the poor and idle life at home;
- (v) lure of better fortune on migration;
- (vi) the land system;
- (vii) the backward method of production;
- (viii) rising cost of living.

87 per cent of the people of Orissa are below the poverty line. The poor people are given small advances varying from Rs. 25 to Rs. 250 and are told that they would be given Rs. 16 per day as a migrant labourer. They are further told that fooding, lodging and clothing shall be free and they would be provided with free travel from and to home. They are sometimes told that grapes and apples would be given to them free at the rate of 2 Kgs. per day. They are further promised that if they would not like the work they would be brought back home. They are given rosy pictures about conditions of work in places of work. Thus they are duped and enticed. At the time of receiving advance

their thumb impression or signatures are taken to show that they have received their full dues.

Bureau of Statistics & Economics of Government of Orissa conducted survey in 322 villages of Orissa in the year 1982. In the above villages 5,361 migrant households were identified. Out of them 88 per cent remained below the poverty line. 87 per cent were either landless and marginal farmers. 79.2 per cent families were in debt. On the average every family incurred a loan of Rs. 2,230. But their loan repaying capacity was only Rs. 3 per month. The survey claims 59 per cent of the migrant labourers get Rs. 121 to Rs. 190 per month apart from getting free fooding, lodging and clothing, etc. According to the survey 47.7 per cent of the migrant labourers get their dues regularly. Nearly 2/3 of them work overtime. Though 97 cases were started by the Government against the contractors, it is revealing to learn that none of them has been convicted.

Provisions of Law and Government Policies.

The SUPREME Court in it's decision in the ASIAD workers' case has given a bold and innovative interpretation of citizen's fundamental rights. Any breach of the labour law endangering the dignity of labour does attract the fundamental right to life and liberty (Art-21) because the right to live implies the right to live with dignify. It is Art-21 (right to life and liberty) that is affected when complaints are made against violation of the Contract Labour Act of the Inter-State Migration of Workers Act, 1979. It held that the Union of India, Delhi Administration and the DDA cannot throw up their hands on despair and become silent spectators to the breach of a constitutional prohibition. They cannot adopt a non-interferring attitude. They must see to it that the workers receive the benefits contained in the laws. Mere prosecution of contractor would not be enough. Nor would petty fines for violation of the laws do. And Magistrates would do well to remember that in such cases the full force of law must be brought to bear on the culprits.

However it is the court's interpretation of Art-23 that makes the case a cause celebre. Art-23 provides that "traffic in human beings and other forms of forced labour are prohibited and any contravention of this provision shall be an offence punishable in accordance with law. What the article prohibits is forced labour". It is labour or service which a person is forced to provide not only because of use of legal or physical force but also because of force resulting from economic compulsions. The court's decision not to read the word "forced" so as to confine its meaning only to the use of physical or legal force is bound to have far reaching consequences. In terms of this decision no employee can ever be compelled to work against his will even though he may be required to pay compensation to his employer.

The innovative decisions by the Supreme Court are too far ahead of the lethargic executive and legislature. As the present case has itself shown, the executive's approach has been legalistic, almost mindless. Thus we have the curious situation in which the judiciary, often accused of standing in the way of socio-economic reforms has become dynamic and the executive tends to follow the letter of law.

The Government of Orissa has passed the Orissa Dadan Labour Control and Regulation Act in 1976 of Oriya migrant labourers.

The Orissan Scene

In the light of the problems briefly touched upon besetting the existing socio-economic set-up. It would be appropriate at this stage to sketch here the Orissan scene. The Labour and Employment Department of Government of Orissa has not yet been able to estimate the number of migrant labourers going out of Orissa. However unofficial estimate places the figure at nearly 2 lakhs. Apart from the authorised contractors there are a large number of unauthorised contractors exploiting the migrant labourers. There is not much reason to believe that the Government of Orissa have been up and doing to plug the loopholes in this regard. It is high time that a depth study should be made on the problem.

Oriya migrant labourers go to Kashmir, Punjab, Hariyana, Himachala Pradesh, Rajasthan, Assam, West Bengal, Karnataka, Maharashtra, Gujurat, Nagaland, Nepal, Bhutan, etc. A few of them who are better educated go to Iran, Iraq, Kwait, Abu Dhabi, Dubai, etc. Those who are promised to be taken to Gulf countries, are kept in Delhi for nearly six months and are made to do hard manual work in the name of providing training as a preparation for work in Gulf countries. They are also made to bribe the agents. Most of them never reach the Gulf countries.

The Oriya migrant labourers usually are engaged in construction of buildings, Roads, Irrigation Canals, etc. Most of them are from Puri, Ganjam and Balasore districts of Orissa.

World's largest rookery for marine turtles— GAHIRMATH

Gahirmatha, an obscure sandy beach on Orissa's coast line, about 100 Kms. from Cuttack, as crow flies has hit the world press as the largest rookery for the marine turtles. Situated on the back water of river Pathsala and Maipura two branches of river Brahmani at the end of 60 Kms. long mangrove forest of Bhitarkanika sanctuary, Criss crossed with a large number of creeks, this beach from Ekakulanasi to Habilkhati, a distance of 10 Kms. has been the ideal nesting ground for lakhs of Olive Ridley Sea Turtles.

No one knows for certain where from the turtles come though the popular belief is that they come from pacific Ocean. But they are also known to have nesting at the West Coast of Mexico. The scientific name is "Lepido Chelys Olivacea" and in Tamil 'Sithama'. In Orissa besides, Gahirmatha, they are also found nesting at Hookitola near Paradip, Astarang and Penthikot in Puri district. Also they are found nesting on Coromandal coasts, Andaman and Srilankan Coast.

Old timers used to say the turtles come to lay eggs during the full moon but, now they are seen nesting in the waning phases of the moon. The peak nesting lasts only a week between January-February and March-April, every year.

It is an unusual sight when thousands of black heads swarm the sea and crawl on the beach to find a safe place to lay eggs.

The turtle crawls, stops for a while, take a look around, pops up its head to breath and after several such process finally it chooses a safe place on the beach to lay eggs. Its two hind flippers about $2\frac{1}{2}$ feet long acts like a shovel to dig the sand till the flippers reach their full length. Then it sites on the hole and lays eggs, one after another. Its egg laying period is about 20 minutes. Then with its fore flippers, it covers up the hole with sand. Immediately after this it returns to the sea not on the same track but in a semi-circular manner.

Shri Chandra Sekhar Kar, the lone scientist at Gahirmatha Sea Trutle Research Centre, who has been working here on the turtles since its inception in 1976, says the eggs laying capacity of a turtle is 40 at the minimum and 180 maximum, recorded so far. On an average it lays 110 to 120 eggs. Every year more than two lakhs turtles come to lay eggs. Since 1977, he says, 10 lakhs of turtles have been enumerated and out of them 15,000 have been tagged with date mark. However, the recovery is only 24 per cent.

The mating of turtles begins in the month of September and the peak is reached in the month of November when the heads of the couplating pairs can be seen after the third breaker's line and colour of the water there is completely black. This can be seen as far as on the eyes can catch.

Shri Kar further adds that the eggs of the turtle lays buried in the sand for two months and after that the hatchlings make direct-orientation towards sea. Even in captivity this behaviour is noticed. The eggs are sometimes destroyed or catch by the predators like jackles, wild board, etc. and it is found that 60 to 70 per cent of eggs are hatched. In captivity it will be 90 per cent. Shri Kar further says that there is no cromosion in the eggs and its sex is determined by the temperature of the nest environment during the incubation period. When the temperature is 30 degree centigrade 50 per cent hatchlings are male and 50 per cent are female. Over 30 degree centigrade percentage of females are more and less than 30 degree centigrade percentage of female is more according to a study made by him.

About the reason of Olive Ridley Turtles seeking the stretch of beach at Gahirmatha, Shri Kar is of the opinion that the lonelines of the place where there is no habitation within 20 Kms. radius, availability of abundant food for hatchlings such as planktons and small pelagic fishes are congenial for the turtles to be attracted by this particular beach. The Division Forest Officer, Chandbali, Shri Suresh Kumar Mishra is of the opinion that abundant phytoplankton and detritus food chain resulting from dead and decaying leaves of mangrove forest of the riverine estuaries provide plenty of food to the sea turtles and hatchlings, Also the sand here is neither hard nor loose which is congenial for nesting. However, Shri R. Whitaker, Director, Madras Sanke Park Trust and Member of the Indian Sea Turtle Specialist Group constituted by the Department of Environment who also visited the Research Centre is of the opinion that no plausible planation can be givan for such a mass arrival of sea turtles because similar conditions are also obtained elsewhere.

The biggest problem for the endangered species is poaching. During the Zamindari period, the Raja of Kanika used to give permission to the traders of Calcutta to collect and take boat-loads of turtle eggs at the rate of only Rs. 15 per each boat-load. Even after all species of marine turtles were included in the Indian Wild

Life (Protection) Act, 1972, poaching continued and number of fishermen with the help of dingy boats and trawlers mostly coming from Digha and Haldia of West Bengal caught a huge quantity of these sea turtles particularly during the mating period where they are very much vulnerable. They used to sale turtle meat and its eggs in Calcutta and also export them. It is said that every year about Rs. 4 crores of turtle meat and eggs were sold in Calcutta. Turtle meats and eggs are served as costly manue in big modern hotels in Calcutta. However, in 1982 the national and international Press published horrifying accounts of mass sea poaching by unscrupulous traders and fishermen and some renowned scientists and conservationists brought this to the notice of Prime Minister, Shrimati Indira Gandhi about conservation of this endangered species. After that Government of India banned the capture of sea turtles from Orissa coast and directed the Coast Guards and Indian Navy for the protection of marine turtles in the sea. In 1983 April, with the help of Coast guard ship 'Rajahansa', 66 unscrupulous fishermen and traders were arrested and four trawlers and 15 country boats with costly nets were seized. The West Bengal Government has also on the surface routes taken steps to prevent any smuggling of sea turtles or its eggs.

In spite of stringent measures taken by both the Forest Department and the State Government and Coast Guards sporadic poaching and fishing in this zone continues. In the fishermen's gill net, the turtles are caught and the fishermen kill and throw them to the sea and its carcass comes floating to the beach.

The Government of Orissa has taken a decision is to ban fishing in this stretch of 10 Km. beach at Gahirmatha. Shri Whitakar was also of opinion that Government should stop plantation of casuarina trees along with rookery as it might disturb the turtles. He also suggested that the Research Centre could take the help of the international bodies like 'Save Sea Turtle Research Fund'. Shri Mishra added that unless mechanised speed boats are given, it will not be possible to apprehend

the poachers since the Coast Guard vessels remain at 4 Km. away from the beach. Therefore, the unscrupulous poachers and fishermen catch the turtles within this 4 Km, from the beach. Both Shri Whitakar and Shri Mishra called for drastic measures to curb poaching along the coast and surprise checks in the fishing markets of Digha and Calcutta. The

Research Officer, Shri Kar and the Divisional Forest Officer, Shri Mishra were of opinion that entire 48 Km, coast from Palmyras point on river Dhamra mouth to False point on Mahanadi mouth should be declared as a Sanctuary, where fishing should be stopped from September to April every year, for protection of the Olive Ridley Turtles.

SEMINAR ON TROPICAL CYCLONES AND DISASTER PREPAREDNESS

A Seminar on 'Tropical Cyclones and Disaster Preparedness' was held at Soochana Bhavan, Bhubaneswar from 11th to 13th January 1984. The Seminar is being organised by Indian Meteorological Society and is being hosted by Government of Orissa. The Seminar is co-sponsored by India Meteorological Department, Department of Science and Technology and other Scientific Organisations and Institutes.

As is well known, a Tropical Cyclone is the most devastating natural phenomenon. Its fury and power of destruction are matters of great concern for people residing in coastal areas and ships plying on the seas. Considerable loss of life and damage to property due to cyclones are caused by tidal waves, strong winds and phenomenal rainfall. As a result, the study of tropical cyclones and their devastating effects have received attention of the Atmospheric and Social scientists the World over, specially of the Tropical regions. During the last decade considerable improvement has taken place in understanding and forecasting the phenomena associated with the cyclones. With the advent of Radar Meteorology and Satellite Meteorology no cyclone now goes undetected.

This Seminar on Tropical Cyclones is primarily intended to bring together a Cross-section of atmospheric Scientists on one hand, the Government Administrators and other Social Scientists on the other to take stock of our present knowledge of tropical cyclones in all its aspects and to evolve a rational Cyclone Warning and Disaster Management System.

It was considered appropriate to hold the Seminar in Bhubaneswar, the Capital of a maritime State of India which is frequently visited by Cyclones. This venture has received enthusiastic response and support from the Government of Orissa.

The Seminar was inaugurated on 11th January by Shri Khurshid Alam Khan, Hon'ble Minister of Tourism and Civil Aviation, Government of India and is being presided over by Shri Upendra Dixit, Hon'ble Minister of Revenue, Government of Orissa.

This is probably the first time that such a seminar has attracted delegates from all disciplines connected with Cyclone Detection, Cyclone Warning and Disaster Mitigation. Delegates comprise of eminent Meteorologists, Oceanographers, Voluntary Social Service Organisations, Defence Services, Government Administrators from Maritime States, All-India Radio, Door Darshan, etc. Some representatives from International Organisations are also participating.

The Seminar divided into seven technical sessions, where over 50 papers were Presented.

SILK—The Queen of Fabrics

There is a fabric, in whose rustle are whispered Poems of beautiful women—whose lustre and richness are surcharged with nuances of mood—deep red like 'manjitha' which can never be washed away, 'Gerua' the colour of earth and all that is primitive—and 'basanti', fresh, like young mango blossoms.

A fabric which is a fusion of colours, an evolution of styles in which all the senses are stimulated—the visual, the tactile, the imagist and the rhythmic. A fabric whose texture is one long lyric of sensuousness and elegance.

A textile in whose nature potentials unfold—the sensitivity of the fingers ennobling the eyes—revealing how combinations vary in the hands of artisans, making magical forms, rooted though they be in the vernacular idiom of the weavers hands, heart and mind—the indigenous creative impulses reaching some of the finest expressions of all times—a refined labour of the fingers made to the strains of the insect from the mulberry bush—the queen of all fabrics—a fabric called, silk.

No one really knows when silk first came to India. There is indication that some silks like tussar, eri and the golden-hued Muga are indigenous to India and existed in pre-Vedic times. However, silk spun and woven from mulberry cocoons in the early lexicons was known as 'Chin Sukh' which suggests its Chinese origin. For centuries the cultivation of mulberry silk was a closely-guarded secret of the Chinese rulers. Legend holds that the mulberry plant was brought in secretly to India by

a Buddhist monk. By the First Century A. D. mulberry cocoon rearing, spinning and weaving had become well-known in India and the silk woven from this yarn was called 'Kauseya'.

HOW SILK IS MADE

All species of silk-worms have four stages in their life cycle, namely, egg, larva, pupa and moth. The most active time is the larval cycle when the silkworm feeds on mulberry leaves. Then it builds a protective silken abode : the cocoon. It next enters the pupal stage which lasts 8—10 days after which it emerges as a moth.

The silk-worm attains maturity at the pupa stage. Its fully developed silk glands start ejecting silk fluid through a spinneret at its mouth. The ejected silk fluid hardens into a fine film on coming into contact with air. The filament is continuous and ranges in length from 350 to 650 metres in the Indian variety of silk-worms to 1,500 metres and more in the improved varieties. The silk-worm uses this filament to spin the cocoon in which it virtually entombs itself in the course of about 24—48 hours. Silk of commerce is then obtained from these cocoons by a process described as reeling' which is nothing but the unwinding of the filament from the cocoon, after killing the pupa. The reeling is done on small reels and later on larger ones. The silk is now ready to be woven into fabric.

In the First to the Fourth Century A. D., silk was used mainly by royalty in India. 'Pattamsuka' (Plain White Silk), 'Cina'

(Chinese Silk), 'Kauseya' (Mulberry Silk) and 'Dhantapatta' (Washed Silk) were the different varieties of silk of that time.

Between the Eighth and twelfth Centuries nobility joined royalty in wearing silk which was produced in Vijayanagar, Kashmir and parts of Gujarat. Varieties available at that time were 'Ahinvala' (Silk from Anhilvad-Patan in Gujarat) and 'tanchera' (Tanjore Silk), 'Kadali-garba' (Silk comparable to the inside of a banana tree-trunk), 'Muktaphala' (Silk with lustre of pearls), 'Dandaprakara' (Striped Silk), 'Hamsavadi' (Cloth with Swan motif), 'Panchavarnapadi' (Five-coloured Silk) and 'Parevaupata' (Pigeon-coloured Silk).

SILK TRADE

Trade in silk was known to have existed between India and Babylon from the time of Buddha. The silk route from China to Constantinople lay through Kashmir and that is how mulberry sericulture came to this area. From the coastal parts of the East, silk travelled to Indonesia, Malaya and the Far East. Doarte Barbosa writing in the beginning of 16th Century mentions the wild tribesmen of Malaya did not consider their freedom secure till they had stored substantial quantities of Ahmedabad brocades equal to their own heights. This was a standard ransom for a captive. From the Western and the Coromandel coasts silk was exported to the Arab States, to Africa and to the prosperous nations of Europe.

In the 20th Century, the movement of silk underwent a dramatic change with textiles from England and Japan flooding the markets of India.

With Independence, however, there was a growing awareness of the importance of handloom weaving in the economic life of the Country. Next to agriculture, it was the industry with the largest potential for employment. Within a decade, the economic aspects had been strengthened by a resurgence of new sensitivities. From then onwards the silk industry progressed upwards.

Today, India is the largest tropical producer of silk in the world. It is next only to China and Japan, which are the two main producers of silk in the temperate zone.

India which used to be the fifth largest sericultural country in the world before independence has emerged during the 1980 as the third largest.

SERICULTURE TECHNOLOGY

This dynamism was a direct result of the breakthrough in sericulture technology which the Indian scientists evolved to suit tropical conditions. During this period, there was a great spurt in sericulture development in the country which was then almost stationary due to low productivity, low quality, high cost of production and unsatisfactory technology. Attempts in the past to transplant the temperate technology of Japan and China did not lead to any appreciable results.

In the '70s, however, the Indian scientists achieved a research breakthrough in almost every Department of Sericulture. High yielding and superior varieties of mulberry were evolved. A new variety called Kenva 5 yielded 12,000 Kgs. of leaf per hectare against 4,000 Kgs. from local varieties. Under irrigation, this variety yielded 30,000 Kgs. of leaf against 15,000 Kgs. of the local variety. The scientists later evolved a newer variety called the S-54 capable of giving upto 50,000 Kgs. of leaf per hectare.

A second breakthrough was in the field of introducing more productive races of the silkworm in Karnataka and in other parts of South India. The pure Mysore race of silkworm was replaced by the Hosa Mysore and, more important still, by a highly productive bi-voltine race in the traditionally multi-voltine areas of Karnataka. For the first time in India bi-voltine races are being raised with improved cocoon quality of 1.7 gram to two grams cocoon weight as against the old one to 1.25 grams. The filament length was improved from about 400 metres to 1,000 metres.

A third break through was achieved in the new technology of silkworm rearing by bringing about a compromise between temperate and tropical sericulture. All these years, sericulture had been considered possible only in the relatively moderate climate of the Deccan Plateau in the Mysore-Bangalore belt and in the J. and K. region.

It was thought that sericulture was not possible under conditions of fluctuating external temperature and the high heat of summer in other parts of India. The Sericulture Research Institute of the Central Silk Board at Mysore worked out easy techniques of rearing the mulberry silkworm by introducing a set of very simple practices by which the difference between the outside and the inside temperature and humidity could be manipulated. As a result of this, sericulture crossed the border of Karnataka and spread to the neighbouring States of Tamil Nadu and Andhra Pradesh.

Today, Tamil Nadu can boast of more than 30,000 acres under mulberry and Andhra Pradesh more than 40,000 acres. Both these States have a vast scope for the expansion of the industry.

SILK INDUSTRY GROWTH

The development of sericulture in India can be seen by comparing the figures since Independence and now. In 1949, the area under mulberry cultivation was only 47,200 hectares. By 1982 this had more than trebled at 1,80,000 hectares. The production of raw silk in 1949 was 1,242 metric tonnes. In 1982, it had gone up four-fold to 5,249 metric tonnes. In 1951, silk waste was put at 628 metric tonnes. In 1982, it was 1,675 metric tonnes.

In 1970, the export of Mulberry silk fabrics was valued at Rs. 12.1 crores. By 1980 it had gone up to Rs. 45.54 crores. The leading importers were West Germany (Rs. 8.21 crores) USA (Rs. 7.66 crores) and U. K. (Rs. 5.34 crores).

The most significant rise has been in the export of silk goods and silk waste. In 1949 the figures were only Rs. 41 lakhs. In 1982, it had gone up to Rs. 69 crores and exports are expected to reach Rs. 90 crores in 1983-84. Export of silk fabrics in 1957 was valued at Rs. 17.95 lakhs for 2.10 lakh sq. mtrs. of silk fabrics. By 1982, the quantity had gone up ten-fold at 122.8 lakh sq. mtrs. and the value was up by 600 per cent (Rs. 61.3 crores).

The number of sericulture villages in India today are nearly 32,000. Most of them are in Karnataka, Assam, Bihar and Andhra

Pradesh. The estimated state-wise employment in the sericulture industry in 1973-74 was 30 lakh persons. The target for the Sixth Plan in 1984-85 is 51.52 lakh persons. India plans to achieve a level of production of about 10,000 tonnes by 1985. This increase is supported by the expanding domestic market. Dress materials, ready-made garments and carpets have gained popularity while sarees, scarves and ties are other main items of exports.

In the world of silk, India is only country which produces all the four main varieties of silk, i.e., mulberry silk, tasar silk, muga silk and eri silk. Mulberry sericulture is practised in Karnataka, West Bengal, Jammu & Kashmir, Andhra Pradesh, Tamil Nadu, Assam, Bihar, Madhya Pradesh, Manipur and Uttar Pradesh. State like Maharashtra, Orissa, Rajasthan and Gujarat are now planning to follow suit and have initiated small projects to encourage farmers to take up silk worm rearing.

Tasar culture is practised mostly by the Tribal population of the country. The important tasar producing States are Madhya Pradesh, Bihar, Andhra Pradesh, Manipur, Orissa, West Bengal and Maharashtra.

Muga is the golden yellow silk of the North-Eastern Region. The production of muga is confined mainly to the Brahmaputra Valley. Eri silk is produced in small quantities in Assam, Bihar, Manipur, Tripura and West Bengal. India also has a small production of Oak Tassar silk confined to the States of Manipur, Himachal Pradesh and Jammu & Kashmir.

WEAVING TRADITION

India has a unique weaving tradition in silk. No Indian wedding is complete without the traditional Banaras silk saree and the Kancheepuram silks. The Kancheepuram silks are wellknown for their dazzling colours and sturdy structure. The Banaras silks are famous for the work done with gold thread and for exquisite woven designs. Pochampali near Hyderabad has its own tradition of silk weaving with yarn that has been tied and dyed in various colours so as to impart the characteristic geometrical pattern to the sarees woven here. Patan in Gujarat is famous for its patola silk which at present is being

woven by a handful of weavers. A hand-crafted Patola saree with tie and die design in silk would cost something like Rs. 15,000 if woven without gold thread. Other important weaving centres are Bangalore, Murshidabad in West Bengal and Paithan in Maharashtra.

Tasar reeling and weaving have their own traditions and this art is practised mainly in the centres at Bhagalpur in Bihar, Champa in Madhya Pradesh and in and around Sambalpur in Orissa; while almost all the commercial weaving of muga is done at Sualkuchi near Gauhati.

The consumption of raw silk in the world is going up by five per cent. At this rate, by 1985, the world demand for silk will be 70,000 metric tonnes, against the projected production of 60,000 metric tonnes approximately. Herein lies the opportunity for India to produce not only for the internal demand but also a quantity of quality silk to meet the external demand. The silk market has never yet faced a problem of plenty and it is for the industry to seize the opportunity and make a further breakthrough, this time in the marketing and the export of silk.

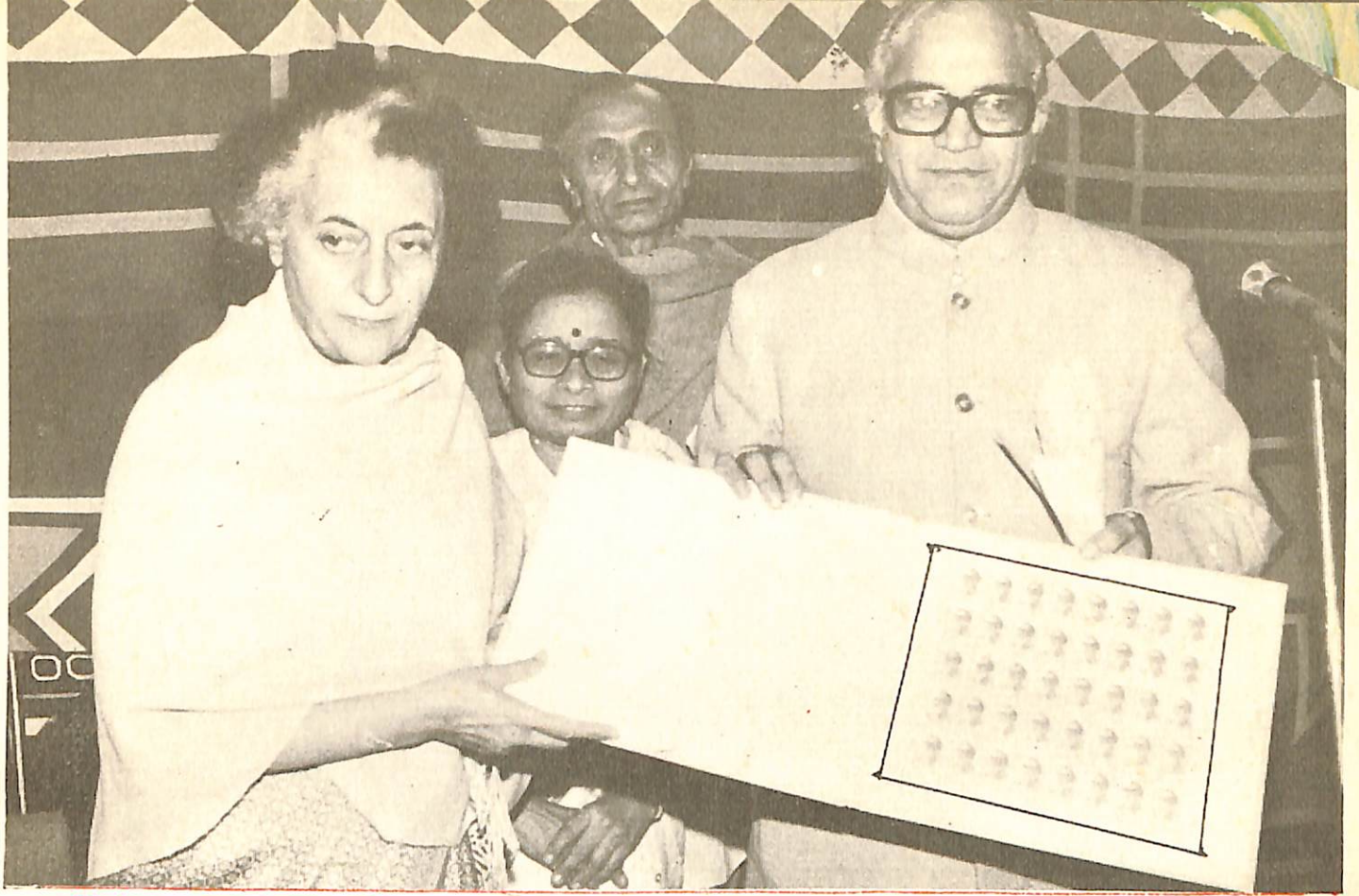
HOLIDAY HOME FOR INSURED PERSONS

The Employees' State Insurance Corporation, Orissa Region has set up two holiday Homes at Nainital in Uttar Pradesh and Bangalore in Karnatak where the insured persons can go to enjoy their holidays and for rest and recreation.

Besides, for the benefit of the workers now the scheme is in operation in all the districts of the State except in districts of Phulbani, Bolangir and Mayurbhanj. The scheme provides medical care and cash compensation to about 1.37 lakh of industrial workers and also to their family members at 28 centres. Full medical care is provided to the above beneficiaries numbering about 5.00 lakhs throughout the State. Cash compensation is paid to the insured persons in the contingency of absence from work due to sickness.

In Orissa five hospitals and two T. B. Annatomies with bed strength of 287 have been constructed at Chowdwar, Kansabahal, Rajagangpur and Jaykaypur. Plans are also underway for construction of a 50 beds hospital at Rourkela for the benefit of the local beneficiaries under the scheme.

During the month of November 1983 a sum of Rs. 8,43,796.68 is paid by the Orissa Region to the insured workers of the State on different occasions. Out of this, the largest sum of Rs. 5,75,997.78 was paid as sickness benefit.



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THE PRIME MINISTER INDIRA GANDHI AND COMMON WEALTH SECRETARY GENERAL DR. S.S. RAMPHAL AT A PRESS CONFERENCE AT BIGYAN BHAWAN, NEW DELHI AFTER THE CONCLUSION OF THE COMMON WEALTH HEADS OF GOVT. MEETING..... ବିକିଟ ସାମ୍ବାଦକ ସମ୍ମିଳନୀରେ ପ୍ରଧାନମନ୍ତ୍ରୀ ଶ୍ରୀମତୀ ଗାନ୍ଧୀ ଓ କମନ୍ ୱେଲଥ ସେକ୍ରେଟାରୀ ଡକ୍ଟର ରାମଫାଲ

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