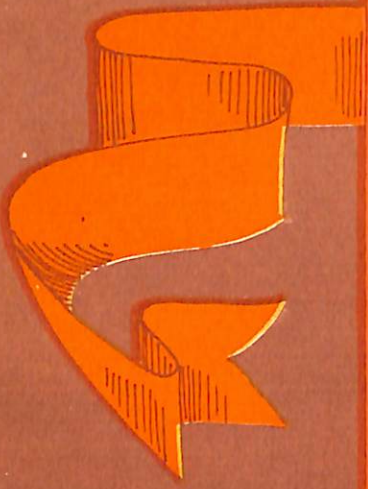
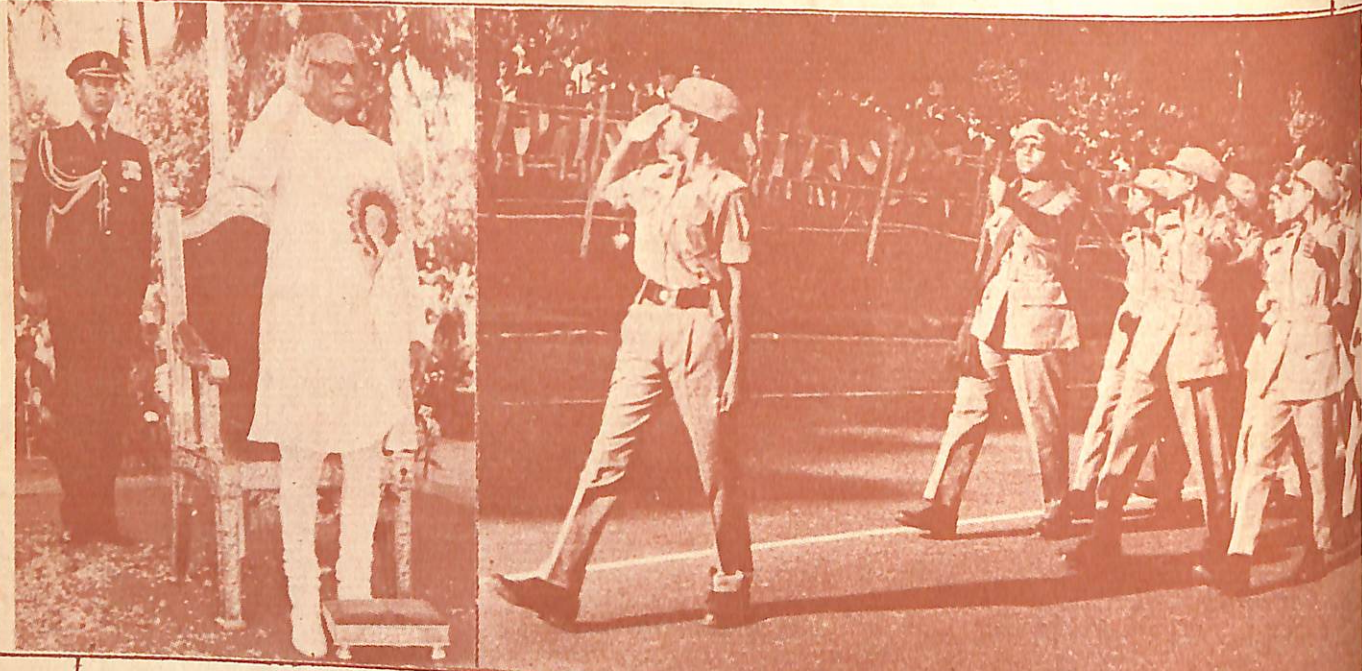




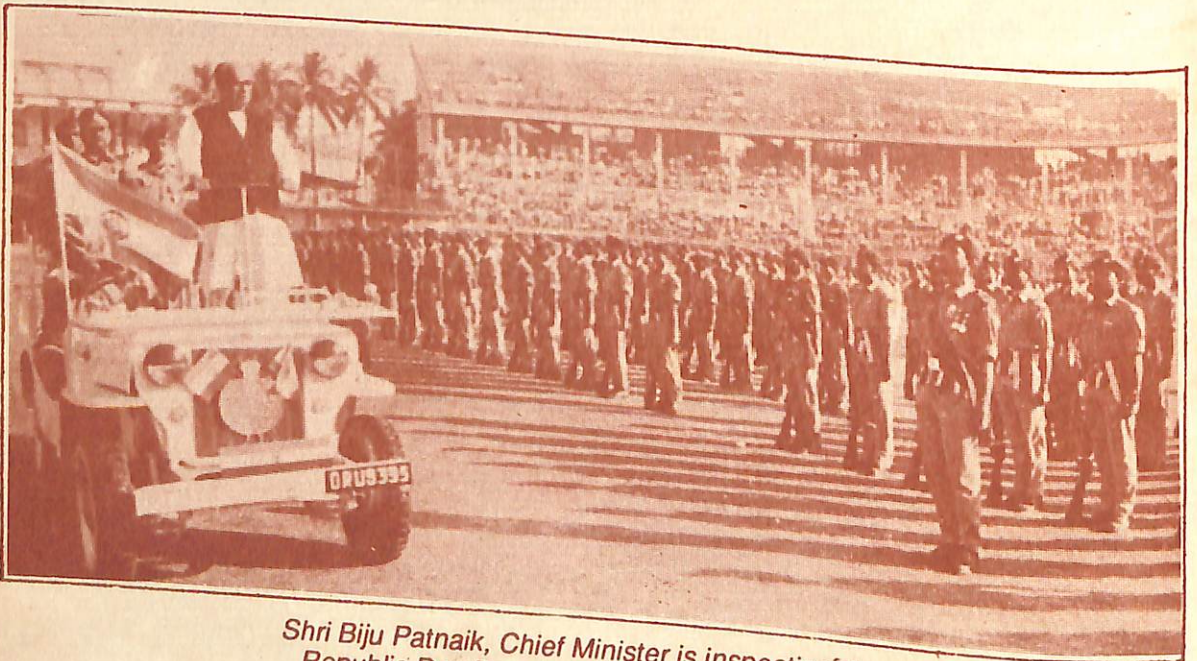
ORISSA REVIEW



February 1994



Shri B. Satyanarayan Reddy, Hon'ble Governor is taking salute of the Republic Day at Bhubaneswar on 26-1-1994



Shri Biju Patnaik, Chief Minister is inspecting the Republic Day Parade at Cuttack on 26-1-1994

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Anti Disaster Preparedness in Orissa

Ajit Kumar Tripathy

Geographical configuration makes Orissa vulnerable to severe natural calamities like flood, cyclone and drought. Floods are almost annual, cyclone almost every alternate year and severe drought once in 3 years, though moisture stress and water scarcity occur in some pockets or the other in every year. Thunder, squall, hailstorms, whirlwind and fire accidents are of common occurrences.

Orissa has a geographical area of 155,707 Sq. Kms. with a population of 315,12,070. The density of population is 202, per Sq. K.M. It is endowed with a 550 K.M. long coastal belt along the Bay of Bengal. Administratively the State is divided into 3 Revenue Divisions and 30 districts. Mostly the districts of Balasore, Bhadrak, Cuttack, Jajpur, Jagatsinghpur, Kendrapara, Puri, Khurda and Ganjam with a geographical area of 40,166 Sq. Km. fall along the costal belt. 68,79,379 people which is 45 per cent of the total population of these districts, reside in the disaster prone costal belt.

Whirlwind and hailstorm usually appear in the months of March to June. Cyclonic disturbances occur in the months of May and June in the pre-monsoon period and months of October and November during post-monsoon period on account of depressions in the Bay of Bengal. Between 1891 to 1970 there had been 1036 cyclonic disturbances or depression. 360 of these intensified into Bay storms of which 221 were moderate and 139 developed into severe cyclones. The cyclones are very often accompanied or succeeded by heavy to very heavy precipitation causing high flood.

The months of June to September are the likely months of flood. Out of total geographical area of 155,707 Sq. Km., 41,000 Sq. Km. is flood prone of which the mere 28,200 Sq. Km. have some sort of protection. The existing embankments provide only partial protection. The Hirakud reservoir being too small in comparison to its catchment provides only partial relief. The Rengali reservoir has a capability to reduce flood in its delta to 11,300 cusecs but the embankment system in its delta is not capable to cope with this intensity.

Over the years, the frequency and severity of natural disasters have increased manifold. This has necessitated long term preventive and protective measures for prevention and mitigation of the natural calamities. However, the financial outlay required for long term measures is vast and the State's resources could hardly accomplish such long term measures. Whatever is done, complete immunity from natural disasters cannot be ensured due to physical and economic factors. In this context disaster preparedness and precautionary and preventive measures which seek to modify, susceptibility to damage have received greater attention.

At Government level, the Revenue Department functions as the nodal Development. The field operations are co-ordinated and supervised by a high level officer known as Special Relief Commissioner who is given wide power in respect of administration of Relief Fund and co-ordination and control of the activities of other Departments connected with the disaster management. The districts have been constituted into three divisions which constitute the administrative tier immediately below the State Level. They are headed by Divisional Commissioners who exercise over all supervision of the disaster management programmes undertaken in their Divisions. The basic unit concerned with detailed formulation of plans and their implementation is the district. Contingent plans are prepared by various district level officers and is dovetailed into a comprehensive plan for the district by the Collector who functions as the Chief Disaster Manager. The district is divided into sub-divisions, tahasils and blocks and are in charge of Subdivisional Officers, Tahasildars and Block Development Officers. These officers have been assigned specific tasks relating to rescue, relief and rehabilitation. During the calamity season, Control Rooms are opened at all levels in the Revenue and Irrigation Departments.

A State Level Natural Calamities Committee has been constituted under the chairmanship of the Chief Minister. District Level Committees have also been constituted under the chairmanship of the Collector. Selected Members of Parliament and members of the State Legislative Assembly have been included in the State Level Committee besides the Secretaries and Heads of Departments of the Departments concerned with disaster management. The Committee reviews the situation arising out of natural calamities and gives advice regarding precautionary measures to be taken, the nature and quantum of relief to be

distributed and the over-all policy relating to relief. It also reviews performances.

During the disastrous flood in 1980 a Cabinet Sub-Committee was formed under the chairmanship of the Chief Minister. In the initial period this Sub-Committee used to meet daily and give immediate decisions on major issues relating to rescue, relief and rehabilitation. The Sub-Committee continues to give overall directions as and when necessary.

The District Level Committee consists of the members of Parliament concerned and the State Legislative Assembly belonging to the district, the District Level Officers concerned and Subdivisional Officers. The detailed contingent plan drawn up by different Departments are placed before this Committee and is finalised after taking their advice.

Before the commencement of the monsoon, the Chief Secretary/Special Relief Commissioner takes a meeting with all the Secretaries concerned and Heads of Departments including the Head of Police Wireless Organisation and the representatives of All-India Radio/Doordarshan, Posts and Telegraphs Department, Telephone Department, Meteorological Department, Railways and representatives of important voluntary organisations. The Collectors of the Districts that are more vulnerable to flood are also invited to attend this meeting. The Officer-commanding and Station Commander, Infantry Battalion stationed at Bhubaneswar is also associated with the discussion so as to enable him to have an idea about the nature and extent of army support that may be required for rescue and relief operation. Discussions are held in detail subsequently with the authorities of Army and Air Force regarding deployment of army personnel and arrangements for air-dropping. Action taken to repair the damages caused to the embankments during the previous year and to strengthen the weak points are discussed in detail. Collectors indicate the weak points requiring further support. They also report the action taken for stocking food stuffs, medicines and other supplies in vulnerable areas and for mobilising additional personnel at the time of flood. The arrangements for flood forecasting and dissemination of warnings are gone into with the representatives of Central Flood Forecasting Organisation and the officers of the Irrigation Department and the representatives of Meteorological Department, Posts and Telegraphs Department, Telephone Department, All-India Radio and Doordarshan. The locations for installing temporary wireless sets are finalised. This meeting is

also repeated at the end of the month to take stock of the position regarding removal of deficiency highlighted in the first meeting. A similar exercise is done at the District level at greater detail.

The Special Relief Commissioner also visits the vulnerable districts and holds discussions with District Level Officers regarding the contingent plan before the calamity season. He also inspects the critical points in the flood embankments.

Control Rooms are opened to function round the clock from 1st May to 30th November in all districts and at the level of Heads of Departments and Departments of Government concerned with disaster management.

I.M.D., Bhubaneswar communicates warning on impending cyclone and heavy rains. Similarly, the Central Water Commission and the State Irrigation Department send flood forecast to Control Room of Revenue Department and S.R.C. who alert the field officers over phone/FAX/wireless. Collectors ensure dissemination of warnings to the villages likely to be affected through Sub-Collectors/Block Development Officers/Tahasildars.

In order to overcome the possible breakdown of landline telecommunication system, I.M.D. have installed INSAT-I-B Disaster Warning System (DWS) at 11 places.

DISTRICT	LOCATION OF DWS
Cuttack	1. All India Radio Station Cuttack.
Jagatsinghpur	2. Paradeep
Kendrapara	3. Mahakalpada
	4. Rajnagar
Puri	5. Astaranga
	6. Krushnaprasad
Khurda	7. SRC's Office, Bhubaneswar
Balasore	8. Baliapal
Bhadrak	9. Dhamara
	10. Chandabali
Ganjam	11. Gopalpur

Four more DWS would be installed. IMD also have programmed to install 20 more DWS in the next phase.

In case of land cyclone, warnings are issued twice a day whereas in sea-based cyclone, warnings are issued 6 hourly.

Warnings are broadcast through Doordarshan and AIR, Cuttack, Sambalpur, Jeypore, Keonjhar,

Baripada and AIR, Vishakhapatnam. The Superintending Engineer, Hirakud Dam Circle, Burla issues advance warning regarding volume of flood water in Mahanadi likely to pass through Delta head at Naraj.

Temporary wireless/VHF stations are installed in vulnerable inaccessible places for quick transmission of message/warnings. 33 temporary sets during 1990 and about 43 during 1993 were installed.

Rain gauges have been set up in every block and in some of the Government agricultural farms. Rain Recording Officers send daily rain fall reports to Collector, RDC, SRC and Department of Revenue during monsoon season. Similarly, gauge readings of different river systems and important reservoirs are communicated by State Irrigation Department and Central Flood Forecast Division, Bhubaneswar.

Closure of breaches in river and canal embankments is ensured before onset of monsoon. The weak and vulnerable points in river and canal embankments are identified and intimated to Collector, RDC, SRC and Revenue Department. The Irrigation authorities have their contingency plan for guarding weak and vulnerable points. Responsible engineers of Irrigation Department are detailed to keep a constant watch of all weak and vulnerable points with requisite materials like sand bags, *talais* and bamboos for undertaking protection work as and when necessary. Irrigation Department also take steps for keeping the drainage channels clear to allow free flow of water by taking recourse to provisions of the Orissa Irrigation Act, 1959 and Bengal Drainage Act, 1880.

Special Relief Organisation has a fleet of 130 power boats and 25 ERP country boats. The boats are strategically stationed for rescue and relief operation during high floods.

Besides, Collectors are empowered to hire country boats during real emergencies.

In coastal districts *pucca* buildings i.e. School buildings and other Government buildings situated on elevated sites are identified in advance in the flood/cyclone prone areas in addition to the cyclone shelters constructed with assistance from European Economic Committees. Besides, about 200 mounds have been constructed for shifting people and cattles of villages threatened by flood. Temporary shelter materials are stocked adequately for use during natural calamities.

Availability of dry foods like *chuda*, *guda*, etc. is assessed by Collectors and they ensure stocking of

dry foods in sufficient quantities with *chuda* mills/stockists to meet emergencies.

Sufficient quantities of food grains are stocked on selected interior places to meet the requirement of emergent relief/public distribution system in the event of disruption of communication and transport system due to flood/cyclone.

Department of Health ensures stocking of medicines/vaccines/disinfectants in adequate quantities in PHCs/Dispensaries and Subdivisional Medical Hospitals in flood/cyclone prone areas. The people in the affected areas are immunized from water-borne and other disease. The water sources are disinfected. Development of personnel for undertaking these works, constitution of mobile teams and establishment of field hospitals are planned in advance.

Health of cattle in the flood affected areas is equally important. Provision of fodder, treatment of cattle and prophylactic measures are the important items that figure in the Contingent Plan of the F.A.R.D. Department. Besides, veterinary squads are also earmarked for specific cyclone/flood prone areas. Arrangement for disposal of dead bodies and carcass of animals are also planned in advance to avoid spread of epidemic.

The Agriculture Department have their contingent plan which among other things, envisages :

- (i) Forming of crop weather watch groups to watch crop situation and to arrange remedial measures.
- (ii) Maintaining reserve stock of seeds, ensuring availability of fertilisers and pesticides.
- (iii) Monitoring information of rain falls, crop coverage, crop conditions, pest and disease attack and input availability.

Rural water supply authorities take up repairs of drinking water tube-wells and supply potable water in the flood affected areas and also in the areas where temporary shelters are set up to accommodate people rescued from flood/cyclone affected areas.

Arrangements are made to requisition Army assistance at short notice to assist in rescue operation, air-dropping of food packets and reconnaissance flights in affected areas. Services of Police, Home Guard, N. C. C. Fire Brigade etc are also mobilised for rescue and relief operation.

Emergent relief is provided to the affected people shifted to temporary shelters for 1 to 15 days depending on the severity.

Assistance is provided for (a) house building, (b) reclamation of sand cast land and (c) ex-gratia to the bereaved families for death of persons due to natural calamities.

Restoration of public properties damaged due to flood/cyclone and other natural calamities to the pre-flood conditions is undertaken with funds provided from the Calamity Relief Fund.

Drought situation is anticipated from the behaviour of the monsoon. The rain fall data collected from different parts are analysed to assess crop conditions and plan relief measures. In order to fight dry spells and moisture stress conditions : (i) energisation of L.I. Points, (ii) supply of water pumps to farmers at concessional rate (iii) construction of cross bundhs are usually undertaken. Eye estimation survey by revenue field staff is taken up to identify villages where crop loss is anticipated to 50% or more. In such villages crop cutting experiments are done to locate drought affected villages. As and

when drought situation develops or worsens execution of labour intensive works, adequate supply of essential commodities through fair price shops introduction of G.R. Cards, strengthening of feeding programme, deeping of wells, sinking of tube-wells, construction of surface wells and shallow ponds, relief to students etc, are some of the measures which are resorted to for mitigating distress of the people in the drought affected areas.

Alertness and preparedness can not prevent natural calamities, but they can surely reduce the rigorous and damages caused by them. There have to be a great degree of people is involvement and participation in this field. In the long run, it is the people who fight their own battle against nature. Relief is only a pittance compared to the damages, and losses suffered be it flood, cyclone or drought. 11.

*Special Relief Commissioner,
Orissa*



Shri Biju Patnaik, Chief Minister is releasing a Souvenir at the inaugural function of the seminar on "Electronics Industry Prospects" at Bhubaneswar on 22.1.94

A Glimpse of Orissa Budget and The role of Finance Commission

Sidhartha Kanungo

Administration and finance are as inseparable as a body and the heart. All administrative acts involve expenditure of money, at least for hiring the necessary personnel to carry out the tasks, Finance fuels the administrative engine. Without it, the latter cannot operate. Rightly, therefore, Kautilya reminds, *All undertakings depends upon finance. Hence foremost attention shall be paid to treasury.*

Revenue is collected by way of tax and other means from the citizens of the country. So it is the moral responsibility of the Government to spend money more efficiently and economically. Sound fiscal management is, therefore, of vital importance to Government.

The budget is one of the principal tools of administration in addition to being the most powerful instrument of, legislative control and of executive management.¹ Admittedly, as one of the aspects of financial administration, budgeting involves the largest number of policy questions in course of making fiscal decisions.

The budget is the master financial plan of a government. It brings together estimates of anticipated revenue and proposed expenditure for the budget period and from the estimates the activities to be undertaken and the means of their financing can be inferred.²

The budget being the financial plan of the Governmental machinery is at the very core of democratic Government³. Only in the budget can an united view of the scope and character of a Governmental activity be seen and only here can the financial direction which Government is planning to take be discerned. Ideally also, the budget document permits the average citizens to see fiscal policy in integrated forms; in practice the picture is often excessively complex even for the legislator whose business it is to legislate budgetary plans.

The budget is the most important financial document of the Government which contains transactions of the Government for three consecutive

years. This is prepared every year and presented to the State Legislative under Article 202(1) of the Constitution of India. It contains actuals for the preceding year, the Revised Estimates for the Current Year and Budget Estimates for the ensuing year. 1

The accounts of Government of Orissa are kept in three parts :

Part—I Consolidated Fund of the State of Orissa.

Part—II Contingent Fund of the State of Orissa.

Part—III Public Account of the State of Orissa.

The expenditure from the Consolidated Fund should either be charged or voted by the State Legislature.

In Part—II of the Budget, accounts are recorded in the transactions concerned with the contingent fund set up by Government of Orissa under Article 267 (2) of the Constitution of India. The State Government maintains this fund to meet unforeseen and emergent expenditure on schemes for which funds have been voted by the legislature till such time as the funds are voted.

Part—III of the Budget is the Public Account of the State Public Money received by or on behalf of the State Government which cannot be credited to the Consolidated Fund are credited to this fund for payment out of Public Account, no demand is required to be presented to the Legislature. These payments are of the nature of banking transactions.

The combined effect of the transactions in the Consolidated Fund, the Contingency Fund and the Public Account presents the overall budgetary position and the surplus and deficit thereof. The opening cash balance of the Government added or subtracted by the surplus or deficit in the over all transactions of the year produces the closing balance for the year.

Budgetary process involves operations designed to raise, spend and account for funds needed to be expended on public services. A budget in this sense, becomes both a description of the fiscal policies of the Government and the financial plans corresponding to them⁴. These operations which act in a continuous chain are performed by the following agencies :

1. The Executive which needs funds,
2. The Legislature which alone grants funds,
3. The Finance Ministry which controls the expenditure of funds by the legislature, and

4. The Audit Department which looks after the legality and propriety of expenditure.

It is seen from the Audit Reports and Appropriation Accounts prepared by the Comptroller and Auditor General of India and placed before the Legislature in accordance with Article 151 of the Constitution of India that in a number of cases grants voted by the Legislature have remained unutilised partially or wholly. In a few cases, expenditure in excess of the voted grants has also occurred requiring regularisation under Article 205 of the Constitution. This indicates that budget provision has been made without due care and caution keeping in view the capacity of the Department to utilise the grant during the year. It is explained by the Department concerned that savings have occurred due to administrative approval not being accorded in some schemes, non-sanction of funds by Government of India in respect of centrally sponsored and central schemes and various other reasons. Thus it is evident that provision in the budget is being made in anticipation of administrative approval, sanction of funds by Government of India and completion of other formalities etc. This is not a happy State of affairs. Under such circumstances the control of Legislature over the Executive is bound to be unsatisfactory.

The expenditure shown to have been incurred does not in reality reflect the achievement in reaching the fiscal targets commensurate with the money spent for the following reasons.

1. In Department other than Public Works, the authorities generally draw funds from the treasuries towards the close of the financial year and keep it with them in sealed bags for years together. It not only affects the ways and means position of the Government but also brings in many other complications like misappropriation etc.

2. In Public Works Departments like Works, Irrigation and Power and Public Health, a peculiar system is followed in showing the expenditure as incurred in execution of the works. In order to avoid lapse of grant, these Departments who follow a different accounting procedures issue materials to different works or not to show the expenditure as incurred. In subsequent years, these materials are again withdrawn. This is called fictitious adjustment as commented by Auditor General in almost all the audit reports. This pernicious system not only gives a wrong picture of the performance of the Departments in execution of various works but gives rise to various complications including large scale purchase of

materials at the fag end of the year at higher rates and misappropriation of such materials in some cases.

The irregularities committed by different Civil Departments as well as Public Works Departments pointed out above can be avoided and the real performance of the department can be ensured if performance budgeting is introduced in all the Departments of the Government and periodical review is made to link the expenditure incurred with physical targets achieved. These measures will definitely improve the performance of various executing agencies and the executive will have a salutary control over the subordinate officials. While analysing the budgets of the Government, the following points may be taken into consideration.

(I) Transfer Under Finance Commission

While in respect of resource raising spheres clearly laying in the jurisdiction of the Centre and the States, it is the respective Governments that are the final authority. In case of those taxes, which are to be shared and the grants-in-aid to the States, the decisions are made by the Parliament in the light of recommendations of the Finance Commission which are appointed periodically for the purpose.

Table I shows the Centre's Financial allocation to the States by Finance Commission and also the transfer of resources to Orissa by Centre through Finance Commission.

It may be pointed out that State Government had asked a sum of Rs. 16,00 crore for non-plan expenditure during the period 1990—95 to the 9th Finance Commission under the Chairmanship of Mr. N. K. P. Shalve. Considering the demand of the State Government, the 9th Finance Commission had recommended a sum of Rs. 9,000 crore for the above mentioned purpose.

It is important to point out at this stage that the State Government have presented a Bill proposal of Rs. 1,712 crore 84 lakh to the Tenth Finance Commission under the Chairmanship of Mr. K. C. Pant. The Bill proposal being non-development one would seek grant-in-aid of Rs. 160 crore for District reorganisation, Rs.151 crore 66 lakh for development of administration of Revenue Department, Rs.11 crore 25 lakh for preservation of Land records, Rs. 4 crore 21 lakh for spread of sports, Rs. 49 crore 59 lakh for housing scheme for Government employees Rs.143 crore 19 lakh for modernisation of Police System, Rs.25 crore 87 lakh for development of the jail administration, Rs. 30 crore 12 lakh for development of Judiciary.

Rs.212 crore 85 lakh for development and modernisation of Health Service, Rs.66 crore 60 lakh for development of primary education, Rs. 60 crore for plantation in drought prone area, Rs. 106 crore for repair of roads and culverts, Rs. 10 crore for preservation of old monuments and Rs. 574 crore 50 lakh for flood control measure.⁶

2. Debt Position and other Liabilities

Public Debt of the State consists of internal debt and loans and advances from the Central Government. The data of such liabilities of the State Government during the five years ending March 1992 are given in table No. II.

The total liabilities of the Government had increased from Rs. 2934.56 crore at the end of 1987-88 to Rs. 5337.80 crores at the end of 1991-92 representing an increase of 82 per cent over the last five years.

It may be pointed out that the total outflow on account of repayment of Government of India loans and interest thereon increased by 108 per cent between 1987-88 and 1991-92. During 1991-92 the entire fresh loans received were consumed for the repayment of outstanding loans and payment of interest thereon.

Hence, unless a suitable debt relief arrangement for writing off the unproductive loans and rescheduling the repayment of other loans is devised by the Finance Commission it may be extremely difficult for the State to finance Capital outlays from future borrowings.

Recently Chief Minister, Shri Biju Patnaik had urged upon the 10th Finance Commission to write off the State's entire debt of more than Rs. 700 crore. If the debt was written off, the State would be able to provide some funds for the developmental purposes, he argued.⁷

3. Growth of Revenue Expenditure

Table III shows the growth of revenue expenditure (both plan and non-plan) during the last five years.

It may be pointed out that while the revenue expenditure (plan) increased by 57 per cent between 1987-88 and 1991-92 the expenditure under non-plan increased faster by 100 per cent during the same period.

4. Expenditure on Salaries

It may be pointed out expenditure on salaries alone constitutes 65 per cent of State's total revenue income inclusive of State's share of Central taxes. In

fact, salaries outstrip the State Government's own tax and non-tax revenue earnings by about Rs. 50 crores⁸

5. Unfruitful Expenditure

Audit Reports of different years point out that due to improper planning and management, unfruitful expenditures occur. Reference may be made to the C.A.G. report for the year 1992 where unfruitful expenditures of Rs. 12.27 lakhs Rs. 10.27 lakhs and Rs. 2.48 lakhs were noticed in Finance Department., Industry Department and Agriculture Department respectively.

6. Diversion of Funds

Expenditure upto entire ceiling of Rs. 31,999.04 lakhs fixed as relief assistance by the Government of India during 1980-85 is reported to have been spent.

Funds allotted for relief of distress caused by natural calamities were diverted on items like cost of establishment, purchase of equipment etc., which did not fall within the scope of such expenditure. It is interesting to note that the expenditure was also incurred out of relief grants during the period where no calamities had been reported⁹.

The Estimate Committee of Orissa Legislative Assembly also felt that major portion of the funds sanctioned for restoration of irrigation projects in cyclone-affected areas had been diverted to other areas for some other work¹⁰.

7. Keeping of Money in Revenue Deposit.

It may be pointed out that contrary to the provisions in the financial rules that the money should not be drawn until and unless required for immediate disbursement, government instructed in April 1983 that money under different projects should be drawn up and kept under Revenue Deposit apparently to avoid lapse of grant. Five disbursing officers whose records were test checked, had retained at the end of March 1984. Rs. 79.57 lakhs (A.D.M.O. Puri Rs. 16.30 lakhs; Ganjam, Rs. 18.22 lakhs; Cuttack, Rs.27.28 lakhs, Phulbani, Rs.5.77 lakhs and Koraput Rs.12.00 lakhs, of which the balance at the end of August 1984 was Rs. 32.05 lakhs in the said deposit amount¹¹.

This procedure and also booking of materials against different works or projects (as mentioned earlier) are really a fraud on the legislature. Apart from affecting ways and means position of the Government, this leads to misappropriation, embezzlement and many other financial irregularities.

8. Investment in Government Companies

Out of 80 Government Companies in which Government had invested Rs.625.37 crores accounts were finalised in 52 cases upto different years ranging from 1961-62 to 1990-91. Twenty three of these companies were under liquidation and 14 had incurred a loss of Rs. 7.52 crores according to the accounts last rendered by them while 15 companies had a cumulative loss of Rs. 73.54 crores. It is a matter of surprise that twenty-six companies in which Government had invested Rs. 295.86 crores during 1951-52 to 1991-92 have not rendered accounts even for a single year (March 1992).

In respect of 23 Joint Stock Companies in which Government had invested Rs. 1.25 crores, only one in which the investment was Rs. 0.33 crores had rendered accounts upto 1988-89 showing an accumulated loss of Rs. 6.46 crores¹².

The points discussed above speak of the sorry state of affairs about Orissa Budgeting. Unless stringent measures are taken to check these financial indiscipline, it would be very difficult for the State to manage its own affairs.

We would like to suggest the following measures to be undertaken by the Finance Commission in meeting out debt liability as well as backwardness of the State:

1. It is recognised in principle that repayment of outstanding loans is to be different for different groups of States in view of their being placed in dissimilar circumstances. This principle may further be amplified to prescribe a concessional or differential rate of interest in respect of all central loans to financially weaker States like Orissa.

2. All unproductive loans may be written off. So that the State would be able to provide some funds for development purpose.

3. The balance of the loans from the Central Government outstanding on 31 March 1993 may be consolidated and rescheduled for payment over a longer period as the present dispensation of 30 years has not served objective.

4. The present criteria of grant-in-aid on the basis of capacity for resource generation should be abolished as it is discriminatory and retarded development for poorer States such as Orissa.

5. Plan loans to be obtained during the subsequent years may be made repayable over a period not less than 30 years.

6. The overdraft loans from the Reserve Bank of India, outstanding on 31 March 1993, may be fully covered by a special grant-in-aid/accommodation from the Centre.

7. The structure of 70 per cent loans and 30 per cent grant in respect of plan assistance may not be uniform for all States. For financially weaker States like Orissa; the pattern may be 50 per cent loan and 50 per cent grant.

8. Orissa is frequently hit by flood, drought and cyclone. Hence, share of relief expenditure on natural calamities may be provided in the non-plan grant-in-aid.

9. The principle so far followed in the distribution of funds to the States should undergo a change and the Finance Commission should take poverty, illiteracy and economic backwardness of the people of a particular region as the main criteria for distribution of resources.

10. Last but not least, backward States like Orissa should be treated as special category States so as to enable them to compete with comparatively advanced States and effectively tackle the problem of poverty and backwardness.

The Gadgil Formula or the improved Gadgil Formula with some more concession for the underdeveloped States had not been able to remove the widening gap between underdeveloped States like Orissa and comparatively developed States like Punjab, Haryana, Gujrat and Maharashtra.

The non-plan surplus under awards of the various Finance Commissions had always been unfavourable to Orissa. The non-plan surplus for Orissa under the 7th, 8th and 9th Finance Commissions was so scanty that they did not help in providing for capital investment. A number of advanced States had, in comparison, plenty of revenue surplus which they could divert for their capital investment.

Access of the centre to various categories of financial resources continues to be much more than that of the States. The Sarkaria Commission in its report has stated that ".....of the combined aggregate resources during the period 1951 to 1985, the Union Government raised 71.5 per cent, States 28.5 resources"

Obviously, the fiscal area within which the Centre operates has a longer and wider potential. The States operate within a relatively restricted area and their financial situation interse exhibits sharper disparities. Some of the States because of their

TABLE—I

Centre's Financial Allocation to States				Transfer of Resources to Orissa by Centre through Finance Commission (Rupees in crores)										
Finance Commission	Tax allocation	Grants in-aid allocation	Total	Tax Allocation Income Tax	Excise Duty	Union Excise Duty	Addl. Excise Duty	Railway	Total	Revenue deposit	Upgradation	Net interest Liability.	Margin Money	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
First Commission (1952—57) Shri K.C.Neogy	371.3	50.00	421.3	10.48	0.16	3.64	..	..	14.28	5.47	..	..	..	5.47
Second Commission (1957—62) Shri K. C. Santhanam.	822.4	197.2	1019.6	15.24	0.47	9.21	3.08	0.98	28.98	17.20	..	..	..	17.20
Third Commission (1962—66) Shri A. K. Chanda.	1067.5	250.4	1317.9	15.90	0.84	26.07	4.50	0.88	47.85	53.00	..	..	..	53.00
Fourth Commission (1966—69) Shri P. V. Rajmanar.	1328.0	421.8	1749.9	17.26	0.34	30.77	3.21	1.02	52.60	87.54	..	..	..	87.54
Fifth Commission (1969—74) Shri Mahavir Tyagi.	4643.0	710.7	5353.8	78.52	1.11	86.50	15.64	1.92	183.69	104.67	..	..	..	104.67
Sixth Commission (1974—79) K. Brahmananda Reddy.	8250.6	2509.6	10760.2	122.37	2.03	149.83	44.73	1.80	319.14	247.67	57.06	..	..	304.78
Seventh Commission (1979—84) Shri J. M. Shelett.	19297.1	1609.9	20907.0	193.97	0.22	638.08	72.79	1.88 0.05 Hotel Receipt	906.99	136.99	32.26	..	..	169.18
Eighth Commission (1984—89) Mr. Y. B. Chavdt	35683.0	3769.0	39452.0	447.51	(—) 0.24	1170.03	187.60	6.48	1811.38	111.70	69.	80274. D.A. 95.90	4065. 62	617 42

SOURCE : Finance Department, Government of Orissa, 1993.

economic and financial strength have achieved accelerated growth in their *per capita* incomes. Compared to the all India average *per capita* incomes the *per capita* income of some advanced states are higher by 30 to more than 60 per cent of the average while those of some poorer States are lower by 17 to more than 38 per cent. Thus the regional imbalances which had originated before independence due to historical reasons, have persisted even after forty six years of independence and the long strides taken in the planning process. Those weaker States like Orissa which have not been able to raise adequate resources according to the existing parametres should be enabled to have

sufficient financial resources through devolution and grants-in-aid mechanisms to achieve a faster rate growth. They should also be in a position to provide a wide range of public services as envisaged in the Directive Principles of State Policy. Access of the backward States to the benefits of an accelerated rate of economic growth in the long run would mitigate existing tension and confusion. Both Chief Minister Shri Biju Patnaik and P. C. C. (I) President have appealed the 10th Finance Commission to give special justice to Orissas in view of its backwardness. We hope, the 10th Finance Commission under the Chairmanship of Shri K. C. Pant would do justice to Orissa.

Table-II

Year	(Rupees in Crores)				
	Internal Debt.	Loan and Advances from Central Government	Total Public Debt.	Other Liabilities	Total Liabilities
1987-88	628.74	1826.59	2455.33		
1988-89	732.39	2044.12	2776.51	479.23	2934.56
1989-90	942.26	2267.48	3209.74	607.38	3383.89
1990-91	1090.84	2653.31	3744.15	720.61	3930.35
1991-92	1419.73	2868.56	4288.29	856.29	4600.44
				1049.51	5337.80

Source : Report of the C. A. G. of India, for the year ended 31st March, 1992 (Civil), Government of Orissa, Orissa Government Press, Cuttack-10.

Table-III

Year	(Rupees in Crores)			
	Revenue Plan	Expenditure Non-Plan	Total	Percentage of Non-Plan expenditure to total revenue expenditure
1987-88	422.45	985.14	1407.59	
1988-89	497.93	1160.79	1658.72	70
1989-90	505.76	1340.35	1846.11	70
1990-91	754.53	1436.00	2190.53	73
1991-92	664.82	1970.20	2635.02	66
				75

Source : Report of the C. A. G. of India. For the Year ended 31st March, 1992, Civil, Government of Orissa

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Additional Treasury Officer,
Special Treasury No.1, Bhubaneswar



Shri B. Satyanarayan Reddy is releasing a book in the Saraswata Samaroha organised by Chinta O Chetana at Soochana Bhavan, Bhubaneswar on 4.2.94. Shri Biju Patnaik, Chief Minister also released "Ramayan Darshan" and graced this function.

Agriculture in Orissa : Today and Tomorrow

P. C. Mohanty

In the eye of urban elite agriculture may be merely a vocation, a means of earning livelihood for the peasants in the rural areas but it is something more than that. In fact, it has been a way of life about 80% of the people of our State and it plays a vital role in the State economy. For centuries our culture, our festivals were linked to agriculture. All facets of our lives had imprint of agriculture on them.

Orissa has a geographical area of 1,55,707 lakh hectares in the State out of which 65.42 lakh hectares is cultivated and another 6 lakh hectares remain as culturable fallow. Topographically the high, medium and low lands constitute 47%, 30% and 23% respectively of the total cultivated area.

The climate of Orissa is of tropical nature. The south-western monsoon and the north-eastern monsoon effectively control its climate. As the State is located in the eastern coast of India, it does not come under the direct path of the south west monsoon with the result that monsoon rain is much lower here than West Bengal.

The total annual rainfall for the State is about 1,500 mm. of which about 1,200 mm. is received within four months from June to September. The rain during the subsequent period is uncertain. The even distribution of rain during the Kharif season from June to October plays the key role in ensuring a good level of production.

The agro-climatic conditions of the State has made it eminently suitable for growing rice during the Kharif season. Rice is grown in about 41 lakh hectares in Kharif season and about 2.3 lakh hectares in summer season. The upland rice which occupies about 24% of the total paddy area is grown under rainfed conditions. It is shorter in duration and the yields are invariably low. It is very much prone to variation in rainfall. The medium land which occupies about 40% of the paddy area gives better yield than upland rice. The low land areas which constitute about 36% paddy land fall into two categories, i.e. (a) rainfed low land and (b) water-logged areas with poor drainage system.

The farmers normally prefer to grow long duration paddy varieties which if needed, can fight water-logging.

Today, with excellent high-yielding varieties paddy available from research stations suitable for different situations, it has been possible to get better yield. The latest release of superfact varieties like Hira and Kalyani II which mature within 70-75 days are suitable in the low rainfall and drought-prone areas with yield potential up to two tonnes per hectare. The superfact varieties like Kalyani 3, Pathara, Banaprabha and Ananda have been popular with the farmers in the medium land. For the low land regions varieties like Tulsi, Savitri and Panidhar have found favour with the farmers. The variety like 'Udaya' released from C.R.R.I. with multiple resistance to pests and disease has been an asset to the State for the rice growers, particularly in the endemic areas. All these have led to better growth rate in production and productivity of rice in the State over the last decade.

High-yielding paddy coverage has increased to about 50% by 1990-91. During 1991-92 the coverage under H.Y.V. paddy was 26.68 lakh hectares which is 18% and 7% more than 1989-90 and 1990-91. During Kharif and Rabi 1991-92 the State has achieved 60.30 lakh M.T. and 6.30 M.T. respectively of the cleaned rice which is the highest yield so far achieved.

Pulses :

Pulses constitute the most important source of protein for the people and are grown round the year in Orissa. Blackgram, greengram, horsegram and arhar are the major pulses grown in Orissa. Besides there are other minor pulses like tur, field pea and cowpea. Presently the pulses over an area of more than 21 lakh hectares are grown of which about six lakh hectares are grown under Kharif and the rest in rabi summer seasons. Amongst the pulses mung and biri occupy the largest area of about 61%. Improved varieties like T-9 in Biri, Pusa Baisakhi in Mung and high yielding varieties like UPAS-121 and ICPL-87 in Arhar are in high demand.

Arhar is now gaining popularity mainly in tribal areas as a mixed crop with paddy or millet. The lead districts in production of Arhar now are Koraput with about 34,500 hectares and Kalahandi with 28,000 hectares.

Oilseeds :

Groundnut, Till (Sesamum) Rape and mustard, linseed, castor, niger are the principal oil seeds grown in the State. Groundnut, Mustard, Sesamum

and Niger constitute the major group of commercial crops for the farmers. These four crops account for 10.8 lakh hectares out of a total area of 11.5 lakh hectares under oil-seeds in the State. Groundnut yields in Orissa have been the best in the country. The area under groundnut in Orissa has increased to 3,75,83,000 hectares.

The oil-seed technology mission set up at the national level provided a special thrust for oil seed production in the State. As a result of concerted effort by the State Government there is perceptible increase both in area and production of oil-seeds in the State. From an area coverage of 3.30 lakh hectares during 1970-71, it rose to 11.51 lakh hectares during 1990-91 with production level of 2.15 lakh tonnes to five lakh tonnes.

During 1992-93 oil-seed production in the State was about 9.15 lakh tonnes and progress has been made for production of 12.56 lakhs during 1993-94.

Sugarcane being the main cash crop of Orissa, it has been programmed to produce 59.25 lakh tonnes of sugarcane during 1993-94 to meet the requirements of Sugar Industries. Sugarcane is grown in about 50,000 hectares in the State and there is proposal to extend the coverage to about 90,000 hectares by end of the 8th plan period with target of production of 76.50 lakh tonnes of millable cane.

Fibre Crops :

In fibre crops emphasis has been given to increase the area under cotton. The cotton crop in Kalahandi district has already proved to be a good cash crop for the farmers. During 1988-89 cotton was taken up in an area of 6,600 hectares in three districts namely Koraput, Kalahandi and Balangir and the production was about 9000 bales of cotton. There is proposal to increase the area to 15,000 hectares by end of the 8th plan period. The per hectare cotton has also improved with better management practices particularly with plant protection measures. What is required now is to organise the industry sector and secure market for the produce so that the farmer is able to get good price.

Jute is another cash crop grown by the farmers of coastal area. Multiple cropping system including jute and paddy is an established pattern in the coastal area. In jute, Orissa is one of the leading States of the country and the yield per hectare is the best in the country. The report of the Expert Group under

the Chairmanship of Sri C.H. Hanumanthe Rao published by Government of India during 1987, reveals that 3.37 yield per hectare as well as the value of gross output of jute was much higher in Orissa and West Bengal whereas it was quite low in Bihar and Assam.

Fertilizer :

Fertilizer is the key-input in improving agricultural production.

With the introduction of high-yielding varieties use of fertilizer has become imperative. High-yielding paddy is more responsive to fertilisation particularly phosphorus and nitrogen. Due to high price of chemical and fertilizers, farmers are now to utilise bio-fertilizers and rhyzobium in the crop field in conjunction with chemical fertilizer. Application of greenmanure and bio-fertilizer has been adopted by the farmers to boost production. Fertilizer application has risen from 12 kg./hect. to 22 kg. hect. during the last five years and it could be pushed to about 25 kg. per hectare by end of 1988-89.

Plant Protection Measures :

Plant protection measures have become an integral part of agricultural production programme particularly after introduction of high yielding varieties. Intensive cropping programmes with multiple relay cropping technique, improved seeds, application of fertilizers, and water management practices are more susceptible to attack of insect, pests and pathogens. Therefore, crop protection is very necessary. The strategy adopted for crop protection measures included monitoring of pest situation in different crops through regular pest surveillance, growing of varieties resistant to crop pests and diseases, early sowing/transplanting to escape the peak period of pest incidence, seed treatment and prophylactic treatment in seed nurseries, need-based applications of pesticides and post harvest control measures.

Horticulture :

The Agroclimatic condition and soil of Orissa are very favourable for taking up different horticulture. Extension of Coconut plantation in coastal districts and compact area, banana cultivation throughout the State have been accorded high priority. A massive programme of plantation of 5,000 hectares under different fruits like mango, coconut, lime oranges, litch, banana etc. in compact area was made during 1992-93. Basing on the experience and acceptance of the people there is a plan for

coverage of 6000 hectares under different fruits during 1993-94.

Use of flowers for different religious and decorations purposes is now on increase. Hence, there are also plans to take up floriculture on a commercially viable scale in the State. Programme has been taken up to produce marigold, tuberose, roses, chrysanthemum in farmers field. Apart from these flowers, it is also contemplated to produce gladiola, orchid, roses etc. for export purposes by the end of 8th Plan.

Government have taken up plantation of 300 hectares oil plan in the Government farm at Sukinda on the experiment basis for production of palmolive oil in future.

Soil Conservation :

Soil and water are broadly two basic natural resources which are needed for crop production. It is estimated that more than 51% or 78.02 lakhs hectares of the total surface area suffers from soil erosion with a total loss of soil to a tune of about 127.56 million tonnes causing a nutrient loss of about 0.117 million tonnes of nitrogen, phosphorus and potassium in every year. Soil conservation measures such as tree plantation, vegetative contour bunding, water recycling structure of low cost technology have been taken up to prevent soil erosion. During 1993-94 the main thrust is given for watershed management in integrated manner by getting funds from external aided agencies and from central sectors, such as (i) Inter-State River Valley Project, (ii) National Water-shed Development Project in Rainfed areas, (iii) Integrated Watershed Development Project in Phulbani and Ganjam District, (iv) Indo Danish Comprehensive Watershed Development Project in Koraput District.

Special Programmes :

Centrally sponsored incentive oriented schemes like Integrated Programmes for Rice Development, National Pulses Development Programme, Oil production programme etc. are being implemented in the State where inputs are being supplied to the farmers at a subsidised rates in order to improve their socio-economic status. technical advice and assistance are also rendered to the farmers by the agricultural yield functionaries in close coordination with scientists of Orissa University of Agriculture and Technology and Central Rice Research Institute. Similarly quality seeds are distributed in pulses, groundnut, oilseeds etc. There are two agencies to supply quality seeds to the farmers : (i) The Orissa State Seeds Corporation and (ii) The Government Seed Farm. The State Seeds Corporation organises its own seed production programme with the help of registered growers and also purchases seeds from the National Seeds Corporation to meet the requirement of seeds.

Role of improved agricultural implements cannot be ruled out to boost agricultural production. The scheme for demonstration and sale of agricultural implements has been sponsored by Government of India for supply of implements to small and marginal farmers at subsidised rate.

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Joint Commissioner,
Gopabandhu Academy of
Administration, Bhubaneswar.



Chief Minister, Shri Biju Patnaik releasing the Book "Anguish of the Deprived" written by Dr. L. D. Mishra at Sookhana Bhavan on 21.1.94.



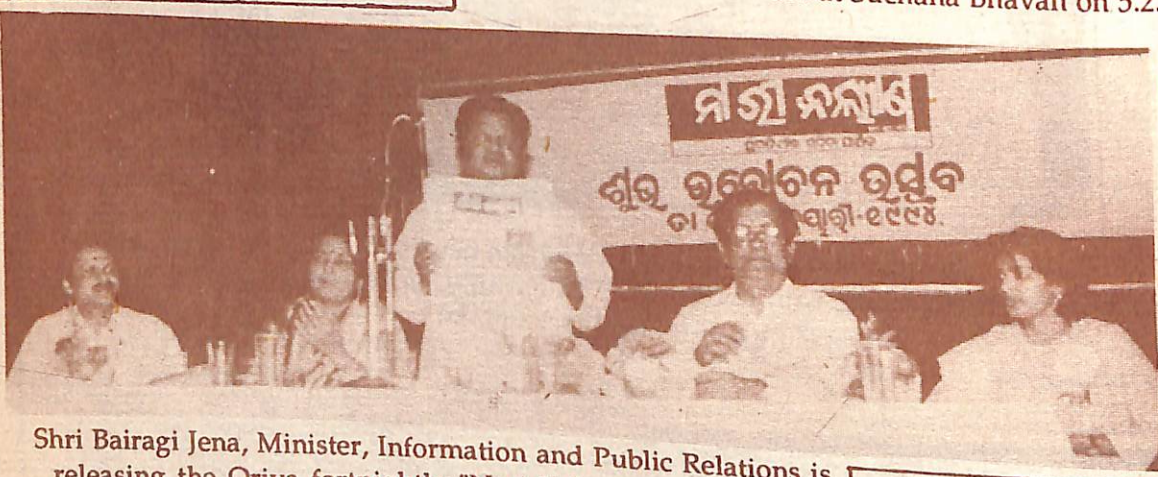
Shri B. Satyanarayan Reddy, Hon'ble Governor is administering oath to Shri G. T. Nanavati, Chief Justice, Orissa High Court at Cuttack on 31-1-94.



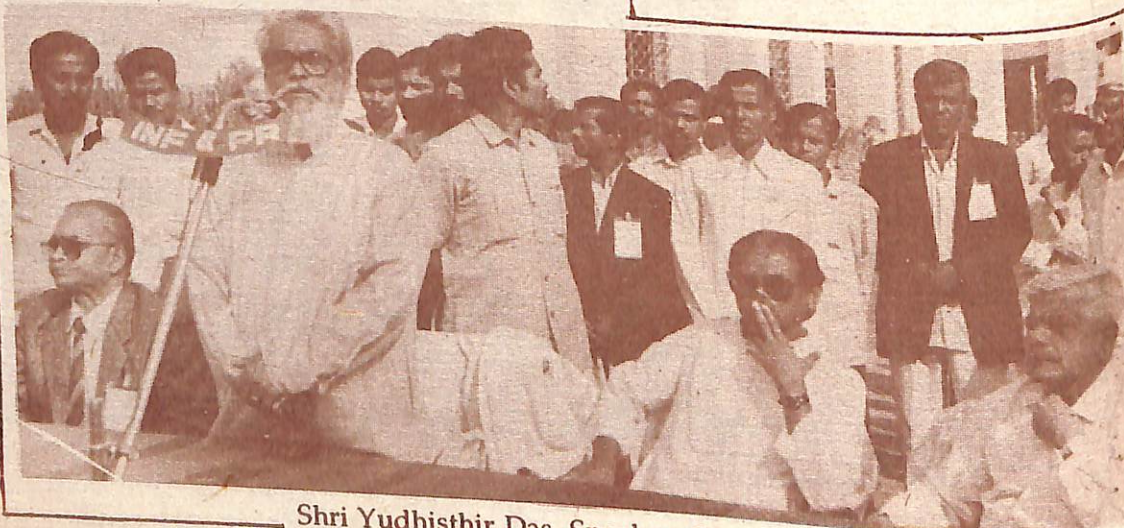
Shri Biju Patnaik, Chief Minister laying the foundation stone of the Office of Hind Kustha Nibarini Sangha at Bhubaneswar on 30.1.94. Shri B. Satyanarayan Reddy Hon'ble Governor was present in the function.



Shri Biju Patnaik, Chief Minister is inaugurating the annual function of OMSA at Suchana Bhavan on 5.2.94.



Shri Bairagi Jena, Minister, Information and Public Relations is releasing the Oriya fortnightly "Nari Kalyan" at Soochana Bhavan on 1.2.94.



Shri Yudhisthir Das, Speaker, OLA is addressing at a meeting in the OLA premises on 4.2.94 in connection with the celebration of death anniversary of Utkal Gourab Madhusudan Das.

ଓଡ଼ିଆ ଯୁବଲେଖକ ସମ୍ମିଳନୀ

ବାର୍ଷିକ ଅଧିବେଶନ

୫ ଓ ୬ ଫେବୃଆରୀ, ବୃହନେଶ୍ୱର



Shri B. Satyanarayan Reddy, Hon'ble Governor of Orissa attended the Yuva Lekhaka Sammilani at Bhanja Kala Mandap, Bhubaneswar as the Chief Guest on 5.2.94.



Chief Minister Shri Biju Patnaik at Netaji Jayanti Celebration in the campus of Ravenshaw Collegiate School, Cuttack on 23.1.94. Shri Chandrasekhar, ex-Prime Minister was also present



Shri C. P. Majhi, Minister, Education and Culture is addressing at the closing ceremony of the Youth Festival—1994 at Soochana Bhavan, Bhubaneswar on 15.1.94.



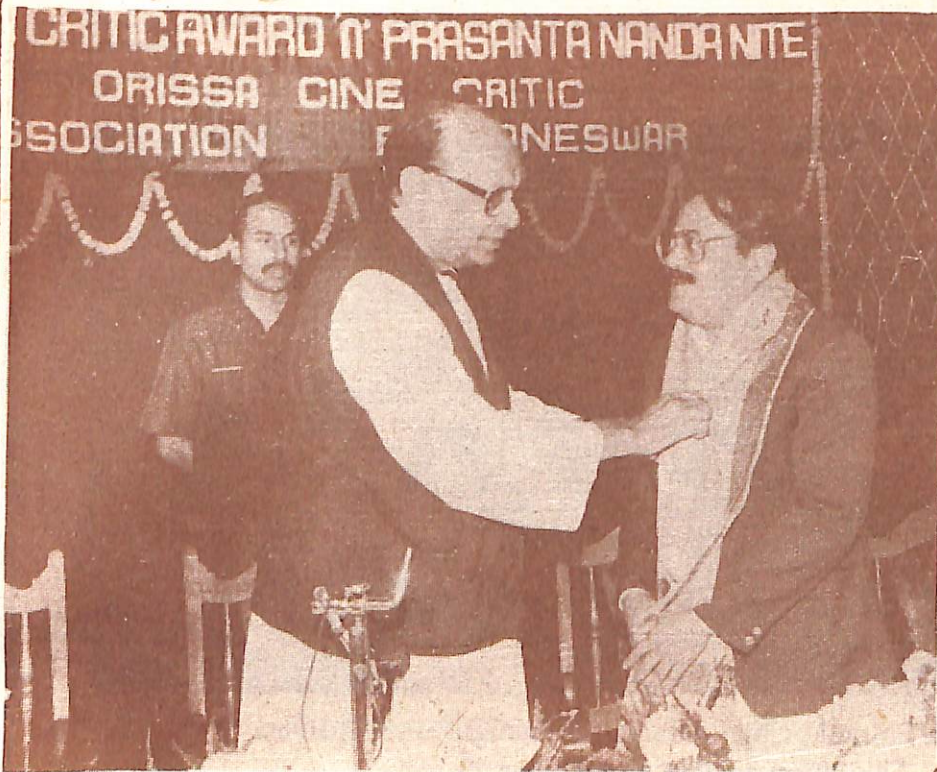
Shri Bairagi Jena, Minister, I&PR is garlanding on the statue of
Veer Surendra Sai at Surendra Sai Nagar,
Bhubaneswar on 23.1.94.



Shri Surasen Jena, Director, Information and P.R.
is inaugurating the Art Exhibition at Rastriya Kala
Kendra on 22.1.94.



Shri B. Satyanarayan Reddy meets the daughter of Saheed Laxman Naik, the veteran freedom fighter.



Shri Biju Patnaik, Chief Minister is felicitating Shri Prasanta Nanda on the occasion of Silver Jubilee Nite at Rabindra Mandap, Bhubaneswar on 21.1.94.



Shri B. Satyanarayan Reddy, Hon'ble Governor is felicitating Dr. Sitakanta Mohapatra, the Gnanapitha Award Winner at Bhubaneswar on 23.1.94.



Shri Biju Patnaik, Chief Minister is inaugurating Adivasi Exhibition at Bhubaneswar on 25.1.94.



Shri B. Satyanarayan Reddy, Hon'ble Governor Orissa is addressing at the Golden Jubilee Function of Municipal High School, Berhampur on 27.1.94.



Shri A.U. Singh Deo, Minister, Sports is presenting Ekalavya Award to Rachita Panda at Bhubaneswar on 28.1.94.



Shri B. Satyanarayan Reddy, Hon'ble Governor is discussing with the Presiding Officers at Raj Bhavan on 3.2.94.



Shri Sivraj V. Patil, Speaker, Lok Sabha is being received by Shri Yudhisthir Das, Hon'ble Speaker, Orissa Assembly and Shri Bijoy Mohapatra, Minister, Parliamentary Affairs at Bhubaneswar Air Port on 31.1.94.

Ground water resources of Orissa

Satyabrata Rath.

Water is treated as a precious natural gift to animal and plant kingdom. It is 'heavenly honey' according to Indian Saints.

Orissa is enriched with various types of natural resources. Many rivers, streams and springs flow with east-ward face and they carry ample water during rainy and summer months.

Our State lies between 17.8° to 22.5 N Latitude and 81.3° to 87.6° E Longitude. The geographical area of the State is 1,55,700 Sq. kms., out of which 50% area is covered under hills, forests, uncultivable water mass etc.

The soil forms a landmass of Indian peninsula and is composed of some of the oldest rock groups on earth. Physiographically the State in general represents an extensive plateau, sloping towards coastal plains along the Bay of Bengal. It is considered a heterogeneous land that can be brought under four regions, (a) The northern plateau (b) The central river basin (c) The eastern ghat hill ranges (d) The coastal plain.

From the geological set up, ground water region of the State can be classified under three distinct divisions.

1. The hard rock region
2. The narrow central river basin.
3. The coastal plains.

Hard rock region :

Near about seventy eight per cent of the total surface area of Orissa is occupied by hard crystalline formation, which belongs to Archean complex. The development of ground water for the hard rock region can be done through construction of larger diameter open wells and dug-cum-borewells. The size of such structures depends upon the thickness of weathered zone aquifer available.

The river basins :

The river basins contributes healthy parameters for development of agriculture, industry and

communication. In such a region thick deposits of alluvial formation like pebbles, sand, clay etc are encountered. In the upper reach extent of alluvial deposits is considerably less within a range of 5 mtrs. to 30 mtrs. Due to rainfall and flow of rivers towards Bay of Bengal recharge is contributed mainly from these two parameters. So exploitation of ground water is feasible through installation of open wells, shallow tubewells. The area, where weathered rocks of Gondwana series are noticed these dug wells or dug-cum-borewells and medium deep and shallow tubewells can be constructed for irrigation purpose.

The Coastal Plains :

The coastal plains in-holds rich aquifers which spread over 27600 Sq. kms. The ground water in this plain occurs either in single aquifer or in multiple granular zones. Closer to sea, the aquifers are either partly or fully contaminated with salinity, where use of ground water for irrigation is restricted. Construction of medium deep and deep tubewells can be safely constructed in coastal plains excluding the saline tracts.

Since last 30 years importance has been given on irrigation and utilisation of flowing water as well as ground water potential. The quantum of water received by rivers from rainfall is left as run off and the magnitude of which leads to near about 80 per cent. All the flow irrigation projects so far executed, contain potential to provide irrigation to 37 million hectares. It has further been estimated that deploying all available surface water resources, irrigation can be proved for an area of 4.12 million hectares.

The magnitude of ground water potential of our State has been estimated as 17.36 lakhs hect. metre. As per the available data upto now 1.31 lakh has been utilised which is considered 8 per cent of the exploitable potential.

On utilisation of ground water potential for irrigation, our state can be enriched with multiple crops and our flood problem can be controlled.

Water is essential for operation of different type of industries, domestic consumption and agriculture. To meet the growing demand of the century, the surface water, and ground water potential has been considered valuable natural assets. Now our conscious objectives are to augment and accelerate the price of Ground Water Development.

The pessimistic thought "Water, water everywhere, not a drop to drink" is left under veil of

blind wizard as announced by technologists. As per the available information nearly 2.33 lakhs dugwells (with and without pumpset) 9900 shallow and filter point tubewells and 3,500 nos. of medium deep tubewells are in operation in the State. It is considered purposeful to indicate different

parameters of irrigation wells for common knowledge of interested citizens in Table-I.

Let us hope for the better days when our ground water resources can be utilised in upper magnitude signalling our star achievement.

Sl. No.	Type of irrigation well	Approx. cost in Rs.	Area of command in hect.
1.	300mm X 200 mm size T/W of 200 m depth.	4,25,000	25 Ha.
2.	250 mm X 200 mm size T/W of 110 m depth.	2,95,000	20 Ha.
3.	200 mm size shallow T/W of 30 m depth.	80,00	12 Ha.
4.	2.75 m dia 10 m depth Dugwell with pumps.	17,000	1 Ha.
5.	2.50 m dia and 10 m depth Dugwell with Tenda.	8,000	1 Ha.

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FINANCING OF POWER PROJECTS UNDER OSEB AND OPGC DISCUSSED

Shri Inder Mohan Sahai, Chairman-cum-Managing Director, Power Finance Corporation called on Chief Minister, on January 24 and discussed issues relating to financing of power projects of the Orissa State Electricity Board and the Orissa Power Generation Corporation. The officials of the Department of Energy, Orissa Power Generation Corporation and Orissa State Electricity Board also met him. As regards Orissa Power Generation Corporation, the Chairman-cum-Managing Director, Power Finance Corporation expressed his satisfaction. During discussion Chief Minister requested him to release the balance loan of Rs. 15.00 crores immediately besides ensuring sanction and release of Rs. 41.00 crores during the first quarter of next financial year in respect of 1b Thermal Power Station.

As regards Orissa State Electricity Board, Shri Sahai requested the Chief Minister for early payment of subsidy to Orissa State Electricity Board. He also pointed out that 12 loans have been sanctioned amounting to Rs. 128.40 crores, which could be disbursed on submission of State Governments guarantee by the Orissa State Electricity Board.

During the discussion, Shri Sahai revealed that Asian Development Bank loan was now available for evacuation schemes, (400 KV/220 KV) transmission systems. Since the Power Finance Corporation was having sufficient funds, he requested Orissa State Electricity Board to come up with fresh loan proposals by the end of the current financial year.

Evolution of Minimum Wages in Agriculture in Orissa

Govinda Padhi

Orissa is an agriculturally dominant state, where there are 29.73 lakhs of agricultural labourers and 45.5 lakhs of cultivators as per 1991 census. The total working population of Orissa is 1.18 lakhs. Thus, agricultural labourers constitute only 25.1%. Out of total main workers of 1.03 lakhs, agricultural labourers constitute 28.85% and cultivators account for 44.21%. Thus cultivators and agricultural labourers combinedly constitute 73.06% of total main workers of Orissa as per 1991 Census. Therefore in Orissa enforcement of Minimum Wage act is of vital importance.

Minimum Wages in Orissa

In 1954, different wage rates for agricultural labourers were initially fixed in Orissa on the basis of area, sex and age groups. As such, Orissa was divided into three agricultural zones and the wages were fixed accordingly which remained in vogue till 1965. Since 1965 no distinction was made on wage rates and the wage differentials on the basis of the regions, sex and age groups were abandoned. A single wage rate at Rs. 1.00 per day was fixed for all categories of labour till 1972. For this purpose every major adult labourer should have to work for 8 hours a day with half an hour rest, and the labourers below 14 years of age group should have to work for 4½ hours a day.

In 1972, Orissa Government raised the wage rate by 100% i.e. to Rs.2/ per day. Subsequently, wage rates were revised at different intervals

Since 1.7.1990, the minimum wage for unskilled labourers has been raised to Rs. 25/per day (as applicable to agriculture) for semiskilled, skilled and highly skilled categories. Minimum wages were notified as Rs. 30/ Rs. 35/ and Rs. 40/ per day respectively from 1.1.1991 onwards

Systems of agricultural employment and wage payments in Orissa :

Peculiar systems of engagement of agricultural labourer and wage payment are prevalent in

different districts, of the state like pledging of arms during peak season in Kalahandi district., Bonded Labour system and *Masari* system in Koraput district., *Halia* and *Baramasia* system in Ganjam district. Hired Labour system in Phulbani district and Exchange labour system in Baipariguda area of Koraput district etc. Different systems of wage payment are in vogue in different districts in the State.

Enforcement of M.M. Act. & Labour Machinery in the State :

In the past, there were three different machinery for the enforcement of Minimum Wage Act in the field of agriculture in the State. There were revenue Department, labour Department and T.R.W. Department. But now in our State only Labour Department has been entrusted with enforcement of the Act in the field of agriculture.

The functionaries of the labour machinery for the State are as follows. They are: one labour commissioner, 2 (two) Joint Labour Commissioners, 3 Assistant Labour Commissioners 4 Labour Officers at the Head Quarters and there are 4 Deputy Labour Commissioners, 10 Assistant Labour Commissioners and 22 District Labour Officers and 59 Assistant District Labour Officers in the field who function as the architects of enforcement machinery. Add to that, in 65 selected blocks where there are concentration of ST/SC agricultural labour, population, there are sixty five Rural Labour Inspectors functioning as inspecting authorities appointed under a centrally sponsored plan scheme since 7th Five Year Plan to ensure payment of minimum wages to the agricultural labour. Besides, there are eighty Honorary Rūrat Organisers working in 80 blocks of the state to educate the labourers to make them conscious of their legitimate claims for minimum wages.

20-Point Economic Programme & Minimum Wages in Orissa :

After declaration of National Emergency, enforcement of minimum wage in agriculture was included under item five of the 20-Point Economic Programme of the Government in 1975. Again in 1980 under, New 20-Point Economic Programme also enforcement of minimum wage was included under item No. 6.

The Table III depicts a clear picture of targets and achievements in the field of inspection under Minimum wage Act in Orissa.

Table-III

Target and achievements made in respect of item No. 6 of New 20-Point Economic Programme

Year	Targets of Inspection	No. of Inspection conducted	No. of violations detected		No. of claim cases filed for non-payment of M. W.	No. of prosecutions filed for non-maintenance of record.	Amount realised and paid to workers for less payment of minimum wages.		Remarks
			In the field of minimum notified wages.	In other field such as maintenance record.			In cash (in Rs.)	Value of kind payment (in Rs.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1980-81	not fixed	809	NA	845	1	2	5,072-85	—	
1981-82	do	1422	NA	769	8	NA	3,673-10	—	
1982-83	7,200	9556	NA	7859	30	9	92,310-35	—	
1983-84	10,080	12218	NA	9198	20	1	1,15,476-95	—	
1984-85	15,936	15242	NA	12081	6	5	1,12,775-63	—	
1985-86	16,080	17593	NA	15132	28	28	1,09,512-05	—	
1986-87	30,000	27519	677	21108	53	6	1,22,339-10	—	
1987-88	30,000	42578	970	35072	101	13	4,08,898-21	31,826-75	
1988-89	32,000	30937	970	23174	114	7	6,00,682-69	23,493-50	
1989-90	32,000	30479	614	26492	87	3	4,54,080-38	12,101-65	
1990-91	32,000	18910	2289	14800	234	13	7,21,751-70	4,648-25	
1991-92	32,000	24782	2569	20339	59	5	5,68,388-91	—	
1992-93	32,000	32142	772	29954	26	5	1,11,853-00	—	

Source : Labour Directorate, Orissa.

The table indicates that though the enforcement of minimum wage Act in agriculture was enscheduled under 20 point Economic Programme since 1975, the State Government did not fix up target of inspection under the Act till 1982. Violations of the Minimum wage Act till 1985-86 were not classified in the table as no separate figures were maintained in the Labour Directorate.

The table provides that with the rise in minimum wages, filing of prosecutions and claim cases have also increased. There was a sudden increase of claim cases in 1990-91 commensurate with the revision of the minimum wages to Rs. 25 per day from 1.7.1990.

The target for inspection could not be achieved since 1988-89. But the labour machinery was active in ensuring minimum wage payment in 1990-91 because the number of prosecutions increased. The Labour Department has taken steps to prosecute both private and Government agricultural farms for non-payment of Minimum Wage to the workers. Balance towards less payments of wage have been realised from employers and were paid to labourers. It is seen that most of the agricultural farms do not maintain records and registers of wage payment.

Short comings

There are a lot of difficulties in enforcing the Act in the field of agriculture. These are as follows :—

1. There is a statutory provision for payment of wage both in cash and kind. In order to determine the norms of kind payment, the prices fixed for wheat and paddy by the Food and Civil Supplies Department are to be taken into account. But labourers are paid by their employers the wages in kind arbitrarily.

2. During peak season in agriculture, the statutory minimum wages are lower than the actual rate of wages paid and during slack season it is vice-versa. In agricultural labour market the laws of demand and supply also play a significant role than that of statutory fixation of minimum rate.

3. There are lesser number of prosecutions and claim cases as compared to number of violations.

4. Absence of effective enforcement machinery is felt. The machinery for the enforcement of minimum wages is not adequate in the State. Rural labour Inspectors were not appointed in all the 314 blocks of the State. Moreover, D.L.Os, A.L.Os and other labour officers are mostly engaged in the labour problems of the organised sector.

5. In coastal areas, employers can pay statutory minimum wages because they get adequate returns from the land because of adequate irrigation facilities. But in tribal belts, cultivators depend upon vagaries of nature for the cultivation of their lands. So they can not pay statutory minimum wages because of low productivity.

6. Agricultural labourers seldom work eight hours a day in Orissa. Hence fixation/revision of minimum wages for them for 8 hours has absolutely no meaning at all.

7. Agricultural labourers are ignorant and illiterate. They are not conscious of minimum wages, hence they are being exploited.

8. Due to inadequacy of subsidiary occupations most of them remain unemployed and therefore accept wage rates given to them, which is less than the statutory minimum.

Suggestion :

The following are some of the suggestions made in the field of effective enforcement of Minimum Wage Rules in Orissa :

1. It is advisable to increase the number of R.L.I.s and other categories of inspecting staff in order to cover all the 314 blocks of the State.

2. As actual wages are higher than minimum wages during peak season and lower during slack season, there is an opinion for suspending minimum wages from the field of agriculture. But National Commission on Labour even recommended that Panchayats should be entrusted to enforce the Act and Public Places may be arranged with notification so that employer will remain alert.

The suspension of operation of the Act is not desirable. Public notification may create awareness among the people. But without punitive measures for violation, the operation of the Act will become ineffective.

3. Working hours for agricultural labourers should be statutorily fixed at 6 hours per day considering the climatic conditions of the state.

4. Irrigation facilities may be increased and land productivity should be raised so that employers will not hesitate to pay more.

5. Provisions for subsidiary occupations in agriculture may be increased to facilitate the area of employment opportunities.

6. Agricultural labourer should be imparted with technical training to boost up their efficiency at block level.

7. The system of bonded labour, pledging of arms etc. should be abolished.

8. The mandate of Article 43 of Indian Constitution to ensure living wage for all workers should be kept in view while revising minimum wages.

9. Revision of Minimum wages in the field of agriculture should be made not only taking into consideration the norms suggested by the Labour Ministers' Conference, 1987 but also the paying capacity of the cultivators. As prices of agricultural products do not increase in the same proportion in comparison to prices of other goods, the present rate affects adversely particularly to small farmers.

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GOVERNOR OPENS ART EXHIBITION

Shri B. Satyanarayan Reddy, Governor, visited Berhampur in the district of Ganjam on 22.1.94. On his way he made a brief halt at Khalikot and inaugurated an art exhibition organised by the renowned artist Shri Durga Prasad Das at the Government College of Art and Crafts.

GOVERNOR ATTENDED STATE LEVEL SEMINAR ON EDUCATION, WELFARE & SELF EMPLOYMENT OF DEAF & DUMB AT BERHAMPUR.

Governor of Orissa, Shri B. Satyanarayan Reddy inaugurated a state level exhibition of art and crafts, garments and other items prepared by the deaf and dumb of Ganjam, Dhenkanal, Keonjhar, Khurda and Cuttack districts in Berhampur Municipality premises on January 22, 1994. The exhibition was organised by the Orissa Association of Dumb, Bhubaneswar in collaboration with the Ganjam district Deaf and Dumb association, Berhampur.

COCONUTS : Conquering new fields

B. K. Mukhopadhyay

By the turn of the century, the estimated demand of coconut would cross 12,000 million, nearly double the current annual output of this essential food and multi-purpose commodity, providing the lifeline to the communities living in the coastal areas of the land.

Coconut oil has a tremendous market at home and abroad. Eighty per cent of India's coconut production is used up in the oil mills and the soap industry consumes most of this oil. Its oilcake is used as animal fodder. One of its many by-products, coir, is used in the manufacture of mats, carpets and ropes. The Indian coir industry, with its base in Kerala, takes care of more than 50 per cent of the World's coir needs.

If the spurt of demand which is being anticipated in the next fifteen years is to be tackled effectively, the problems of cultivation, cropping and distribution of the plant have to be done on a planned basis. This includes, first of all, bringing larger tracts of land under cultivation and the proper utilisation of existing irrigation and other facilities.

The area under coconut cultivation in India has gone up. Southern States, with Kerala in the lead, have extensive tracts where coconut is cultivated.

Orissa is a typical state which is now being developed for coconut cultivation. There exists a long coastline of about 500 Km, an excellent environment

for planned coconut cultivation, which can also provide direct employment opportunities and infrastructure for coconut-based small and medium scale processing industries. Plants would be planted on canal embankments. But this faces a number of hurdles, with seasonal crop management being the most difficult task. But, by using inventive cropping techniques devised by the Central Plantation Crop Research Institute, these difficulties can be overcome.

The RBI has effected certain measures to extend refinance assistance to commercial co-operative banks from the National Bank for Agriculture and Rural Development, so that planned coconut cultivation can be encouraged by extending credit to farmers with small and medium size landholdings. With modest investment of about Rs.14,000 per hectare Rs. 3,000 in the first year, Rs. 1,600 in the second year, Rs. 2,200 in the third year and Rs.2,400 in each of the remaining three years—small farmer would be able to raise fresh coconut plantations within six years. Before the palms start bearing, various inter-crops such as tapioca, sweet potato, yam, colocasia, turmeric, ginger, banana, dry paddy,ragi, sorghum, inferior millets, horse gram, cow grain and green gram can be raised. A coconut plant gives eight to ten nuts in the seventh year, about 40 nuts in the tenth year and 50 nuts thereafter. (The economic life of a coconut palm is about 60 to 70 years.) With irrigation, proper application of fertilizers and plant protection practice, the yield can be raised to 60 to 70 nuts. Thus, the expected gross realisation at current rates would be about Rs. 7,000 to Rs. 8,000 per hectare, as against the maintenance cost of Rs. 2,500. The borrowers will thus be able to repay the loans with interest within 15 years.

*A 28-29, Bhaumanagar,
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GLOWING TRIBUTES TO SURENDRA SAI

Paying glowing tributes to the memory of Veer Surendra Sai, Chief Minister, Shri Biju Patnaik who addressed the birth anniversary meeting organised in Soochana Bhavan on January 22 last, called upon people to emulate his ideals. Minister, I&PR Shri Bairagi Jena was in Chair. The meeting was organised by Gangadhar Meher Smruti Committee, Veer Surendra Sai Unnayan Committee and I&PR Department.

While Shri Surasen Jena, Director, I&PR, made introductory remarks on Surendra Sai, Shri Prasanna Acharya, Minister, Rural Development; noted freedom fighter Shri Bijoy Pani and eminent historian Dr. Jagannath Patnaik gave succinct account of Sai's struggle against Britishers.

Cancer of cervix with pregnancy

Dr. (Mrs.) Kalyanee Dash

In the present age, as we are approaching towards the twenty first century, death to cancer has posed a great challenge. The problem of cancer is so alarming that it needs emphasis. Even in highly developed countries with advanced medical facilities, the cause of every one death out of seven among women, is due to cancer of the genital tract. Out of this, 8% is due to cancer of the uterus and 6% is due to cancer of the cervix (uterus neck), whereas in India the incidence of cancer of the female genital tract is 30.2%. But in all these cases the cervix is the commonest site.

Although the cancer of the cervix is common among women, it is rarely seen during late pregnancy, as routine examinations reveal its presence earlier. Its incidence is about 1 in 3,000—6,000 deliveries. For the purpose of better management, carcinoma (cancer) of the cervix is subdivided into different trimesters (3 months) of pregnancy.

1. Cancer of cervix in the first trimester of pregnancy :

During first trimester, cancer-in-situ (pre-clinical) is more frequently observed than invasive carcinoma due to routine cervical smear examination by papanicolaou technique. Accuracy of this test is 90-95%. The patient in this stage of disease comes with a history of bleeding during early pregnancy which may be confused with threatened abortion, erosion of the cervix and cervical polyp.

So during first trimester, any pregnant lady with or without history of bleeding per vaginum should have a speculum examination and smear test of the cervix. By this method, many early cases of cancer cervix are detected after which the pregnant lady is instructed about proper follow-up care to reduce chance of developing invasive cancer.

In asymptomatic cases with a negative smear, a repeat cervical smear is advocated six weeks after delivery.

Those cases which give positive smear test may be sent for cervical biopsy. This cervical biopsy during pregnancy can be taken punch biopsy technique from suspicious areas. If it is positive for

invasive cancer no further investigation is necessary. But if carcinoma-in-situ is detected, cone biopsy by cryosurgery is advocated to exclude invasive cancer. But cone biopsy is unsafe during pregnancy.

Treatment :

In a negative cone biopsy case no treatment is advocated. The pregnancy is allowed to continue with advice to respect smear examination after each third month.

Carcinoma-in-situ cases also require no treatment. Vaginal delivery is allowed. In case of invasive cancer, treatment of the patient is given preference in place of pregnancy. So the pregnancy is not conserved. In stage I (a) Radical vaginal Hysterectomy is advised (uterus is removed with careful dissection of the pelvis). In stage I (b) and II (a) wertheim's Hysterectomy with removal of lymph glands is done. In early pregnancy, stage II(b) and stage III cases are treated by radiotherapy alone. For this, pregnancy is terminated.

Cancer of cervix in second trimester of pregnancy :

These patients complain of bleeding in mid-trimester of pregnancy with or without local cervical growth. Diagnostic procedures are same as in the 1st trimester.

Treatment :

Radical Hysterectomy or Radiotherapy can be advocated for these patients. Here the pregnancy is ignored for the safety of the patient.

Cancer of cervix in third trimester of pregnancy :

About 1-1 of cervical cancer patients come during third trimester of pregnancy.

Treatment :

Vaginal bleeding is the first symptom which may be confused with other bleeding conditions associated with pregnancy (i.e. Antepartum Haemorrhage). Therefore, in all such cases the cervix should be inspected one week after cessation of vaginal bleeding to exclude cancer of the cervix. Prompt investigations are required for any abnormal bleeding during pregnancy. Irrespective of duration of pregnancy, cervix is inspected and if suspicions arises, cytological study and biopsy are done. The cure rate of cancer cervix declines considerably after 34th week of pregnancy due to hormonal influence and increased vascularity of the pelvic organs in pregnancy.

Treatment :

Radiotherapy in third trimester causes foetal abnormality (i.e. microcephaly—small head). The chances for successful treatment are diminished by 15% for each month of delay in the treatment after the onset of vaginal bleeding. It is difficult for judgement of treatment in a case at 32nd week of pregnancy because if delay is made for 4-8 weeks there is better chance of survival of the foetus. But it is to be remembered that simultaneously, there is increased risk to the mother due to advancement of cancer.

Summary :

Although cervical cancer associated with pregnancy is not so frequently seen, still it is a grave situation with poor prognosis, because due to increased vascularity of the pelvic organs during

pregnancy it progresses rapidly. But due to better facilities of antenatal care units and cervical smear tests, it is now diagnosed and treated earlier.

Preganacy is ignored in first and second trimester of pregnancy. High classical caesarian section is done in third trimester followed by super voltage radiation. During pregnancy interpretation of cytology slide is difficult, as there is increased dyskaryosis of superficial cells and increased parabased cells.

However, routine check up and vaginal smear examination can detect cancer of cervix earlier, and for treatment purpose—it is sooner the better.

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LEPROLOGISTS MEET

Governor, Shri B. Satyanarayan Reddy attended the XIII national Conference of the Orissa State Branch of the Indian Association of Dermatologists, Venereologists and Leprologists on 30.1.94 in the conference hall of Hotel Kalinga-Ashoka, Bhubaneswar. The programme was organised by the association jointly with Vikash, Bhubaneswar. In his address, Shri Reddy said, although modern medicine achieved tremendous success in curing leprosy, prejudices played a detrimental role. Despite use of modern medicine the leprosy patients preferred to stay in separate homes in slums. Attempt to integrate the patients with the community and rehabilitate them in the family environment should gain momentum, he stressed. Shri Reddy lauded the efforts of the voluntary agencies, taken in this regard. Leprologists from all over Orissa attended a work-shop on leprosy organised on this occasion.

W.H.O. WORKSHOP ON TOBACCO CONTROL

Governor of Orissa, Shri B. Satyanarayan Reddy inaugurated a two-day W.H.O. (World Health Organisation) workshop on Tobacco control programme at S.C.B. Medical College, Cuttack on January, 11. The national workshop was organised by Acharya Harihar Regional Centre for Cancer Research and Treatment. Dr. Gouri Sankar Acharya, the Superintendent of the Institute gave introductory remarks and Prof. S.B. Patnaik, Director of the Institute presented his report. The use of tobacco increased rapidly due to the influence of the western civilization in India and that became a tobacco curse, caused the dreaded disease like cancer, said Shri Reddy expressing concern over million deaths attributed to diseases caused by tobacco use. He further told that the multi-millionaire tobacco industries of the western world were stepping up campaign in poor Asian countries to allure the people for more use of tobacco.

Others who spoke on the occasion were Sayed Mustafiz Ahmed, Health Minister of Orissa, Mrs. S.P.Kohli, Deputy Director General of Health Services, Government of India and Dr. S.G. Vaidya, President of the National Organisations for Tobacco Eradication, Goa. Prof. S. Patnaik, Principal, S.C.B. Medical College, Cuttack released the booklets published on the occasion. Prof. Smt. Bhaktilata Ray proposed a vote of thanks.

Status of nurses in Orissa

Dr. (Mrs.) Subhransubala Mohanty

"Health for all" by 2000 A.D. and attaining it through primary health care is the motto of many developing countries of the world to-day. India is one of such countries committed to this challenging job and is making all out efforts to reach this destination. Orissa, being one of the poorest and most backward partners in the India Union, has to make a determined bid to fulfil this laudable national objective. In this context nursing community plays a vital and crucial role. It is really a classic example of national integration because of her serving to all kinds of patients without prejudice of caste, colour, creed, religion or language. Both the society and the Government owe to this. In return what do they receive from the society and the Government is now a baffling question.

Nursing to-day is regarded as the sheet-anchor of our total health care delivery system. She is an important link between the doctor and patient. Her teaching of personal hygiene, sanitation, nutrition cooking and first-aid are very important. Her kind, skillful, resourceful and tactful personality could mitigate the fear of un-known and her invaluable tasks in the hospitals can bring solace and hope to the millions of mankind. That is why a nurse is called "sister". But what exactly nurse means? She is proud of her profession because the word "Nurse" represents the following qualities in her—'N' stands for nobility of the profession and the family of a nurse, 'U' stands for unity among all nurses; 'R' stands for regularity in work; 'S' stands for sympathy for the patients and 'E' stands for excellent etiquettes. She is eminently suited for this job of noble thought and wishes because of her inner flow of love, affection and compassion.

Society sometimes does not duly recognise the invaluable services of nurses. There is a feeling that they serve out of economic necessity. One has to serve to earn one's bread. But in case of nurses, it is not question of bread and butter alone. It transcends beyond that mundane consideration and goes to a higher plane of service and sacrifice. Some criticise the nature of the services and underestimate it. The general attitude towards the job sometimes demoralises them and on the other hand they do not receive so attractive a salary to compensate this loss

of face and low wages and over duty are the real hurdles before the nursing community. She needs job satisfaction, status and reasonable economic compensation for her sacrifice to lead a dignified life in a grossly modern world.

Similarly on their economic side, some problems are noticed. The important aspects of the problem are : work load, pay scale, income sources, incentives and job prospects as well as saving and investment. The recommended number of nurse by International Nursing Council (INC) is three beds for one nurse (1 : 3). But in S.C.B. Medical College Hospital, Cuttack it is noticed that nurse work at the ration of 1 : 10. Like wise their promotional opportunities are very rare. A staff nurse after 20-25 years of service may or may not get the chance of higher rank i.e. Nursing Sister/Assistant Matron. A Nursing Sister after 15-20 years of service gets the promotion to the post of Assistant Nursing Superintendent (ANS) and if chances favour she may be promoted to the post of Deputy Superintendent/Chief Matron and to the next higher rank of Nursing Superintendent. While analysing their saving-investment pattern, it is found 94.2% nurses have general provident fund (GPF), 2.9% have post office savings. It is because 94% of nurses, being the only earning member of the family have to support the dependants out of the meagre income and have no capacity to save. Upto 1966, they were given very low scale of pay which slightly improved with the revision of pay in 1976, 1985 and 1989.

In Orissa, the very foundation of nursing structure needs to be strengthened. Firstly, a nurse should have a strong base in the biological and social sciences to cater to the changing needs of society and science. Secondly some amount of flexibility is necessary in the hierarchical structure of management of administration of Orissa. A clear division of power and responsibility among all classes of nurses and medical team is necessary to avoid conflict in the medical team.

It may be concluded that by changing their socio-economic status, better health care and service can be extracted in a state like Orissa. Certain committees may be formed at state level to review their socio-economic status and working conditions. Application of computer and appointment of sufficient staff may relieve them from some of the hazards of their services. However, the duty of Orissa Nursing Employees Association (ONEA) has a formidable role to play to raise their status in the days ahead.

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FARM AND INDUSTRY FAIR

Governor of Orissa, Shri Satyanarayan Reddy inaugurated an agricultural and industrial exhibition in the premises of Gandhi Smruti Pitha at Telengapenth, Cuttack on 30.1.1994 and attended as the Chief guest of the Death Anniversary Celebration of Mahatma Gandhi. In this exhibition 20 organisations i.e. Agriculture, Industries, Animal Husbandry, Health and Family Welfare, Information and Public Relations, Soil Conservations, Social Welfare Departments, Central Rice Research Institute, District Rural Development Agency, Cuttack Agro Industries Corporation, Gandhi Memorial Industrial Co-operative Society etc. participated. In his address, Shri Reddy said, under the leadership of Mahatma Gandhi, we got Independence. To know about the rural life of India, Mahatma Gandhi was travelling throughout the country and he laid special emphasis on expansion of cottage industries. "Therefore to bring a revolutionary change in the economic life of the poor villagers, we should follow the sayings of the Mahatma, so that overall developments can take place in the country," Shri Reddy concluded.

Shri Rajendra Singh, MLA was in Chair Dr. Damodar Rout, Panchayati Raj Minister attended as Chief Speaker. Smt. Susama Beuria, Chairman of the Local Panchayat Samiti proposed a vote of thanks.

FLOWER SHOW IN CAPITAL

Governor of Orissa Shri B. Satyanarayan Reddy attended as the chief guest at the Flower Show of the Garden Festival at Soochana Bhawan, Bhubaneswar on 9th January, 1994. This programme was organised from January 8th to 12th last. Orissa Plant Lovers Association, Bhubaneswar in collaboration with the Department of Tourism organised the Show. Smt. Priti Mohapatra, President of Plant Lovers' Association welcomed the visitors. Governor of Orissa called upon the plant lovers and students to make Bhubaneswar a city free from pollution by their continuous efforts. He said flower is the symbol of beauty and love through out the world and used by every body throughout the centuries in all countries to express affection, regard, respect and good will, because man's fascination for the flower and plants represents his innermost desire to achieve simplicity and purity of thought which like the fragrance of the flower pervades the whole world uniting every community, every nation and all men in the common goal of humanity to preserve the variety and richness of our environment. He further told that gardening is like painting and gardens are the pictures drawn with the pen of nature. He told that this flower show represents the care and dedication lavished by each participant in his garden. This represents man's commitment to universal values that join people across countries and continents in a common goal preserving our habitat.

This meeting was presided over by Shri I.C. Mohapatra, Vice Chancellor, OUAT.

Polygraph : Deceivers Deceived

Dr. B. K. Samantray
&
S. P. Dash,

Lie detection or Polygraphy as it is popularly called, is the latest craze in the Forensic circle today. Like any other Branch of Forensic Science it also renders invaluable service to the society by testing the veracity of statements of suspects made in connection with any offence under investigation by the police. Polygraphy is governed by the principles of psychosomatic interaction. Hence an individual undergoing the test must be physiologically and mentally a sound person. Although in its infancy in India polygraph has come a long way ever since it made its formal beginning in 1895 in U.S.A. The first polygraph unit was set up in Central Forensic Science Laboratory, New Delhi in 1974 and in State Forensic Science Laboratory, Orissa in 1992.

Lie detection is the measurement and interpretation of graphs, put out by an instrument known as lie detector or polygraph as a consequence of physiological changes taking place in suspects undergoing the test. The physiological reactions are Blood Pressure (BP), Galvanic Skin Resistance (GSR) and Respiration. The latest version of polygraph has the added advantage of computer fitted to this which makes the process of recording and interpretation easier and more objective.

During the test suspect is connected with number of cords and is asked several questions by the Polygraphist. The suspect replies in the form of Yes or No only. Different techniques are used in the formulation of questions depending upon the issues of the case at hand. Apart from the Lie Detector machine, which continuously records internal physiological changes on a moving graph paper, the expert keeps a vigil on the external behavioural and bodily movements like deliberate coughing, belching muscle stiffening, sniffing, deep breathing etc. to gauge the equipment. This contributes to overall behavioural pattern of the subject towards the test.

Notwithstanding the high degree of reliability and usefulness of polygraph, particularly in western

countries like U.S.A., Canada, U.K., Japan etc. sceptics have reservations in accepting it wholeheartedly. One of the reasons behind their reservations is that this technique is inconsistent and not fool-proof. The same man, so goes the argument, tested on lie detector machine, with the same set of questions produces different reactions, each time. But it is generally overlooked that reactions vary in degree, but not in kind and for a trained and experienced polygraph expert, it is not at all difficult to decipher the variations, howsoever minute, they might be, particularly with a machine with high degree of sensitivity and calibration the task of the expert becomes all the more easier.

It is argued that hard-core criminals and habitual offenders can easily dodge the Lie Detector machine. This class of offenders, few contend, are so careless and disinterested in the whole process that they can control their tension and apprehension and thus evade the technique of detection by the polygraphist. But tension like any other emotion/emotional experience such as anger, love, fear are autonomic in nature. They are not fully controlled by the human being as other function like thinking, learning or problemsolving. Because, while the later ones are controlled by the cerebrum in the Control Nervous System (CNS) the emotions are controlled by Autonomic Nervous System (ANS).

ANS is made up of 2 sub-divisions, known as Sympathetic division and Parasympathetic division. They are in a sense, antagonistic in their functions, because while the former is active, the other one remains dormant and vice versa. The parasympathetic division tends to be active when we are calm and relaxed. It helps build up and conserve body's stores of energy. For example, it decreases heart rate, reduces BP and diverts blood to the digestive tract. The sympathetic division, on the other hand is active during aroused states and prepares the body for extensive action by accelerating the heart rate, raising BP, increasing the blood sugar (Glucose) level and increasing certain hormones in the blood. The endocrine glands secrete adrenaline which induces the organism to run away from danger or to be aggressive to show off might or even to be tender and sexy when some one is in love. The organism can have no control over the autonomic reactions, even if some one tries to do so. Can any one think of running out of fear without sweating or exasperating for more oxygen?

Telling a lie deliberately is a strong emotional experience for a human being just like anger, love and fear. And whenever some one does so, he is

bound to feel guilty and tense accompanied with normal physiological changes like high BP, sweating and breathlessness. Thus when a relevant question is asked to the suspect the BP goes up appreciably, the chest expands to let in more air and the sweat buds start producing more amount of sweat which no one can conceal.

The suspect thus can not just deceive the polygraph, particularly in the recording of internal physiological changes although he may succeed to camouflage the polygraphist orally regarding his knowledge, involvement or connivance. Criminals—hard-core or novice—will exhibit these properties because these are upon the issue at hand, but it is not possible to deceive the polygraph machine.

It is worth mentioning in this context that those conversant with Transdental Meditation (TM) and Yoga do have some control over their autonomic nervous system. During TM, the heart rate slows down, the breathing rate goes down and in well-practised meditators may even cease breathing for few seconds. Some times GSR rises and Electro Encephalogram (EEG) shows more coherent Alpha activity which are indications of relaxation. The TM experts may elude the polygraph, if given freedom, which is a rare phenomenon. The Statistical information about coincidence between criminals and TM practitioners is very rare and may not affect the subjects under reference.

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SCIENCE EXHIBITION

Orissa Governor Shri B. Satyanarayan Reddy inaugurated a State-level Science Exhibition at Dhanurjaya Narayan High School, Keonjhar on January 28 last. 128 science projects were on display by the students of different school circles of the State.

After going round the exhibits, Shri Reddy in his address to students highlighted the scientific achievement in ancient India. He called upon students to emulate ideals of Shri Jagadish Chandra Bose C. V. Raman and Ramanujan and strive for achieving progress by utilising the knowledge of science.

Minister of State for Mass Education Shri P. C. Ghadei, Minister of State for Handicrafts and Cottage Industries, Shri Chotray Majhi and Director, SCERT Dr. Kali Kumar Dash also addressed the gathering.

Khiching : A forgotten Heritage

Dr. Pradeep Mohanty

On the eastern sea-board of India, Orissa, as a centre of art and architecture occupies a significant place in the cultural history of India. Filled with exquisite temples and extraordinary monuments, it possesses sandy beaches with tall palms and swaying casurina trees, wildlife sanctuaries and natural landscape of enchanting beauty. The famous Sun Temple at Konark, the Jagannath at Puri, and the Lingaraj at Bhubaneswar are some of the architectural marvels of this ancient State. In addition to these famous temples, there are endless monuments and shrines, all waiting to be visited and explored. One such place is Khiching in the Mayurbhanj district in northern Orissa. The architectural and sculptural ruins recovered from this site indicates that it must have been a major centre of civilization around 8th to 12th Century A.D.

Khiching is the most important monument of Mayurbhanj. It is situated in the Karanjia sub-division, 150 km. from Baripada and 320 km. from Bhubaneswar. The name Khiching is a corruption of Khijjinga-Kota, the capital of early Bhanja rulers. The ruins of this ancient magnificent town extend far beyond the limits of the present village from the bank of the Khairabandhan on the north to that of the Kantakhair on the south. Due to its geographical situation and political role it had wider cultural influences and contacts. Such influence and contacts guided the course of development of art of Khiching. Despite the influences the art of Khiching lived with vitality for centuries and expressed the aesthetic experience and religious sensibilities with the individuality of its own.

Legend has it that once upon a time Khiching had eight Siva temples of which seven *lingams* are still to be traced. But what we find today is three ancient temples dedicated to Kutaitundi, Chandrasekhar and Kichakeswari, fortified ruins of Viratgarh, Kichakgarh, many *stupas* and sculptures.

The large temple of the town is dedicated to Kichakeswari, the family goddess of the ruling Chiefs of Mayurbhanj. Rich in architectural splendour and

exquisite beauty chiselled on its outer surface, it is the most impressive monument of Khiching. It is a *Pancharatha* temple with fully developed *pagas*. The central *parvadevata* niches contain powerful and superbly carved images of Mahisamardini Durga, Kartikeya and dancing Ganesh. The *anurathas* have a niche completed as a barrel-vaulted shrine with a band of scrolls down the levels of the roof. The *Kanikas* are basically treated as pilasters but they have also a tiny niche above which is the scroll, *Kirtimukh* garland and *Bhara-vahaka*. The *anurathas* have an ascending *naga* or *nagini* pilaster that rests on a block carved with a lion crouching on an elephant. The *naga* and *nagini* are highly accomplished pieces of carving. Small panels are inset to the lowest section of the base mouldings and these contain a large number of erotic figures and occasionally *Kanyas* and deities.

The present Kichakeswari temple, originally dating back to 7th or 8th Century, was reconstructed from the ruins of an earlier temple in the early 20th Century. It is not known how the King of Khiching got his ideas for an unfortunate restoration, since the old photographs of the site indicate that there were merely enormous masses of fallen stones lying in mounds in different parts of the site. The restoration seems to be incorrect in several details. The present shrine preserves a large ten-armed skeletal image of Chamunda with prominent veins, ribs and sunken belly, wearing a garland of skulls and seated on a dead body. In brief, the *Parvadevatas*, the *chaitya* arches, the amorous couples, the scroll works and the arabesques still to be found in the original parts of the temple clearly indicate that it may be a close contemporary of the Brahmesvara and the Lingaraj temples of Bhubaneswar.

The shrine of Chandrasekhara is still standing in the compound. The plinth and the walls of the cello are almost intact. Of the *sikhara*, the *mastaka* portion which had fallen, has been restored with great admiration in the first quarter of the present century. The decorations of the lintel and the jambs of the door-way and the figures of the door-keepers, Chand and Prachanda, are well executed.

There are ruins of two fortified palaces of Khiching. The more extensive one on the river Khairbandhan is now known as Viratgarh, and the other Kichakgarh named after well known characters in the Mahabharata. They were apparently the royal residences of the ancient Bhanj rulers. The site of Viratgarh was excavated and the brick structural remains unearthed along with a number of

antiquities such as potteries terracotta figures, stone images, beads, pieces of gold and seals. The discovery of a Kushan coin pushes the history of the place to 2nd century A.D.

To the southwest of the present Khiching temple is a place called Chaula Kunji where there are fourteen pillars, four large and ten small, all monoliths. These pillars after excavation of the site were brought to their present position sometime during 1932. It is also called as Natya-Mandir. This site is in a precarious condition. Unless proper care is taken immediately, the pillars may fall down any time. The vast ruins of Kichakagarh lie to the southwest of this site.

On the southeast of the Kichakeswari temple complex is a brick mound called Itamundia. This site has revealed a big image of Buddha. One door-jamb of this site contains an image of Mahisamardini Durga.

Chandisal is another important locality situated to the south of Itamundia. This has been excavated and conserved. The most noteworthy discovery from this place are the carved bricks which formed the wall of the main temple wherein an image of Buddha enshrined in the lower part was found during the excavation from a place called Bhaibohu Dedhasura and on the bank of the river Kantakhair two images of Uma-Maheswara were recovered.

By far the most exciting aspect of Khiching town is a museum housed in the temple compound. The rich collection of this museum throws a glimpse about the rich cultural events this place witnessed once

upon a time. The museum contains a large number of life-size images of Durga, Ganesa, Parsvanath, Tara, Parvati, Ardhanageswar, Vaishnavi, Nandi, Kartikeya, Avalokiteswar, Dhyan Buddha, Mahisasuramardini, Uma-Maheswar and female devotees. In addition, it has copper and iron implements, terracotta figurines, seals, ornaments, potteries, coins, stone tools and various fragments of the temples. In the courtyard of the museum several sculptured parts of ancient temples of the site have been displayed in the open. In spite of such a rich collection, the museum is in a pitiable condition. First of all, it is too small a repository to accommodate the rich collection of icons.

To sum up, the monuments of Khiching represent one of the highest points of the Orissan sculptural tradition. It combined a highly original sculptural aesthetics with extraordinary craftsmanship. The temples and sculptures of the place are all found in blue fine-grained chlorite, which is more enduring in nature and conducive for receiving fine ornamentations. The iconographical evidences suggest that under the early Bhanja rulers Khiching was prosperous town where Brahminism, Buddhism and Jainism flourished side by side. There is a general agreement amongst the art historians that the temples of Khiching are the finest products of Orissan art and architecture.

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WILD ANIMAL PRESERVATION PLAN

The 14th advisory board constituted by Forest Department met at State Secretariat on 24.1.94 to discuss measures for protection and preservation of wild animals with Forest Minister Shri A.P. Singh in Chair. Principal Secretary, Forest, Shri Bhaskar Chandra Patnaik and Principal, Chief Conservator of Forest were present in the meeting.

State News in Brief

SAHEED DIVAS CELEBRATED

The State-level Martyrs' Day was celebrated in the State Assembly premises on January 30 last. Governor, Shri B. Satyanarayan Reddy; Chief Minister, Shri Biju Patnaik; Speaker, Orissa Legislative Assembly, Shri Yudhisthir Das; I & P R Minister, Shri Bairagi Jena; Health Minister Sayed Mustafiz Ahmed; Energy Minister, Shri Kalindi Charan Behera and other dignitaries paid floral tributes to Gandhiji's statue on the occasion.

12,727 WELLS SUNK

Under the million well scheme, 12,727 dug wells have been sunk with an estimated cost of Rs 1634.61 lakhs till the end of December. 612 dugwells have been sunk only in the month of December with an estimated cost of Rs. 222.55 lakhs.

INDIRA AWAS YOJANA

5,419 houses have been built under Indira Awas Yojana till December end and the same have been allocated to homeless Adivasis, Harijans and people belonging to economically weaker section.

71,195 OVENS SET UP

71,195 improved chullahs have been set up in different districts of Orissa till December end against the fixed target of 20,000 chullahs for current financial year.

BIO-GAS PLANTS INSTALLED

6,182 bio-gas plants have been installed till the end of December in different districts of Orissa, including 672 in Sambalpur, against the fixed target of 12,000 for the current financial year.

ADIVASI WOMEN-ADVISORS CALL ON C.M.

A team of women advisors, including Sumani Jhotiani and Akshyari Majhi from Kasipur area called on Chief Minister, Shri Biju Patnaik on January, 18 at Bhubaneswar and apprised him of the need for imparting special training to women representatives and safeguard measures to ensure minimum wage in backward areas.

PLAN TO SET UP SCHOOL COMPLEX

The State Government have decided to implement soon the central directive 1992 which enlists a

package of reforms for bringing about qualitative improvement in the field of education. A school complex will centre round a nodal high school covering primary and upper primary schools situated within a radius of 8 kms.

PENSION ADALAT

The 43rd pension adalat held in Kalahandi on 19.1.94 with Principal Secretary, Shri Pratap Mukhopadhyaya in chair settled 78 cases of grievances relating to finalisation of pension paper of the retired teachers and government employees of Nuapada and Kalahandi districts. In the 47th Pension Adalat Shri Mukhopadhyaya also settled 115 pension dispute cases of the same nature at Dandakaranya in Koraput district on 21.1.94.

BODY AND MIND PLAY A GREAT ROLE WHILE DOING CONSTRUCTIVE ACTIVITIES

The Governor of Orissa Shri B. Satyanarayan Reddy inaugurated the 32nd National Conference of India Association of Physiotherapists at the Club House of Barabati Stadium, Cuttack on January, 8, 94. The two-day long conference was attended by Physiotherapists from all over the country. The welcome address was given by Dr. S.N. Mohanty, Director of NIRTAR, Olatpur and the function was presided over by Dr. M.S. Yadav, President of the Association.

POWER PROJECTS WITH CANADIAN FUNDING LIKELY

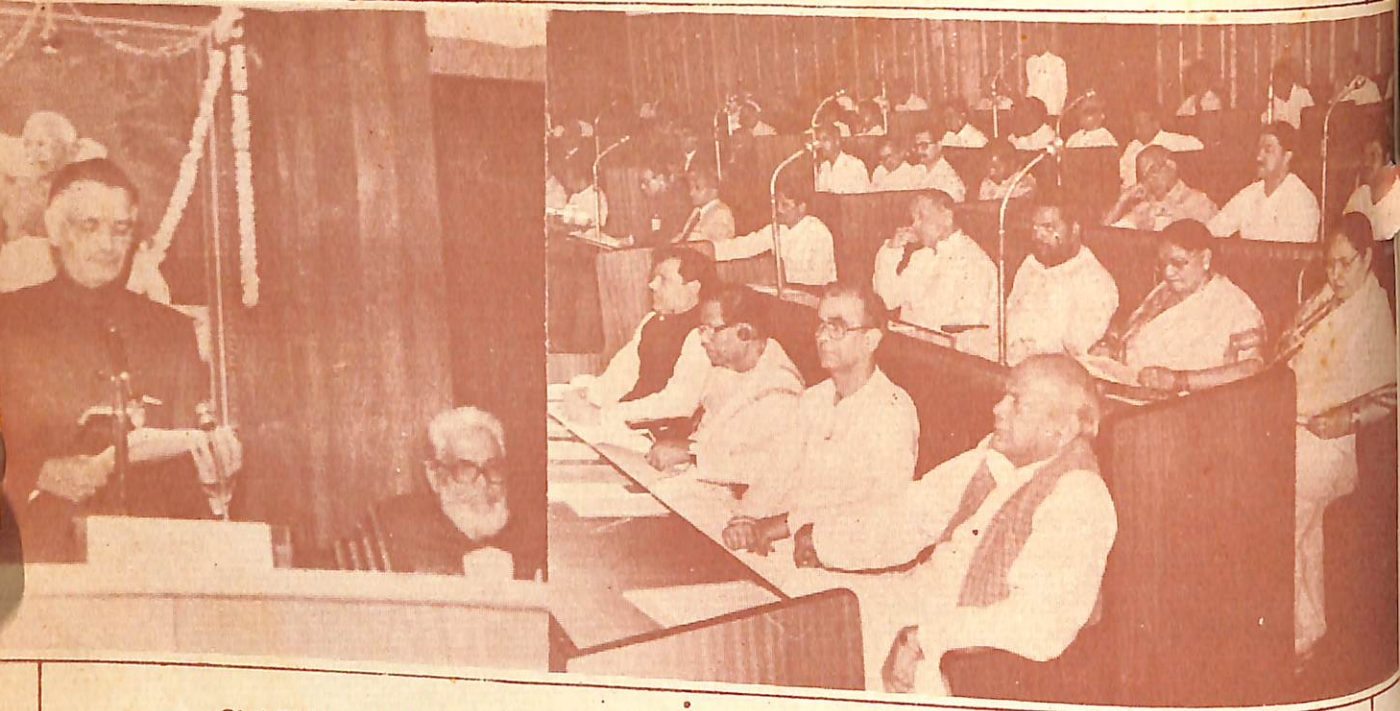
Mr. John L. Paynter, High Commissioner for Canada and Mr. Myk. Dugate, Second Secretary (Commercial) while calling on the Minister, Energy on January, 21, 1994 informed the Minister and officials of the O.S.E.B. that enthusiastic entrepreneurs in Canada would be interested in setting up thermal, hydel, solar power projects and bio-energy plants using the latest available technology. When questioned about the funding pattern, the High Commissioner suggested that the pattern adopted by Government of India could be accepted as an humble beginning. The Minister during discussion pointed out that the thermal power plant proposed to be set up at Rengali would be offered for International Competitive Bidding very soon. Mr. Dugate, the Second Secretary (Commercial) desired to get a list of hydel and thermal projects which were in the pipe-line so as to acquaint and motivate the interested entrepreneurs in Canada so that they would come to Orissa for field visits and initiate dialogues with the Government.



Shri B. Satyanarayan Reddy, Hon'ble Governor; Shri Biju Patnaik, Hon'ble Chief Minister and Shri Bairagi Jena Minister I. & P. R. are offering flowers at the statue of Mahatma Gandhi in the Assembly premises on the Martyrs Day on 30-1-1994.



Shri Bairagi Jena, Minister, I. & P. R. is addressing at the Chakhi Khuntia Jayanti Celebration at Soochana Bhavan, Bhubaneswar on 20-1-1994.



Shri Shivraj V Patil, Hon'ble Speaker, Lok Sabha is addressing at the inaugural function of Presiding Officers Conference at OLA, Bhubaneswar on 1-2-1994.



Chief Minister Shri Biju Patnaik offering floral tribute at the portrait of Veer Surendra Sai in a state level function organised by I. & P. R. Department and Veer Surendra Sai Smruti Sansad at Soochana Bhavan on 22-1-1994.