



# ORISSA REVIEW

MAY - 1970

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President, Shri V. V. Giri, inaugurated the Bapu Dham Complex in Chanakya Puri, Delhi on April 4, 1970. He also laid the foundation stone of a Community Hall. He participated in a Community Dinner (Preeti Bhoj) with the Harijan employees of N. D. M. C.

to taken on the occasion shows Shri Giri participating in the community dinner

Shri B. S. Murty, Union Minister of State for Health and Family Planning, inaugurated the Silver Jubilee celebrations of the S. C. B. Medical College, Cuttack on April 18, 1970.



# RISSA REVIEW

MAY 1970

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SA REVIEW seeks to provide condensed record of the activities and official announcements of the Government of Orissa and other useful information. Many items appear in summarised form. Such items should not be treated as complete authoritative versions.

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Samar Bilas Patnaik

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OUR COVER: CHAITIGHODA DANCE,  
Traditional Festival of the Fisher-  
men Community in Orissa.

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## *In This Issue.....*

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# ORISSA'S BID TO FORGE AHEAD

nically backward, Orissa which  
ered a set-back due to recession  
anned expenditure during the  
ve-Year Plan, has now been able  
herself on the road to economic

The present Government which  
power after the Fourth General  
on the basis of their joint 21-point  
ne are determined to lift the peopl  
from the slough of poverty and  
and put them on even ground  
hey will find it easy for them  
le to catch up with the other  
l States of the Union. The  
fulfilled are :

Abolition of land revenue which  
was one of the important election  
pledges.

Abolition of irksome Panchayat  
taxes for giving relief to the  
poorer sections of the society.

Appointment of a Commission of  
Inquiry to probe into charges of  
c o r r u p t i o n against former

Ministers. On the basis of the  
findings of the Khanna Commis-  
sion, criminal proceedings have  
been started against some of  
them.

- (4) Tightening of Vigilance Organisa-  
tion to root-out corruption in the  
administration.
- (5) Water-rate was reduced in cana  
irrigated areas.
- (6) Scheme of separation of Judiciary  
from the Executive was completed  
in all the 13 districts.
- (7) A code of conduct was prescribed  
for the Ministers.
- (8) A new Industrial Policy actuated  
by pragmatic approach was for-  
mulated.
- (9) An Evaluation Committee was set  
up under the presidentship of Dr.  
P. S. Lokanathan to look into

the problems of major State-sector industries which has already submitted its report and Government are suitably implementing many of the recommendations. Another Evaluation Committee set up to look into the small industries in co-operative sector and Pilot projects, etc. have submitted an interim report.

- (10) Expansion and reorientation of the educational system.
- (11) Green Revolution in the countryside was ushered in by expansion of High Yielding Variety Programme.

Some of the sectorwise achievements in this brief period of three years are indicated in the following paragraphs.

### AGRICULTURE

75 per cent of the population depend upon agriculture and it contributes 60 per cent of the income of the State. This

sector was neglected in the past. Unfortunately 1966-67 and 1967-68 were years of unprecedented floods, droughts and cyclone. 1968-69 was comparatively better though there was a little set-back due to drought in certain parts of the State. Expenditure on agricultural production schemes including land development and Ayacut development programmes in the last three years are as follows:—

	Rupees in lakhs	
1966-67	..	195.10
1967-68	..	164.19
1968-69	..	122.32

Agricultural production was boosted through Intensive Cultivation Programmes like I.A.A.P., I.A.D.P., H.Y.V.P., etc. Maximum production of commercial crops such as jute, oil-seeds, sugarcane, paddy, etc., were aimed at. The table below shows the achievements made under principal crops during the last three years:—

### PRODUCTION OF PRINCIPAL CROPS

	(In lakh tonnes)		
	1966-67	1967-68	1968-69
1. Rice	.. 36.92	37.55	42.12
2. Other cereals	.. 2.29	2.63	2.99
3. Pulses	.. 4.34	3.39	4.49
<b>Total—Foodgrains</b>	.. 43.55	43.57	49.57

(In lakh tonnes)

	1966-67	1967-68	1968-69
Oil-seeds ..	1.78	1.71	1.70
Sugar-cane ..	1.74	1.81	2.10
Wheat and Mesta ..	2.64	3.62	4.10

## IRRIGATION

due attention of Government. The irrigated area under major and medium irrigation projects are as follows:—

to combat the vagaries of nature irrigation schemes have continued to receive

## Hirakud

		Khariff (Acres)	Rabi (Acres)
1966-67 ..		3,20,000	50,000
1967-68 ..		3,40,000	2,32,000
1968-69 ..		3,61,000	2,32,000
1969-70 ..		3,64,450	..

*Andhra Pradesh—*The revised estimates of the project are of the order of 68.38 crores and it will irrigate a gross area of 16.82 lakh acres. The project is yet completed in all respects. It is irrigating 5.89 lakh acres during Khariff season in the districts of Puri and

Cuttack. The target of Rabi in the current year is 2 lakh acres.

*Salandi Irrigation Project (Balasore District)*—The project will be completed in 1971. It has provided irrigation to 25,000 acres of Khariff crop in 1967-68 for the first time and this was stepped up to 50,000 acres in 1968-69 and 1969-70.

*Salki Irrigation Project (Boudhphulbani District)*—Up to the end of Third plan, an area of 29,610 acres under Khariff

	Khariff (Acres)	Rabi (Acres)
1966-67		
1967-68	.. 36,250	3,000
1968-69	.. 40,000	5,000
	.. 40,000	..

*Budhabudhiani Irrigation Project (Puri District)*—A sum of Rs. 149.72 lakhs has been spent up to the end of 1968-69.

	Khariff (Acres)	Rabi (Acres)
1966-67		
1967-68	.. 5,000	300
1968-69	.. 5,500	1,500
	.. 6,170	1,556

and 3,000 acres under Rabi was irrigated. The figures for the last three years are as follows:—

The areas irrigated in the last three years are as follows:—

Other important Medium Irrigation Projects, such as Ghodahada in Ganjam district, Dhanai in Ganjam district, Darjang in Dhenkanal district, Bahuda and Hiradharbati in Ganjam district are nearing completion. Two new Irrigation Projects, such as, Pitamahal in Sundargarh district and Uttei in Kalahandi district have been taken up. Both these projects when completed will provide irrigation to 30,000 acres under Khariff and 10,000 acres under Rabi.

## INDUSTRIES

**Important landmarks in the promotion of industries in the State under the present regime are as follows:—**

An Industrial Policy Resolution based on pragmatic approach and not on any

doctrinaire consideration has been adopted. To encourage private investment following concessions have been announced by Government:—

- (1) Land on long-term lease at concessional rate of premium and rent.
- (2) 12½ per cent subsidy on power consumption.
- (3) Exemption of Sales Tax Octroi on raw-materials and machinery for a certain period.
- (4) Price preference in respect of Government purchases to Small Scale Industries.



re industrial establishments are  
 ired to provide employment to the  
 l people in their undertakings.

he State Government have pursued  
 a vigour a number of applications for  
 it of Industrial Licences. As a result,  
 following parties got Industrial  
 nces and Letters of Intent for establish-  
 t of industries during the period from  
 7 to 1969—

- (1) Orissa Fertiliser & Chemicals,  
Rourkela (Fertilisers).
- (2) Handidhua Colliery, Talcher  
(Coal).
- (3) Dodsai Private Limited, Rourkela,  
(Pipe specials).
- (4) Jamalprasad Sikaria & Company,  
Cuttack (Wheat products).
- (5) Titagur Paper Mills Company  
Limited, Choudwar (Caustic Soda  
Chlorine).
- (6) Industrial Development Corpora-  
tion of Orissa, Hirakud (AOSR/  
ASC Conductors).
- (7) Jayashree Chemicals Limited,  
Calcutta. (Expansion Hydro Chlo-  
ride Acid and Calcium Hypochlo-  
rite Plant at Ganjam).

During this period 34 applications for  
 ing up Large Scale Industries and 10  
 Medium Scale Industries were made  
 l most of them were recommended by  
 State Government. These are now  
 ding with the Government of India.  
 An important landmark is the setting up  
 a Planning & Design Cell in the Indus-  
 es Department to supply project profiles  
 parties interested in setting up indus-  
 es in the State.

## ANCILLARY INDUSTRIES

About 879 acres of land has been ear-  
 marked as an industrial growth centre at  
 Rourkela for growth of ancillary indus-  
 tries. This is in addition to 34 ancillary  
 industries now existing in the Industrial  
 Estate at Rourkela for supplying various  
 requirements of the Steel Plant. State  
 Government are also actively pursuing  
 establishment of developed areas near  
 Kansbahal, Rajgangpur, Paradip, Suna-  
 beda, Talcher and Jajpur Road.

As a result of consistent promotional and  
 directional activities of the State, several  
 industries have gone into production since  
 1967. These are—

- (1) Ferro-Silicon Plant at Theruvali
- (2) A Chemical Plant of Jayshree  
Chemicals at Ganjam.
- (3) I. D. C.'s Cement Plant at Bargarh
- (4) I. D. C's Cables at Hirakud
- (5) I. D. C's Rerolling Factory at  
Hirakud.
- (6) I. D. C's Ferrochrome Plant at  
Jajpur Road.
- (7) Utkal Scientific glass equipments
- (8) Cocacola and Paper Sack Plant

A Fertiliser Plant near Rourkela is under  
 construction by Orissa Fertilisers & Chemi-  
 cals. The Foundation Stone of a Nitro-  
 genous Fertiliser Factory at Talcher was  
 laid on February 3, 1970 by Dr. Triguna  
 Sen, Union Minister for Mines and Metals  
 and Petroleum and Chemicals. The Ferti-  
 liser Corporation of India are setting up  
 this Plant.

The following table will indicate the investment of the State Government in shares, guarantees and loan under State-aid to industries:—

Year	SHARE INVESTED	
	Public Sector Amount Rs.	Private Sector Amount Rs.
1967-68	..	..
1968-69	2,68,40,000	..
	2,28,00,000	50,000
	Government Guarantee	
1967-68	..	187,000
1968-69	..	120,000
1969-70	..	150,000
	STATE-AID LOAN	
	Amount of loan sanctioned	
1967-68	..	90,000 (Due to imposition of ban by Government)
1968-69	..	4,90,450
1969-70	..	2,45,200 (Up to December 1969)

*Pilot Projects*—40 Pilot Project Companies were incorporated in 1958. The Scheme did not succeed as entrepreneurs who had only 10 per cent interest in the Share Capital were entrusted with 90 per cent of the capital investment by the State Government. The present Government has evolved a forth-right policy of encouraging the entrepreneurs to purchase Government shares on deferred payment basis. In their bid to revive these dying units, about three such units have been revived and a few more are in the process of being revived.

- ### TRANSPORT AND COMMUNICATION
- (1) The Cuttack-Paradip Rail link has been taken up. Its construction inaugurated by the Chief Minister, Orissa in February 1969. This rail link connect Paradip Port with the hinterland.
  - (2) Survey work for construction Talcher-Bimalagarh line is in progress.
  - (3) Foundation Stone has been laid for construction of a Cargo Berth at Paradip. Shri K. Raghuramaih, Minister for Shipping & Transport, Government of India, laid foundation stone on January 23, 1970.

## POWER

Talcher Thermal Project was completed on February 7, 1968 by the Minister of India. The installed capacity of power generation in the State has now been increased to 560 M. W. Per capita consumption power has increased from 63 units in 1968-69 to 84 units in 1969. Some of the important schemes completed during this period are the following:

**Balimela Transmission Scheme—** 220 K. V. Double Circuit-line from Balimela to Talcher is under construction. In the last three years transmission towers have been erected over a stretch of 223 Kms. out of a total length of 525 Kms.

132 K. V. Single Circuit line from Rayagada to Theruveli was energised in April, 1967.

132 K. V. Single Circuit line from Berhampur to Ganjam Caustic Soda Plant was energised in July, 1967.

132 K. V. Single Circuit line from Chowdwar to Khurda was energised in June, 1969.

During 1967-68, 85 per cent of the construction of 132 K. V. Single Circuit from Jeypore to Sunabeda was completed.

33 K. V. Line from Khurda to Pipli was energised in 1968.

33 K. V. Line from Khurda to Bhubaneswar was energised in June, 1969.

(8) 33 K. V. Line from Jajpur Road to Sukinda was completed in 1969.

(9) 33 K. V. Line from Jajpur Road to Kamakshyanagar was completed in October, 1969.

(10) 33 K. V. Line from Bhanjanagar to Phulbani was completed in December, 1969. For the first time Phulbani district, the most backward area in the State got electric supply.

(11) 33 K. V. Line from Nawarangpur to Umerkote was completed in October, 1967.

(12) 33 K. V. Line from Patnagarh to Padmapur was energised in May, 1969.

## RURAL ELECTRIFICATION

Under Rural Electrification Scheme, 84 Kms. of 33 K. V. lines and 248 Kms. of 11 K. V. lines have been drawn in different districts in the last three years for supply of power to villages and lift irrigation points. The number of villages electrified district-wise are as follows:—

District	Villages
(1)	(2)
(1) Balasore	36
(2) Bolangir	4
(3) Cuttack	75
(4) Dhenkanal	9
(5) Ganjam	65
(6) Keonjhar	11
(7) Kalahandi	3

(1)	(2)
(8) Koraput ...	5
(9) Mayurbhanj ...	8
(10) Phulbani ...	1
(11) Puri ...	59
(12) Sambalpur ...	11
(13) Sundargarh ...	3

## LIFT IRRIGATION POINTS

(1) Balasore ...	17
(2) Cuttack ...	85
(3) Ganjam ...	52
(4) Koraput ...	8
(5) Mayurbhanj ...	4
(6) Phulbani ...	2
(7) Puri ...	10
(8) Sundargarh ...	3

## CO-OPERATION

The policy of the present Government has been to streamline the co-operative structure and to encourage those units which are economically viable. This has resulted in a healthy trend of membership and working capital remaining steady. The number of the Societies which was 9,286 in 1966 decreased to 8,712 in 1968. The membership increased from 1,691,697 to 1,822,893 in 1968. The working capital increased from Rs. 6,345.72 lakhs in 1966 to Rs. 7,917.92 lakhs in 1968.

*Primary Agricultural Credit Societies—* There are 17 Central Co-operative Banks with 37 branches. The volume of farm

credit has been increased and the co-operative credit structure has been geared to meet the production programmes. The membership of these societies increased from 12.18 lakhs in 1966 to 13.01 lakhs in 1968, while the working capital increased from Rs. 16.55 crores to Rs. 22.45 crores during the same period.

*Orissa State Co-operative Bank—* The share capital, deposits, borrowing and working capital of the Orissa State Co-operative Bank which were Rs. 55.44 lakhs, Rs. 288.98 lakhs, Rs. 521.59 lakhs and Rs. 893.07 lakhs in 1966 respectively increased to Rs. 75.24 lakhs, Rs. 359.77 lakhs, Rs. 460.06 lakhs and Rs. 977.77 lakhs, respectively in 1969.

With a view to increasing agricultural production, marginal and sub-marginal cultivators including Bhag-Chasis are being financed agricultural loan without insisting upon any security to the limit of Rs. 2,000 for short-term and Rs. 1,000 for medium-term loan. The loans advanced by the 17 Central Co-operative Banks increased from Rs. 885.53 lakhs in 1966-67 to Rs. 1,245.00 lakhs in 1968-69. For the development of the Agricultural Programme in the State, emphasis has been laid on the long-term loan to the agriculturists for minor irrigation, purchase of machinery and other land development measures. Investment made by the Orissa State Co-operative Land Development Bank increased from Rs. 105.62 lakhs in 1966-67 to Rs. 203.00 lakhs in 1968-69. The number of Primary Land Development Banks increased from 37 to 51 during the last three years. During the year 1968-69, 39 Regional Marketing Co-operative Societies have marketed agricultural produce worth Rs. 160.86 lakhs.

village Co-operative Societies have distributed Chemical Fertilisers worth 98 crores and 183 Village Co-operative Societies have distributed consumer goods worth Rs. 60.28 lakhs in the rural

### EDUCATION

In the sphere of education the State has made steady progress and expenditure in this important sector is gradually increasing as will be evident from the fact that the outlay under education was Rs. 12.62 crores prior to its inclusion in the budget by the present Government and has now increased to Rs. 16.63 crores.

**Scholarship**—During 1967, the number of Junior College M. C. P. Scholarships awarded on the result of High School Intermediate Examination was raised from 650. The number of Junior College M. C. P. Poverty Scholarships awarded on the result of Pre-University and Higher Secondary Certificate Examination was

raised from 370 to 450. Financial assistance of Rs. 100 each to poor and meritorious students at the time of their first admission to the Colleges was given to 1,100 students in place of 750 students awarded in the previous year. Stipends to children of political sufferers awarded at the different stages of education were raised from 230 to 423 by the present Government.

**Women's Education**—The management of Queen of Mission's Girls' High School at Berhampur was taken over as a full deficit aided institution, with effect from June, 1967. During the year 1968-69, five deficit aided Girls' High Schools were converted into Government 'A' Type Schools. During 1967-68, 12 Girls' M. E. Schools and 6 Girls' High Schools and during the year 1968-69, 9 Government Girls' High Schools were opened by the present Government. In the month of July 1969, 5 Girls' M. E. Schools were upgraded to Girls' High Schools.

### GROWTH IN THE NUMBER OF INSTITUTIONS OF ALL CATEGORIES

	Primary Schools	Secondary including M. E. Schools	Colleges for general education
	(1)	(2)	(3)
67	26,001	5,006	68
68	26,074	4,964	69
69	26,208	5,202	72

### GROWTH IN THE NUMBER OF STUDENTS AT ALL STAGES

67	17,85,991	4,53,684	28,342
68	19,24,938	4,15,684	28,030
69	18,93,565	4,51,640	33,322

### GROWTH IN THE NUMBER OF TEACHERS AT ALL STAGES

67	52,663	24,055	1,867
68	52,547	24,781	1,996
69	53,675	25,534	2,140

B.—Figures for 1967-68 and 1968-69 are purely provisional

## EXPANSION OF MEDICAL FACILITIES

With the successful implementation of various health programmes, e.g. (i) provision of integrated health services, both preventive and curative to the community through establishment of Primary Health Centres, (ii) Eradication of Malaria and Small Pox, (iii) Expansion of Medical Education and Training Programmes and (iv) Family Planning Programme; there has been a marked and rapid improvement in the health condition of the people. The *per capita* expenditure on health services has risen from Rs. 2.70 paise by the end of Third Plan to Rs. 3.45 paise by 1968-69.

Specialist services have been extended to the Capital Hospital, Bhubaneswar as well as to the two District Headquarters Hospitals at Koraput and Baripada. There are two Paediatric Hospitals in the State one at Cuttack and another at Bhawanipatna. The Cancer Wing attached to the S. C. B. Medical College, Cuttack is being upgraded to a Cancer Institute.

## BACKWARD CLASSES' WELFARE

The present Government has consistently upheld the policy of giving special attention to Scheduled Tribes and Scheduled Castes who constitute about 40 per cent of the total population. Percentage of literacy which was only 1.5 and 3.3 among Scheduled Tribes and Scheduled Castes has gone up to 7.4 and 11.6 according to 1961 Census. For the purpose of fulfilling constitutional obligations the State Government have reserved 24 per cent of the vacancies for the Scheduled Tribes and 16 per cent for the Scheduled Castes. The present Government have opened the following Schools in the last three years :—

- (1) 7 Ashram Schools

- (2) 8 Residential Sevashrams
- (3) 5 Chatsalis
- (4) 20 Upgraded Sevashrams
- (5) 43 Hostels
- (6) 10 Ashram Schools upgraded High Schools.
- (7) 5 Units of purchase, sale and price shops opened in addition to the continuing 6 Units.

In order to provide medical facilities to the people belonging to Scheduled Tribes and Scheduled Castes 19 six-bedded hospitals, 11 Allopathic Dispensaries, Ayurvedic Dispensaries and 14 Mobile Health Units were established. Providing drinking water facilities to the wells, tanks and tube wells, etc. is sunk every year.

The past three years were a period of consolidation and the stage is now set for achieving all round progress and advancement. The Green Revolution, which has brought about a silent revolution in the country-side has ushered in a new era. Harnessing of the natural resources in minerals and forests is advancing industrialisation in the State. The weak sections of the community would get a fair deal with greater attention focussed on the development of the under-developed regions of the State. All these would contribute to pave the way for the reduction of unemployed.

No Government, much less the present Government can claim an uniform record of achievements. The tasks ahead are no doubt difficult. But understanding, co-operation, sacrifice and dedicated service alone on the part of all concerned can take the State forward in its march towards progress and prosperity.

# GANDHI AND NEHRU

Jawaharlal Nehru was the disciple, friend and comrade-in-arms of the Mahatma. Perhaps no two men so different in social background and upbringing, who speak of dress and other externals, have such kindred spirits.

With Mahatma Gandhi, Jawaharlal Nehru turned ordinary men into men of conviction and action, ready to look death in the face.

Like Gandhi, Nehru was free from fear; he believed in the right means for gain-right ends. The adherence to right means was the essence of Gandhiji's sage. Said Nehru:

"I have been attracted by Gandhiji's stress on right means and I think one of his greatest contributions to our public life has been this emphasis. The idea is by no means new, but his application of an ethical doctrine to large scale public activity was certainly novel. It is full of difficulty and perhaps ends and means are not really

separable and form together one organic whole. In a world which thinks almost exclusively of ends and ignores means, this emphasis on means seems odd and remarkable."

The meeting of two of the greatest minds of the century goes back to 1916, to the Congress session at Lucknow. Since then both drew so close to each other that history will find it hard to separate them.

What drew Nehru to the Mahatma? "I think," says one of Nehru's biographers, "it was the rebel in Gandhiji, a man who hated injustice and cruelty, who refused to be content with the mere enunciation of lofty principles but insisted on action which drew the one to the other."

Freedom to Nehru, like Gandhiji, meant not only political independence but also freedom from economic want. He said:

"If it is to have any meaning, political democracy must gradually or, if you like,

rapidly lead to economic democracy. If there is economic inequality in the country, all the political democracy, and all the adult suffrage in the world cannot bring about real democracy."

As early as 1948, Gandhiji had also said, "Economic equality is the master key to non-violent independence. Working for economic equality means abolishing the internal conflict between capital and labour. It means the levelling down of the few rich in whose hands is concentrated the bulk of the nation's wealth on the one hand, and the levelling up of the semi-starved naked millions on the other. A non-violent system of Government is clearly an impossibility so long as the wide gulf between the rich and the hungry millions persists."

As free India's first Prime Minister for seventeen years Nehru laid the foundation of our democracy, our secularism, and our foreign policy. His thinking, like Gandhiji's, followed an astonishingly consistent pattern.

It was his firm conviction, as it was Gandhiji's, that the progress of India can be and should be measured by the progress of women. "Our political movement swept away many social barriers and brought the women out. That shows that our political movement was something much more than a political movement, because it affected the lives of all classes of people.....It affected women. It affected children. It affected the peasantry, the industrial workers and others. So, it was a vital movement which affected every class and every group in India. That is what a real movement

should be. And in this movement the women of India, undoubtedly, played an exceedingly important part."

Again, speaking at Madras in 1950 Nehru said: "It may be possible to neglect men's education but it is not possible nor desirable to neglect women's education. The reasons are obvious. If you affected women, probably men also will be affected and in any event children will be there by affected."

It is scarcely different from Gandhiji's remarks:

"I have pointed out from time to time that there is no justification for men to deprive women of, or to deny to them equal rights on the ground of their illiteracy. Education is essential for enabling women to assert these natural rights to exercise them wisely, and to work for their expansion."

"The future of India," Gandhiji once said while addressing women, "lies in your knees, for you will nurture the future generation. You can bring up the children of India to become simple, God-fearing and brave men and women, or you can code them to be weaklings, unfit to brave the storms of life and used to foreign finances which they would find it difficult in after life to discard."

All this does not mean that Gandhiji and Nehru did not have any differences. They did have differences, and they were frank in discussing them in person or through correspondence. The difference was mostly of emphasis. But each difference brought them closer, with greater affection for each other.



's deep regard and affection for  
atma found moving and memora-  
ance when "the light has gone

Two days later, on February 2, 1948,  
Nehru said in the Constituent Assembly:

light has gone out, I said, and yet  
rong. For the light that shone in  
ntry was no ordinary light. The  
it has illumined this country for  
ny many years will illumine this  
for many more years, and a  
l years later, that light will still be  
this country and the world will  
l it will give solace to innumerable  
For that light represented some-  
re than the immediate present, it  
ted the living, the enternal truths,  
g us of the right path, drawing us  
or, taking this ancient country to  
"

"Great men and eminent men have  
monuments in bronze and marble set up  
for them, but this man of divine fire  
managed in his lifetime to become enshrin-  
ed in millions and millions of hearts so  
that all of us became somewhat of the  
stuff that he was made of, though to an  
infinitely lesser degree. He spread out in  
this way all over India not in palaces only,  
or in select places or in assemblies but in  
every hamlet and hut of the lowly and  
those who suffer. He lives in the hearts of  
millions and he will live for immemorial  
ages."

Your need to save is greater than your need to spend

# The Post Office Savings Bank

is there to serve you

Open a Cumulative Time Deposit Account and get lumpsum return with bonus. You can save from Rs. 5/- to Rs. 500/- per month in 5-Year, 10-Year or 15-Year Account

Deposits in 10-Year and 15-Year Accounts are eligible for relief in Income Tax

Remember

Your savings while serving you also serve the country.  
Consult the nearest Post Office for details

Issued by

The Director of Public Relations & Tourism

Government of Orissa, Bhubaneswar

## 1). C. and its role Industrialisation



Industrial Development Corporation commenced its operation in the year 1962. At that time it had only one producing unit, Kalinga Iron Works at Barbil. Recently, steps were taken to consolidate existing units. Bargarh Cement Works at Bargarh, Paper Mill, Cable Works and Hirakud Iron Works at Hirakud, Tile Factory at Boudwar, Salt Factory at Sumandi and Ferro-Chrome Plant at Jajpur Road. These new units were in a state of stress and strain for a considerable time due to want of funds. Therefore, steps came up requiring to consolidate existing units and only since last year, the Industrial Development Corporation has managed itself in an appropriate manner and its Units have stepped up production to contribute to its stability.

### SUSTAINED ENDEAVOUR

Even at the time of difficulty, the Industrial Development Corporation has endeavoured to promote some of the projects which are gradually taking shape.

These are Talcher Industrial Complex, Paradip Fertiliser Plant, Ferro-vanadium Project, etc. For the Talcher Industrial Complex, the Industrial Development Corporation has spent nearly Rs. 18 lakhs and has carried out many valuable tests and survey which have contributed greatly for the preparation of the feasibility report on the Talcher Fertiliser Plant, Carbonisation unit and Pig Iron Plant at Talcher. The Industrial Licence for Ferro-vanadium plant has been secured this year and now tests are being conducted to compile the detailed project report. The Consultants Messrs. M. N. Dastur & Company and UNIDO are helping in the pre-investment studies and compilation of Project Report which has got priority. The construction work may be taken up in 1971.

### NEW PROJECTS

Besides, the Industrial Development Corporation is now taking steps to expand the Ferro-Chrome Plant from its rated capacity of 10,000 tonnes to 25,000 tonnes

per annum. It is also giving necessary assistance for the promotion of nickel extraction plant at Jajpur Road.

The Sponge Iron Plant utilising high grade Iron-ore has been planned to be set up in the iron-ore belt close to Barbil for production of feed-stock leading to the manufacture of billets.

A Lead Smelter has also been suggested to be set-up in Sundargarh district as sufficient reserve of lead bearing material is available there.

The I.D.C. has taken steps to promote a X, Benzene Hea Chloride Plant near the Jayshree Chemicals, a Tyre and Tube Plant and various other ancillary Units.

For undertaking all these new ventures, it is necessary to develop a Planning and Design Cell under this Corporation and steps have already been taken to build up this Cell. The Engineers of the Corporation will be participating in the designing, planning and engineering of the Industries for private and public sectors. With the vast mineral resources available in Orissa it has been felt necessary that such a Cell will catalyse the industrial activities to a great extent.

#### LOCATION OF STEEL PLANTS

In the field of major Industries like Steel Plants, Industrial Development Corporation has already high-lighted the concept of industrial belt with emphasis on Bonai and Nayagarh as ideal Steel Plant sites in our country. On the basis of raw material reserves, investment on infrastructure, transport cost, these two locations have got unique advantage. Couple

of years back, the Steel Ministry conducted survey for establishment of Pig plants in consultation with Messrs Dastur & Co. and Kuljian and it has indicated in the order of priority that two places enjoy very high position. Both the Consultants have stressed that ten million tonnes capacity steel plant can be easily located in this area without any difficulty.

The Corporation previously tried to contact well-reputed firms like Dastur & Co., to draw feasibility report and due to certain restrictions by the Government of India, they have not been permitted to take up the assignment in spite of the instructions to them to do so. It is understood that these restrictions have been lifted very recently and the State Government are taking steps now in consultation with the I.D.C. to finalise this assignment quickly. One should appreciate that such a major task, the Corporation has got its limitations, as certain facilities which are really essential to process a project, are to be made available by Central authorities.

**BONAI AND NAYAGARH—IDEAL STEEL PLANT SITES**  
On the basis of techno-economic consideration the following points are mentioned briefly in favour of Bonai and Nayagarh Steel Plants—

- (1) Rich reserves of iron-ore, limestone and manganese ore are available within a distance ranging from 10—100 miles. In fact, in Bonai, iron-ore is available at a distance of 5 miles with Fe-content more than 63 per cent and so also in Nayagarh.

(See Page 32)

## PLANNED DEVELOPMENT OF INDUSTRIAL BELTS

ast country like India, where the  
n explosion is an acute problem  
ate the national economy, it is  
y important that the tempo of  
lisation should be accelerated in  
achieve the stipulated economic  
of 5-6 per cent per annum. To  
employment to her millions, to  
skills of our talented people and  
the living standard of common  
apparatus for planning must be  
ened in all respect to achieve this  
and to prevent the country from  
nal catastrophe.

### DEQUATE INFRASTRUCTURE

ng the last three plan periods, the  
tial development in this country has  
nced tremendous difficulties due to  
s in socio-economic and political  
re. The strain and stress has  
ed the growth to a great extent during

the Third Five-Year Plan. In this context,  
it may be emphasized that in any develop-  
ing country, the industrialisation is planned  
and guided by well-defined criteria,  
i.e., raw materials, water, power, transport  
and marketability of finished products. In  
Orissa, although nature has provided raw  
materials of rare availability, abundant  
water and power resources, yet the trans-  
port inter-link has constituted a major  
bottleneck in the growth of her infrastruc-  
ture. With the realisation of Cuttack-  
Paradip rail link and subsequently,  
Talcher-Bimlagarh rail link, an industrial  
belt, which has been conceived by us  
sometime back, connecting Rourkela-Bonai-  
Talcher-Cuttack-Paradip can be developed.  
Similarly, another industrial belt can also  
be conceived joining Banaspani-Nayagarh-  
Gandhamardan-T o m k a-D a i t a r i-  
Jakhpura-Paradip. In the district of  
Mayurbhanj, another cross industrial belt

can be developed joining Gandhamardan-Keonjhar-Karanja-Bisoi-Rairangpur-Gorumahisani. In Koraput district an industrial belt connecting Malkangiri-Sunki-Balimela, etc., can be developed.

In this background, the concept of industrial belts will have to be systematically pursued for the purpose of planning of the State since no industry can find its full growth in isolation. If one realises the development of industries in Germany or in USA or in Japan, the industries always have got a system of growth, in which the final product of one industry constitutes the raw material of another industry so as to maximise the productivity. In Orissa, similar planning has to be conducted to ensure the growth of industries on some rational basis atleast for the coming two decades. In the following paragraphs, I shall briefly deal with the industrial potentialities of different industrial belts on the basis of information available with us now.

#### ROURKELA-BONAI-TALCHER-CUTTACK-PARADIP

*Rourkela*—Rourkela area, although well-known with the existence of the steel plant, fertilizer plant, Utkal Machinery, and many other small engineering units, has not yet fully developed. Recent survey shows that it is quite feasible to locate chemical equipment manufacturing plant near Rourkela with the plates, sheets, etc., available from the Rourkela Steel Plant.

With the intermediate products of the fertilizer plant (ethylene, ammonia, etc.) and with the bye-products of the coke oven plant (benzene, naphthalene, etc.)

there is possibility of realising a chain of organic chemical industries, e.g., styrene, aniline, phthalic-anhydride, dye-stuffs, caprolactum, and carbon black, etc.

A Lead Smelter can also be installed with the galena available in the district of Sundargarh.

*Bonai*—A million tonne integrated iron and steel plant can be set up at Nonpara area, which is about 50 KM south of Rourkela. The elevation of the site is about 550 ft. above mean sea level. The site is accessible by the S. E. Rly., nearest railway station being Patasai on the Bondamunda-Barsua Branch of S. E. Rly. from where a branch or a siding of about 10 KM can be constructed to connect the site. An all-weather road connects Rourkela, Tansa and Joda passes through this area. A large acreage of land (about 10,000 acres) is available, which ensures no limitation for its expansion.

The proposed Lodani Dam on the Brahmani river can be the potential source of water with the construction of a gravity canal from this Dam to the site.

The existing Hirakud-Talcher transmission grid runs at an aerial distance of 90 KM from the site. There are sub-stations at Joda and Rourkela at a distance of 60 KM and 50 KM respectively. The proposed transmission line between Joda and Rourkela would pass within a distance of 10 KM from this site.

Raw materials which can meet the requirements of the steel works are as follows:—

(i) *Iron-ore*—This complex can use iron ore from Khandadhar block owned by Orissa Mining Corporation, which is about 40 KM from the site.

al—Jharia coal at a distance of Ramgarh coal at a distance of with suitable percentage from each the coal requirement of the plant. sport of coal from Talcher can se after completion of the pro- il link between Bimalagarh and

nestone—Birimtrapur at a distance M. can be the source of limestone

anganese—Dumaro at a distance 5 KM. and Banspani at a distance t 150 KM. will be the source of f manganese ore for this complex.

r—As it is well-known, a fertilizer being taken up by the Fertilizer tion of India Limited to produce tonnes of urea per day. This r plant is based on the utilisation coking coal available at a distance . from the proposed site. Recently, e has been finalised to instal one 3 gas retort of 120 tonnes coal out per day to produce reactive or ferro-alloy industries. Arrange- being made to construct a 'formed unit soon, which will utilise the r coal for production of shaped coke used in the small blast furnaces. ke will be given thorough trial in all blast furnaces of the Industrial pment Corporation of Orissa Limi- (ICOL) at Barbil.

ntually, an iron complex is expected installed at Talcher utilising iron rom Tomka and Daitari. The river anani flowing nearly, 6 KM. away from lant site will meet the water require-

ment of this industrial complex and the Talcher Thermal station, which is close by, will cater to the power requirement of various industries. Talcher is about 200 KM. away from Paradip Port. So, he finished products from Talcher can be exported easily to various countries. The low phosphorous pig iron produced at Talcher will meet the requirement of engineering industries to be developed in the area between Talcher, Cuttack and Paradip.

Paradip—There are great potentialities for development of various industries near Paradip. If at a future date, our country needs to have a coast based steel plant, Paralip may offer the most suitable site for following reasons:

(i) There is abundant supply of sweet water at Paradip with close proximity of river Mahanadi as well as a perennial sweet water canal. If the existing canal cannot supply sufficient amount of sweet water to the proposed steel plant, a separate pipe line of not more than 20 KM. can be constructed from river Mahanadi to feed sufficient amount of sweet water for the project. This facility is not available in most of the ports of our country.

(ii) The lagoon of the Paradip Port has got in its bottom sandy soil and therefore, it can be dredged to any depth to admit bigger ships. At present, the provision is made to get 60,000 tonners.

(iii) The carrier, which is taking iron ore to various countries, can easily obtain coking coal from the countries like Australia, etc. The non-coking coal for blending purpose can be obtained from

Talcher, which is not more than 120 miles from Paradip and is being connected by rail link.

(iv) The iron ore can be obtained from Tomka-Daitari area, which is at a distance of 92 miles from the Port.

(v) At the first stage, the steel plant at Paradip can produce billets, which can be easily despatched to countries like Philippines, Indonesia and Malaysia, etc., where ample rolling capacity is fast developing. In this connection, it may be more advisable to export semi-finished goods than a raw material like iron ore.

(vi) As the Paradip Port is in the process of development, lot of Government land can be made available for the steel plant without any rehabilitation problem.

Besides the steel plant, the following industries can also be planned at Paradip :

In the chemical side, a phosphatic fertilizer plant has already been planned and it is hoped that some of the private entrepreneurs may take it up in the near future. This phosphatic fertilizer plant will import phosphatic rock and naphtha ammonia till the refinery is implemented at Paradip. A polyester plant can also be planned at Paradip. Close to Paradip Port, there are areas for development of salt industry. As and when this salt industry is developed, other industries like soda ash, ammonium chloride, caustic soda, etc., can be planned. With the installation of a petroleum refinery, petrochemical complex will also gain ground. It is relevant to mention here that Paradip may provide an excellent base for an oil

refinery since the infra-structure at Paradip is well developed to realise this project. It may also be examined if it would be possible to have a pipe line connecting Haldia-Paradip-Vizag. to provide flexibility in the operation of the refinery and supply fuel to the mineral belt for development of chemical and metallurgical industries in the eastern coast.

Another industry of national importance which has been planned but has not got ground for quite some time, is the smelter for manufacture of zinc, sulphuric acid, etc. There is ample scope for this industry to be developed at Paradip and the sulphuric acid produced will be a raw material for realisation of many chemical industries.

In the case of engineering industries already mentioned above, a heavy machinery and vessel unit can be established at Paradip. A ship building yard may be planned at a future date.

**BANSPANI-NAYAGARH-GANDEA  
MARDAN-TOMKA-DAITARI  
JAKHPURA-PARADIP**

Barbil : The Kalinga Iron Works under the management of the IDCOL has been designed to produce foundry grade iron of nearly 200,000 tonnes per annum using nutcoke and iron ore fines.

Recently, a Sponge Iron Plant using low grade iron ore, coke and iron ore fines has been planned at Barbil. The Sponge Iron Plant will be used for the production of iron billets for the Re-rolling Mill of the IDCOL at Hirakud. Besides, a Pelletisation Plant at Barbil is under active consideration by the IDCOL.



Joda, ferro-manganese plant is in operation and other ferro-alloys industries be set up there.

**Joshipur Road :** The IDCOL has already installed a Ferro-Chrome Plant for production of high carbon ferro-chrome, and low carbon ferro-chrome. The IDCOL has planned to instal a dichromate plant at its Ferro-Chrome Plant. Besides, to the Ferro-Chrome Plant, Government of India are planning to instal a plant extraction plant.

**Nayagarh:** A big iron complex can be set up at Nayagarh near the village Jharpara, which is situated at about 100 ft. above mean sea level. The proposed Nayagarh-Paradip rail link can be extended to this site with the construction of 10 Km. siding. The State Highway connecting Jamshedpur with Keonjhar via Bhubaneswar will pass on the eastern boundary of the site.

A large area of 14,000 acres of land is available, which can very well take care of expansion together with the establishment of an industrial estate around this complex. About 60 per cent of this area is barren.

The proposed Jharpara Dam on the Brahmani river will meet the water requirement of 20—25 cusecs.

With the construction of 220 KV line from Jharpara-Joda grid through Nayagarh, the transmission line will run nearly 2-3 KM from the proposed site.

Raw materials which can meet the requirements of this complex are as follows:—

**Iron-ore—**Malangtoli block at a distance of 25 KM can supply the iron-

(ii) **Coal—**Jharia and Ramgarh at a distance of 280 and 300 KM respectively can meet its coal requirement.

(iii) **Limestone—**Biramitrapur at a distance of 290 KM or alternatively, Bilaspur at a distance of 510 KM will supply the required amount of limestone.

(iv) **Manganese—**Banspani at a distance of 50 KM will supply the manganese ore to this complex.

**Tomka-Daitari—**The iron ore mines at Daitari are being developed for the export of iron-ore of plus 12 mm. size. The under-sizes ranging from 6 to 12 mm. have been envisaged to be used in the iron complex at Talcher. The fines below 6 mm. can be utilised efficiently for pig iron production after necessary sintering or pelletisation. Therefore, near Tomka-Daitari, there is great possibility to instal pelletisation unit, ferro-silicon plant, etc., utilising the raw materials available nearby and the coke from Talcher.

#### GANDHAMARDAN-KEONJHAR-GARH-KARANJIA-BISOI-RAIRANGPUR-GORUMAHISANI

In this industrial belt, Joshipur has got great scope to develop China clay industry. From Joshipur to Bisoi, there is potentially rich mineral belt in Similipal mountain range, where valuable minerals like nickel, chromium, etc., are available. This area is under investigation of the Geological Survey of India and it has been reported to be very promising.

Near Rairangpur, there are vanadium bearing titaniferrous magnetite ore deposits in Kumardubi and Betjharan areas and recently IDCOL has planned to set up a ferro-vanadium project near Gorumahisani.

In this area, refractory works, ferro-silicon plant can also be planned with the first class quartz clay, etc., available from nearby sources.

### INDUSTRIAL BELT IN KORAPUT-KALAHANDI AREA

The area near Rayagada is now quite well developed with an existing Ferro-Silicon Plant near Theruvali, Paper Mills, Ferro-Manganese Plant, and Aero-Engine Factory near Sunabeda. Besides this, the following industries can be planned:

- (i) Pig Iron Plant at Umerkote
- (ii) Integrated aluminium plant at Jeypore.
- (iii) Cement Plant at Sunki
- (iv) Calcium Carbide and Silicon carbide plant in Koraput district.
- (v) News-print factory at Jeypore
- (vi) Integrated paper and pulp factory at Jeypore.
- (vii) Hard board and plyboard factories at Jeypore.
- (viii) Sugar factory at Nawarangpur

This industrial belt is not yet fully surveyed since the prospecting work in this area is still going on. In this industrial belt, the transport facility constitutes a major bottleneck and the situation has improved considerably after the construction of the new railway line to Vizag.

### INDUSTRIAL BELT CLOSE TO MAHANADI BASIN

Due to the realisation of the Hirakud Dam, the area around Hirakud Dam has developed to a considerable extent with the Aluminium factory at Hirakud besides Re-rolling Mill, Cable Plant and an Industrial Works of the IDCOL. The Cement Plant of the IDCOL at Bargarh is very close to Sambalpur. Besides these, a

Refractory Plant at Belpahar and a Paper Mill at Brajrajnagar are in operation for a long time. In this area, the following industries can also be planned:—

- (i) Ferro-silicon plant near Belpahar
- (ii) Ferro-titanium industry near Sambalpur.
- (iii) Vanaspati industries at Sambalpur.
- (iv) Breweries at Sambalpur

### GANJAM AREA

In Ganjam area, a caustic soda plant is already in operation at Chatrapur. Besides, a Salt Factory of the IDCOL is also in operation at Surla-Sumandi in the district of Ganjam. With the availability of vast coastal land suitable for salt manufacturing, salt industries can be developed in large and scientific way to harvest industrial grade salt, which can help the development of some other industries like soda ash, ammonium chloride, etc.

Lastly, those industrial belts, if properly planned, will provide ample scope for industrial prosperity of not only Orissa but the entire country. For realising this systematic growth, it is most important to pursue the implementation of important links like Talcher-Bimalgarh, Banspani-Nayagarh-Gandhamardan-Jakhpura and lastly, Gandhamardan-Joshiapur-Rairangpur. It may be mentioned here that the area enclosed by the two industrial belts, i.e. (i) Rourkela-Bonai-Talcher-Cuttack-Paradip, and (ii) Banspani-Nayagarh-Gandhamardan-Tomka-Daitari-Jakhpura-Paradip, can be termed as 'GOLDEN TRIANGLE' of our country from the mineral point of view and if political emotion does not stand in the way, it can provide firm base for the development of metallurgical, electrometallurgical and chemical industries.

## HOUSING PROBLEMS IN ORISSA

problem of housing is mainly two- Housing shortage and unsatisfactory condition of houses. Housing shortage both in urban and rural areas. Housing shortages are due to increase in population, influx of rural population to urban areas and the breakdown of traditional joint family system. The unsatisfactory conditions of housing are due to inadequate arrangements in sanitation, water supply, public utilities, and poor ventilation.

Orissa, like other States of the country, the problem of housing is experienced not only in towns but also in villages. Orissa is a large State with total area of 60,164 Sq. miles. Orissa had 62 towns in the year 1961 with total urban population of 10,650 out of the total population of

17,548,846. But the rural population during the same year was 16,439,196. As regards housing the figure in 1961 was 3,702,725 out of which 3,437,840 or 92.8 per cent were situated in rural areas and only 7.2 per cent or 264,885 in urban areas. There is a remarkable change when we compare the population and housing of 1951 with that of 1961 figures. In 1951, the total number of houses was 3,008,716 which increased to 3,573,863 in 1961, i.e., an increase of 565,147 during the decade. In other words, when the number of houses has increased by 10 per cent, population has increased by 20 per cent from 1951 to 1961. Thus, there was greater congestion and overcrowding in inhabited dwellings. The decadalwise increment of houses in Orissa will give a clear picture.

*Decadewise Increment of Houses in Orissa*

	No. of houses (in lakhs) (2)	Increment (in lakhs) (3)
1951	24.1	0.0
1956	26.4	2.3
1961	28.9	2.5
1966	30.1	1.2
1971	35.7	5.6

It reveals that the rate of increase was highest in 1961 due to implementation of various housing schemes, both in urban and rural areas.

In order to have a clear picture of the

problem of urban housing in Orissa would be better to analyse the position of towns having population of 30,000 and above. Such towns with their population and housing stock are given below :

*No. of houses available for every 100 population in the towns of Orissa having population of 30,000 and above*

Sl. No.	Name of the town	population (1961)	No. of houses in (1961)	No. of houses available for every 100 population
(1)	(2)	(3)	(4)	(5)
1	Cuttack	146,308	27,888	19.0
2	Rourkela	90,287	29,052	32.1
3	Berhampur	76,931	19,696	25.6
4	Puri	60,815	12,980	21.3
5	Sambalpur	38,915	8,626	22.2
6	Bhubaneswar	38,211	8,807	23.0
7	Balasore	33,931	6,958	20.5

The above table reveals that Cuttack city is very much over-crowded. Of the above towns the position in Rourkela, the modern Steel town seems comfortable as there are only 3 persons living in a census house. The reason may be that many of the individuals live without full compliment of family members. Cuttack is over-crowded, as the city has not expanded its housing activities due to geographical barriers. The condition in the rural areas of the State is also equally bad.

A correct estimate of the housing needs of the population vis-a-vis their income-

levels is the first step for evolving a sound housing policy. Owing to lack of adequate data, it is difficult to have a correct estimate of the housing needs of the State. The recommendation of the Committee on Housing, Building and Planning of United Nations is relevant in this context. The Committee underlined "the recognised need for adequate statistical data as a tool for effective projections and programming housing and community facilities for assessing the housing situation in quantitative and qualitative terms and for a periodic review and evaluation of housing trends and developments". In this connection

need for development of basic building and urban development schemes at the national level" was stressed so "the need for close collaboration between housing agencies and agencies responsible for the collection and analysis of statistics".

## HOUSING PROGRAMME

A village housing project scheme has been in operation in Orissa since 1958-59. It is a centrally sponsored scheme and is aimed at providing adequate housing and amenities in selected villages. The Government has set up a Rural Housing Cell. The functions of the Cell are:

- 1) to draw up layout plans for villages;
- 2) to prepare suitable design and specification for houses with due regard to local condition;
- 3) to provide overall technical guidance;
- 4) to give attention in providing roads, drainage, sanitation, water-supply and community facilities; and
- 5) to ensure that money available for the project is properly spent.

By the end of 1967 this scheme is reported to have covered 291 villages, spread over 81 C. D. Blocks.

At the end of the Second Plan it was estimated that 10 lakh houses would be constructed out of an outlay of Rs. 40 lakhs. But achievement was far behind. During Second Plan expenditure incurred totalled 27.99 lakh

rupees or 70 per cent of the outlay. During Third Plan 25.37 lakh rupees was spent and target for 1966-67 and 1967-68 were 2.00 lakh and 3.00 lakh rupees, respectively.

The decreasing outlay in the annual plans under the scheme was responsible for reduction in overall plan outlay.

## HOUSING BOARD

The Housing Board was set up in Orissa with the following objective:—

- (a) to avail the Central and State Housing fund;
- (b) to collect data regarding housing need of different classes of people and to undertake surveys for the purpose;
- (c) to undertake the construction of houses in selected areas according to approved plans;
- (d) to encourage self-help in house building with necessary aids by way of technical assistance, etc. and
- (e) to organise building trades.

The bottleneck in the housing programme can be enumerated below:—

- (i) Delay and difficulties in acquisition and development of land;
- (ii) Lack of comprehensive development (Master Plan) for the towns;
- (iii) Difficulty in formulating schemes in conformity with the standard fixed by the Central Government such as subsidised industrial

housing scheme and slum clearance; and

(iv) absence of co-ordination among various agencies.

In many cases criticism has come from many quarters with regards to selection of site without due regard to place of work of the occupant and distribution of funds among the various schemes without any regard to the actual demand among various income groups. The tendency even to day for urban housing scheme is to select some Government land or to acquire some vacant land wherever it is easily available without much regard to its location and proximity to the main work centre of the town. Scattered development of small housing area does not facilitate establishment of ideal residential neighbourhood, with basic amenities and services like hospital, schools, shopping centres, etc. Hence to avoid all such difficulties it is desirable that all housing activities are brought within frame work of Master Plan prepared for all the towns and implemented by a specialised agency.

The problem of housing shortage can be solved by giving encouragement to private and public housing. Private sector can be encouraged by way of providing loans at lower rate of interest, supply of building material in sufficient quantities and also providing suitable site at reasonable cost. It is also necessary to evolve low cost housing design befitting the climate and

socio-economic condition of the people. The major bottleneck in implementation of housing scheme is the delay and difficulties in acquiring land in urban areas. This can be avoided if the State Government or local bodies acquire land in advance for future use in and around the urban area.

Town Planning plays a vital role with regard to housing problem arising due to unsatisfactory condition of existing houses. To relieve the congestion in a city or town it requires planning in advance. The development of a city or a town is largely governed by the type of building bye-laws.

The housing problem is also closely associated with the Town Planning. If the town is not regulated according to some plan, the growth is likely to be haphazard. The modern theory of Town Planning is based on the broad lines of the requirements of the country or the State as a whole. In brief the aim should be to evolve integrated urban-rural region which would provide stable and diverse employment at reasonable social and economic cost.

Housing is a public necessity like education and public health. In urban areas it is essential for the maintenance of healthy manners and morals of people and is influenced by housing. In view of the vastness of the problem and the financial difficulties of the State Government, the Central Government has to accept a large measure of responsibility in financing housing programmes.

## SELF-RELIANCE IN DEFENCE

Defence industries have been firmly established in the country, the production has crossed Rs. 250 crores annually. It is making sophisticated warships, sonic aircraft and modern tanks, besides meeting the entire needs of small arms and ammunition.

The country is now self-sufficient in small arms, light artillery weapons and ammunition. In the range of medium artillery weapons, the more modern ones are fast replacing the traditional weapons. Larger numbers of Jeeps and Nissan vehicles are being supplied to the Services.

Determined efforts are being made in Ordnance factories to produce new types of arms, ammunition and equipment. Ordnance factories have taken up the challenging task of meeting the varied and complex requirements of the Armed Forces. Side by side, the modernisation of the old factories is in full swing.

Production in the two new factories—engineering factory at Ambajhari and

the filling factory at Chanda has started and they are expected to be fully commissioned later this year. The new vehicles factory, which will increase the present production of vehicles two-fold, is expected to be commissioned next year.

The public sector undertakings, under the Ministry of Defence have backed up defence effort with their striking performance. Their efficient management has resulted in a profit of Rs. 9.67 crores during 1968-69. These undertakings have been showing profits from 1965 onwards. They comprise the Hindustan Aeronautics Ltd., Bharat Electronics, Mazagon Dock Ltd., Goa Shipyard, Garden Reach Workshop, Bharat Earthmovers and Praga Tools. The production in these public sector undertakings is almost double the output in 1966-67. It is expected that the production will touch Rs. 140 crores in 1969-70.

The Bharat Electronics Ltd., has won the pride of place among the electronic factories in the country. It has successfully undertaken the manufacture of a whole

new batch of electronic equipment for the Services and has also taken up the challenging task of developing futuristic equipment, which will replace the existing equipment.

The major task now is to develop and productionise a family of equipments which will replace the trans-receivers, transmitters and radars now under Services. The Bhart Electronics Ltd., is poised in a very confident position to do this. A number of trans-receivers designed on advanced concepts have been developed and are under test and the Radar Division has developed three types of radar.

The production of electronic equipment required by the Air Force and the Navy is being increasingly taken up. Sets required by the Air Force and the Army after what is called 'UHF-isation' are also being developed. It is expected that the expansion of the base for the production of components in the country and the electronic industry in general will contribute to the attainment of self-sufficiency in this field.

### AIRCRAFT & WARSHIPS

In the field of aeronautics, the tasks facing the State-owned Hindustan Aeronautics, Ltd. are even more challenging. While the Bangalore factory is producing the supersonic and other aircraft, the MIG complex at Nasik, Hyderabad and Koraput has been fully established and deliveries are on schedule. In the years ahead, the MIG complex will ensure a rapid increase in the indigenous content of its product.

The Hindustan Aeronautics, Ltd. has also been producing the famous Gnat fighter

aircraft, Alouette-III helicopters, HS transport aircraft, a jet trainer and air-observation post aircraft for the Army.

The aircraft industry and the defence requirements for aircraft have recently been surveyed by the Aeronautics Committee. This Committee has made a number of recommendations which are hoped to guide development of the aircraft industry in India even as the Bhart Committee report has guided the growth of the electronic industry.

The Committee has come to the conclusion that indigenous production of aircraft in suitable quantities is possible, viable and within the competence of Indian industry. It has endorsed the attempts at indigenous development of aircraft and their engines. If sufficient advance planning and proper management effort is brought to bear, it should be possible for the HAL, among other things, to meet the future requirements of ground attack fighters and helicopters by development and licence production.

The second India-made frigate is taking shape, while the first one is being fitted with weapons and electronic equipment. Mazagon Dock Ltd. has at present an order for three frigates. The first frigate, christened INS 'Nilgiri', is expected to be commissioned in the Indian Navy by the end of next year. Indigenous production of a large variety of equipment is being established in the country and an ancillary base for warship construction is being built.

In the first frigate, the indigenous production of 263 items was established. The value of indigenous items in the second



is expected to go up to Rs. 5 crores, a total of Rs. 18 crores spent on it. Items like the propulsion system and radar system will be covered under indigenous production.

Mazagon Dock has also completed a number of jobs for the private sector. In addition to ship repairs which require foreign exchange. Two ocean liners have been taken up for construction for the Shipping Corporation of India.

Her maritime venture under the Government's leadership is also forging ahead. A new diesel engine factory is being established at Ranchi and production is expected to commence later this year. Reach Workshops are now emerging as the leading shipyard in India and the construction of dredgers.

## RESEARCH

The project-oriented Defence Research Organisation is backing up this defence effort with research and development. A thousand scientists are working to modernise the field of defence equipments, engineering, electronics, aerodynamics and missiles, besides a number of other projects useful to the Defence Services.

Among the recent successes are a light anti-aircraft gun, anti tank gun, rocket for aircraft with high explosive warhead and an armoured recovery vehicle for Vijayanta tanks.

The Department of Defence Supplies has had a major impact on the problem of import substitution. The Department handles the procurement of stores, the production of which has still to be established in the domestic trade.

Sample rooms have been set up at Delhi, Bombay, Calcutta and Madras to enable the entrepreneurs to have a look at the items and submit their offers to manufacture different types of stores. Seven technical committees have been set up to scrutinise the offers received, recommend placement of orders and assist the Department of Defence Supplies in technical matters. These committees are guided by a Central Committee.

Due to the special efforts made by the Department, orders for 5,000 items of the value of Rs. 33 crores have been placed with the private sector. Production of some very complex items have been established and bulk supplies have started.

Planned and organised efforts are now being made by the Department of Defence Supplies to harness the resources of the civil trade and the public sector from outside the defence complex to achieve not only import substitution, but also to mobilise the available resources for achieving self-sufficiency. This Department has set for itself a target to achieve import substitution to the extent of Rs. 200 crores during the Fourth Five-Year Plan period.

The country is now venturing in a concerted way into the sophisticated fields of weaponry and their equipment, having achieved a good measure of self-reliance in regard to the traditional items of arms and equipment. India is not looking to foreign sources today to do turn-key jobs in the country. The need to establish indigenous capability for sophisticated items for meeting the requirements of the Defence Services is the sheet anchor of the Government's policy, towards which all efforts are attuned.

# LOOP

## *THE NEW, CONVENIENT AND FREE FAMILY PLANNING METHOD*

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## MEGHALAYA A STATE WITH IN A STATE

Hill State of Meghalaya created by the Assam Reorganisation Act, 1969 of Parliament on December 24, 1969, was inaugurated on April 2, 1970.

The new autonomous State which is the nature of a State within the State of Assam comprises two hill districts of —United Khasi and Jaintia Hills and Garo Hills. Of the remaining hill districts the North Cachar Hills and the Jaintia Hills have opted to remain within Assam State while the option of the Garo Hills have opted to remain within West Bengal. The option of the Jaintia Hills district has to be decided on.

Threatened by East Pakistan in the north and east and Brahmaputra valley on the north and North Cachar and Mikir on the east, the new autonomous State has an area of more than 8,500

square miles. The total population of the two districts comprising the new State is 769,380 according to 1961 census. But the present population of the State is estimated to be nearly 900,000. The hill areas of Assam have a total population of over one and a half million. The population of Meghalaya predominantly consist of the Khasi, Jaintia and Garo tribals. According to 1961 census the density of population per square mile in Garo Hills and Khasi and Jaintia hill districts was 97 and 83 persons respectively.

### RESOURCES

Forests and forest products are the chief resources of the new State. Coal and Limestone are available in considerable quantities both in Garo Hills and Khasi and Jaintia Hills. In addition, sillimanite in purest form, fire clay, abressive, ceramic and clay are also available.

## POLITICAL SET-UP

The new State will have a 38-Member Legislative Assembly. The members of the Assembly have already been provisionally elected by indirect election. The members of the Garo and United Khasi and Jaintia Hills autonomous districts councils, having a present strength of 56 elected representatives constituted the electoral college. In the elections the All Party Hill Leaders Conference secured a majority in the provisional Legislative Assembly and the Party Chairman, Captain Williamson Sangma, has been designated the Chief Minister of the State. The new State will have control of 61 out of 65 subjects in the State list.

So far as Meghalaya areas are concerned the Government and Legislature of Assam

will have jurisdiction in respect only certain subjects of common importance including State highways, industries, and hydroelectric projects. While the overall responsibility for law and order in Meghalaya will remain with the Assam Government, the autonomous State will have its own police and town police. It will also have enforcement of power so far as subjects in its State list are concerned. The Assam and Meghalaya States will have concurrent powers requiring co-ordination by both State Assemblies in subjects including acquisition of lands.

The new State will have a common Governor and a common High Court with Assam. Shillong, the present Capital of Assam and a popular hill station will be the common capital of both the States.

(From Page 16)

The limestone deposit in Bonai (Birmitrapur area) for the Bonai Steel Plant is within a distance of 50 miles and Manganese is also available from nearby source.

- (2) Both Bonai and Nayagarh have no difficulty for water supply as Bonai Steel Plant will be fed by Brahmani and the Nayagarh Steel Plant will be fed from Baitarani.
- (3) Large acreage of levelled land is available for the installation of steel plants close to the rail-

way line already developed in both the areas.

- (4) After the realisation of Talcher-Bimlagarh railway line, Bonai will be within a distance of 20 miles from Paradip Port.
- (5) Talcher coal which is blended with the coal from Jharia can easily be transported to Bonai after the realisation of Talcher-Bimlagarh railway line. Jharia coal can be easily transported to Bonai in wagons carrying iron ore from Kiriburu area.

# IRRIGATION AND POWER POTENTIAL

Additional irrigation potential of 2.1 million acres was created and 1.4 million acres added to the installed power generation capacity during 1969-70. Rural electrification, energisation of pumping sets and tubewells and flood control projects were also undertaken on a regular basis. These facts have been highlighted in the Annual Report for 1969-70 of the Ministry of Irrigation & Power for 1970.

Of 545 major and medium irrigation projects undertaken since the beginning of the Five-Year Plan, 325 projects have been completed. Some of the projects under construction have also started yielding partial benefits and an additional irrigation potential of 24 million acres in major and medium irrigation projects has been created since the commencement of the First Plan. With the completion

of the projects in hand, another 22.5 million acres of irrigation potential will be created. Even so, at the beginning of the Fourth Plan only a third of the usable annual flow is being utilised. While the emphasis in the Fourth Plan will be on the speedy completion of the continuing projects, a few new projects would be taken up to maintain the tempo of irrigation development.

An Irrigation Commission was set up in April 1969, to review the development of irrigation in the country and to report on the future programmes for integrated development of surface and ground-water resources for maximising agricultural production. The report of the Commission is expected by April 1971.

Inter-State disputes concerning the rivers Krishna, Godavari and Narmada

Democracy means tolerance, tolerance not merely of those who agree with us, but of those who do not agree with us.

—NEHRU

could not be settled through negotiations. Three Tribunals were, therefore, constituted under the Inter-State Water Disputes Act, 1956 (as amended in 1968) to adjudicate on these disputes—two in April 1969, for the Krishna and the Godavari and the other in October 1969, for the Narmada. The adjudication proceedings are in progress.

### POWER DEVELOPMENT

The growth of agricultural and industrial production is closely dependent on the availability of power supply and hence, the highest priority has to be given to meet the load demands based on sound forward Planning. Power development over the last two decades has been noteworthy but shortages continue to persist in some regions. By the end of 1969-70, the installed capacity would touch 15.5 million K.W. as against the installed capacity of 2.3 million K. W. at the commencement of the First Plan—thus achieving more than a six-fold increase. However, we have still a long way to go before we reach a reasonable level of *per capita* consumption of power. The load growth is being reviewed continuously and steps are being taken to establish an installed capacity of at least 22 million K.W. and if possible more by 1973-74.

Rural Electrification has received special attention, as electricity supply to rural areas meets the urgent needs for stepping up the

utilisation of ground water resources in agriculture and for agro-based industries. The number of irrigation sets energised increased from 18,700 in 1951 to about 1.2 lakhs by the end of March 1969. In the Fourth Plan period, it is expected that about 12.5 lakh additional pumping sets would be energised—of these 7.5 lakh pumping sets would be financed through Plan outlays and about 5 lakh pumping sets through loan assistance to be provided by the Rural Electrification Corporation which has been set up in the public sector. The main objective of the Corporation is to provide financial assistance outside the State Plan ceilings for rural electrification schemes, including assistance on concessional terms to rural electric co-operatives. The Corporation will have, at its disposal Rs. 150 crores during the Fourth Plan.

The number of villages electrified as on September 30, 1969 stood at 73,554, representing about 13 per cent of the total number of villages in the country. The population benefited by rural electrification up to the end of September 1969, was 100 million comprising about 31 per cent of the total rural population in the country. Special efforts are being made to mobilise resources and accelerate the programme.

An Expert Committee has been set up by the Government of India to examine the measures to achieve utmost expedition

Democracy demands discipline, tolerance and mutual regard. Freedom demands respect for freedom of others. In a democracy changes are made by mutual discussion and persuasion and not by violent means. If a Government has no popular support, another Government which commands that popular support takes its place.

—NEHRU

construction of power projects, better  
 tion of existing generating facilities.  
 ng of future schemes to utilise the  
 economic energy resources in the  
 s and reduction in transmission  
 This Committee is also availing  
 of the assistance of foreign experts in  
 lds of power survey, power system  
 ion, manufacture and operation of  
 s and generators.

e attention is being given to trans-  
 n and distribution schemes and for  
 etion of regional grids for the inte-  
 operation of power systems in  
 egion. Inter-regional tie lines are  
 roposed to be constructed for evol-  
 a All-India grid.

### FLOOD CONTROL

year 1969 witnessed floods of severe  
 tude causing a total damage of about  
 3 crores to property and crops. Parts  
 am, Uttar Pradesh, Bihar, West  
 l and Rajasthan were the worst hit.  
 re cyclone hit the coastal areas of  
 a Pradesh in May 1969, and then  
 in November 1969, causing immense  
 ge. The total damage was over  
 0 crores.

ing the year under report, a Central  
 Forecasting Organisation was esta-  
 d in the Central Water and Power  
 mission with centres at Gauhati,  
 ore, Surat, Patna, Varanasi and  
 iguri. Of these, the flood forecasting

work by Centres at Patna and Surat was  
 particularly useful and the forecasts issued  
 by these centres assisted the States in  
 making timely arrangements for relief and  
 evacuation operations. A chain of Radar  
 Stations is to be set up on the eastern coast  
 of India to facilitate issue of timely warn-  
 ings to the areas which are frequently hit  
 by cyclone. One such Radar has already  
 been set up and 5 more are to be installed  
 in the course of next three years.

The periodic ravages caused by the  
 floods in the Brahmaputra and its tribu-  
 taries have been of serious concern to the  
 Government of India as well as the Govern-  
 ment of Assam. The Government of India  
 have proposed the setting up of a Brahma-  
 putra Flood Control Board to evolve and  
 implement a comprehensive plan of flood  
 control.

### WATER AND POWER DEVELOPMENT CONSULTANCY SERVICES (INDIA) LTD.

As an important step in making India's  
 expertise in the field of irrigation and  
 power available to developing countries,  
 a Consultancy Organisation by the name of  
 Water and Power Development Consul-  
 tancy Services (India), Ltd., has been set  
 up in the public sector. WAPCOS which  
 was set up in June 1969, has registered  
 itself with U. N. agencies, Asian Develop-  
 ment Bank, etc., so hat these agencies  
 could consider inviting WAPCOS to bid for

A University stands for humanism, for tolerance, for reason, for progress, for the  
 adventure of ideas and for the search for truth. It stands for the onward march of the  
 human race towards even higher objectives.

—NEHRU

investigation, planning, design, consultancy and other similar work in respect of projects assisted by them.

### INDUS WATERS TREATY

The Indus Waters Treaty, 1960 concluded between the Government of India and the Government of Pakistan provided *inter alia* (i) for a Transition Period during which, to the extent specified in the Treaty, India was to make deliveries to Pakistan from the Eastern Rivers and (ii) for making a fixed contribution of Pounds Sterling 62,060,000, in ten equal instalments, towards the part cost of the system of works which *inter alia* will accomplish replacement, from the Western Rivers and other sources of water supplies for irrigation channels in Pakistan which, on August 15, 1947, were dependent on water supplies from the Eastern Rivers. The Transition Period which was for a period of 10 years from April 1, 1960, would expire on March 31, 1970.\* With the ending of this period, all the waters of the Eastern Rivers (Ravi, Beas and Sutlej) would be available for unrestricted use in India. The tenth and the last instalment of India's contribution was paid on October 31, 1969.

### FARAKKA BARRAGE PROJECT

The construction of the Farakka Barrage Project, so essential for the preservation of the Port of Calcutta, has made satisfactory progress. The work on all the 109 bays of the Barrage has been completed except the raising of the piers. The Road Bridge of the Barrage has been completed for 50% from the Left Bank. Efforts are being made to accelerate the work on the canal and other ancillary works to synchronise with the completion of the Barrage.

### INDO-PAK TALKS ON EASTERN RIVERS

The Fourth Secretary level meeting on Eastern Rivers was held at Islamabad from February 24 to March 2, 1970. Detailed discussions took place regarding the proposals on the Padma proposed by Pakistan. Indian and Pakistan Projects on the Eastern Rivers, the issue relating to the Karnafulli Project in East Pakistan, and co-operative measures in regards to river training works on the rivers in the eastern region, were also discussed. It has been agreed that a Secretary level meeting would be held in New Delhi within four months for carrying forward the discussions.

\*The Transition Period has since ended.

I am proud of India, not only because of her magnificent heritage but also of her remarkable capacity to add to it by keeping the doors and windows of her mind and spirit open to fresh and invigorating winds from distant lands.

—NEHRU



# Technical Education and Employment Opportunities

second half of the Twentieth century has confronted India with a new situation. She has been drawn into the vortex of the Scientific Revolution in Science and, by inference, into the technological revolution that has changed the face of the world and expanded industrial development. There is at the same time an acute shortage of technical education and a difficulty in employing her own highly-qualified engineering graduates.

## THE PROBLEM

Since 1947, when our country attained independence, there has been an almost phenomenal expansion of technical education at all levels. In 1947, we had only 100 engineering colleges with an admission capacity of about 3,000 students each

year. There were only 53 polytechnics with an admission capacity of about 3,700 students. Today, we have 120 engineering institutions at the first degree level which have an admission capacity of 25,000 students each year. The number of polytechnics has leaped to nearly 300 with an admission capacity of about 50,000 students each year. In 1947, we had hardly any facilities for advanced studies and research in engineering. Today, in addition to the Institutes of Technology and the Institute of Science, Bangalore, thirty centres have been developed for post-graduate studies and research in a wide range of engineering subject-fields. Provision exists for the training of 4,000 students at the post-graduate and research

Jawaharlal Nehru was one of the greatest figures of our generation, an outstanding Statesman whose services to the cause of human freedom are unforgettable. As a fighter for freedom he was illustrious, as a maker of modern India his services were unparalleled.

Dr. S. RADHAKRISHNAN

level. This is a record of which any country could be justifiably proud.

Unfortunately, we have today to face the problem of unemployment among many of our qualified engineers. According to a detailed study recently carried out, the total stock of our engineering manpower in 1965 was 2,29,300 of whom only about 7 per cent were not gainfully employed. The stock rose by 1968 to 3,32,000 and unemployed engineering graduates and diploma-holders shot up to 17 per cent. This was the period of our major recession. Today, we have about 10,000 engineering graduates and 46,000 diploma-holders who are still looking round for suitable work.

#### WHAT HAS BEEN DONE

Obviously, the problem has to be tackled on a priority basis. Fortunately, something has already been done. Last year, the Central Government announced a series of special measures to increase demand. These included the employment of engineers for preparatory investigations for irrigation and power projects; road transport development soil surveys etc. employment of engineers for the operation and maintenance of thermal power stations; employment of engineers in vacant posts in several organisations including Short Service Commissions in the Defence Services; development of Indian Consultancy

Services; the employment of engineers private contractors; and the formation of co-operatives by engineers to undertake construction work and to render services in rural areas for agricultural machinery.

The State Governments, too, recognise the urgent need for such decisions and are taking vigorous steps to help engineers through co-operatives and set up small and medium scale industries. Through their Industrial Development Corporations, the State Governments have helped engineers to set up small and middle-sized industries of their own. The Gujarat Industrial Corporation gives to each engineer-entrepreneur fixed assets like land and factories on easy terms. The Government of Maharashtra has a scheme to help employ 3,000 engineers on various projects.

It is too early to assess the impact of these measures but over 22,000 engineering graduates and diploma-holders are reported to have secured employment in 1968.

#### TARGET FOR TODAY

The question for 1970 is : what can we do quickly and effectively to meet this awkward position? To consider first what to do in the short-term with the quality engineers. The Madurai Polytechnic in Tamil Nadu has allowed the use of workshop equipment and machinery

I am not wedded to any dogma or religion but I do believe in the innate spirituality of human beings. I do believe in the innate dignity of the individual. I do believe that every individual should be given equal opportunity. I believe as an ideal in an egalitarian society with no great differences. I dislike the vulgarity of the rich as much as the poverty of the poor.

NEHRU

ed diploma-holders for production whenever this is not needed for work. Job orders are secured l industry for such products as nuts, making fastners and compo- ss arms for electric polls and ictural fabrications. The diploma- ctually execute these orders under nce of polytechnic staff. Then, ipal helps diploma-holders to get 's. Raw-materials are provided icts produced are sold to industrial ions in the city. About 20 holders have done this productive d earned anything between eight rupees net per day, that is, after e cost of materials, hire charges nery, transport of finished goods 1.

: Participants under the scheme own self-confident and will be able p small workshops or repair shops own to become self-employed. s no reason why this experiment be extended to all our polytechnics ineering colleges in a big way. We lise workshops, laboratory drawings e faculty of technical institutions in dustrial movement to re-vitalise the nic life of India.

uch for the short-term. What about ng-term in which we continue to ce engineering graduates that the

economy has not been able to absorb? Apart from containing admissions to engi- neering colleges, we must here and now- equip our students with the self-confidence and resourcefulness born of the skills of entrepreneurship, so that they can start small industrial units of their own. This means that we have to reorient our courses, survey the industrial potential of specific areas and help students to exploit this potential.

### THE NEXT STEP

The Fourth Five-Year Plan that we have formulated reflects our concern about employment opportunities. So far, we have been concerned with establishing new institutions and expanding old ones. Today, we are compelled to concentrate on the improvement of quality.

What is the full implication of a revolu- tion in quality? The first essential require- ment that any country can have for quality improvement is the improvement of the Teacher. In the last three Five-Year Plans, there has, as I said earlier, been a pheno- menal expansion of technical education. We tried to equip staff to deal with its expanding student population both at colleges of engineering and in polytechnics. But there is still an acute shortage of staff on colleges of engineering (16.4 per cent in 1969) and in polytechnics (about 15 per cent).

Pandit Nehru had no hatred, prejudice or enmity against any one. He placed before the country the ideal of Poorna Swaraj. He wanted India and Indians to be completely independent and did not want the sovereignty of India to be hampered in any way. He put before the citizens of India the ideal of absolute freedom which is the message of the Gita also.

VINOBA BHAVE

Faculty development is a continuous process that must provide for a wide range of opportunities for the serving teacher to improve his knowledge and professional competence. To do this, we started in 1963-64, Summer Institutes for engineering teachers. Every year, we run 30 of these Institutes with an average enrolment of 1,000 teachers. The Summer Institutes have done substantial work, but by themselves they cannot help to meet all the demands of faculty development. We have, therefore, to organise a carefully planned scheme of participation in field work for serving teachers at selected industrial organisations. To these centres, we must bring teachers from polytechnics and engineering colleges for a period of a year or two depending upon the needs of each individual.

For many years, we have stressed the need for technical education and industry to co-operate closely. We have urged that experts from industry should work as part-time lecturers and that our faculty should go out into industry to give a practical bias to their expertise. One of the main criticisms about our polytechnics, for instance, is that they are not sufficiently practical in their training programmes. The polytechnics are engaged in producing the middle-level manpower that is necessary for a wide range of professional duties. The technician that the polytechnic produces has to act as liaison between the engineer and the skilled craftsman to interpret the engineer's plans, to determine the type of production and to choose the tools and machines best suited to the job. The training of a technician is a long process that takes place partly in a technical institute and partly in industry. The

education of our polytechnics must be cross-fertilised with practical experience from industry so as to expose the technician trainee to actual working methods and techniques and skills relevant to his specialisation. All this implies a re-evaluation in polytechnic education, so that it can relate theory to practice, teaching to industrial work.

### NEW RATIOS

For this is our immediate problem. Though we have 120 engineering colleges and 300 polytechnics, the proportion of engineer to technician is still 1 : 1. In developing countries, the proportion is 1 : 3 or 4. This means that we are employing engineering graduates to do jobs of technicians. A recent survey showed that over 40 per cent of technician jobs in India are at present being done by graduate engineers, manifestly a waste of manpower. We have to correct this imbalance. We have to move towards a reasonable ratio of one engineer to three or four technician in the course of the next five years.

How shall we go about this vital change? First : Polytechnics and industry must be near each other and must co-operate to organise and conduct sandwich courses to train different types of technicians that industry needs. Next : Industry must accept as its own responsibility the organisation and supervision of apprenticeship training for polytechnic students. Third : Technical Institutions must recognise that unless practical training becomes an integral part of the total educational process, we cannot hope to produce the kind of technician that industry needs.

TIME OUR MASTER

an important factor in a develop-  
 ty. We have to do in five years  
 ers have done in 50 years. Yet  
 enge is salutary and if we can rise  
 it may possibly be our  
 . We have risen to it in  
 re the Green Revolution. The  
 Ministry of Agriculture has a  
 or opening about 2,000 servicing  
 a rural areas that will, incidentally,  
 loyment to a large number of  
 ; and diploma-holders. I have no  
 at if quick advantage is taken of  
 a Revolution among the peasantry  
 ntial number of engineers and  
 holders can be suitably employed.  
 has been done in agriculture by  
 n revolution can also be done in  
 especially in the realm of small  
 s and in an extensive manner over  
 of the country, provided we go in  
 ld and imaginative programme of  
 orks in the rural sector. Rural  
 ulverts and bridges, rural school  
 programmes (a large number of  
 many schools today are either  
 buildings or are otherwise housed  
 unsatisfactory conditions), low  
 using in urban areas accompanied  
 clearance, and other construction  
 m be undertaken on a planned and  
 basis in the next four years. The  
 ic situation is favourable for  
 ng such a programme. Food  
 is growing ; there is surplus capacity  
 ent ; it is not difficult to increase the  
 of other materials needed for  
 ction and road building and techni-  
 ls are available in the shape of  
 loyed engineers, diploma-holders  
 her educated supervisory and auxi-  
 personnel. The threat of inflation,  
 is always held out against a big  
 works programme, is much less

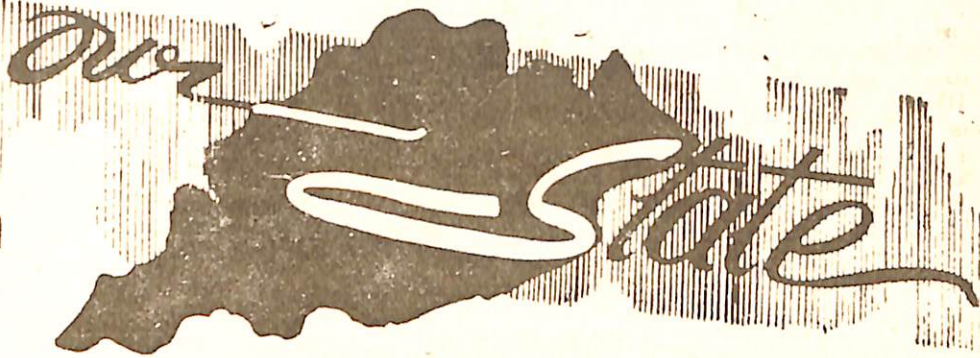
today than it was two or three years ago.  
 If we harness the technical manpower  
 resources of our country and provide the  
 necessary capital and other facilities, we  
 will have ushered in a Revolution in  
 Industry parallel to the Green Revolution.

It is good sense to recognise that jobs  
 cannot automatically be created for engi-  
 neers. They can emerge only as a link  
 in the chain of economic development.  
 We have, therefore, first, to increase  
 productivity, because only through  
 productivity will we have a surplus for  
 reinvestment. As increasing investments  
 are made, increasing employment oppor-  
 tunities are generated. The primary task  
 of our engineers and technicians is to  
 accelerate the pace of production. In this  
 enterprise the Universities and Institutes of  
 Technology can find opportunities of  
 valuable experience both for their teachers  
 and students, and for the people of India.  
 By their initiative and example, they can  
 break for ever the isolation that tends to  
 divide learning from the lives of the  
 masses of the people of India. If our  
 Universities can function as centres where  
 students of merit may go to learn, not  
 merely the theory of engineering but its  
 full psychological implication, namely, our  
 social commitment that will transform our  
 society, they will have served us in the  
 age of science.

Perhaps there are greener pastures in  
 more affluent countries of the world but  
 I know of no country that has become rich  
 without intensive work of her own people  
 to enable her to grow to full stature. With  
 our Universities and our Institutes of  
 Technology and with Industry, rest the  
 solution through a co-operative and sus-  
 tained endeavour, to make better engineers  
 of our engineers and to provide them with  
 suitable employment.

## CALENDAR OF EVENTS—ORISSA

- 1-4-1970 ... Orissa Formation Day was observed throughout the State
- 3-4-1970 ... Orissa Fisheries Development Corporation wound up; announcement by the Minister for Fisheries in the State Assembly.
- A bill to legalise abolition of land revenue was introduced in the State Assembly.
- 6-4-1970 ... The Orissa Cess Amendment Bill and Electricity Duty Amendment Bill passed in the Orissa Assembly.
- 7-4-1970 ... World Health Day observed
- 8-4-1970 ... Orissa Assembly adjourned *sine die*  
Orissa Assembly adopts an unanimous resolution describing the Andhra Assembly claims for certain areas of Orissa as unfortunate.
- 10-4-1970 ... Indoor Patients' Department in the Homoeopathic Hospital at Bhubaneswar was inaugurated by Shri Murari Prasad Mishra, Minister for Health and Family Planning.  
Shri R. N. Singh Deo, Chief Minister inaugurated the seminar organised by the Fertiliser Association of India at Bhubaneswar.
- 14-4-1970 ... Bisuba Milana at Cuttack
- 16-4-1970 ... Foundation stone of the Blood Bank building was laid by the Chief Minister Shri R. N. Singh Deo at Dhenkanal.
- 17-4-1970 ... Location of steel plant at Vizagpatnam Salem and Hospital announced. This caused widespread discontent in political and administrative circles in Orissa as the claim for location of steel plant at Bonai and Nayagarh was not considered.
- 18-4-1970 ... S. C. B. Medical College, Cuttack celebrated Silver Jubilee.  
Labour Seminar was inaugurated by Shri Rajballabh Mishra, Minister for Labour at Sunabeda.
- 19-4-1970 ... The first Rice Mill set up in the co-operative sector was commissioned at Balasore.
- 29-4-1970 ... Orissa Cabinet decides to allow Central rates of dearness allowance to the State Government employees.



## JUVENILE DELINQUENCY

Study undertaken by the Juvenile Delinquency Bureau of the State Police from 1959 to 1969 reveals that 387 juvenile delinquents were arrested and dealt with by the Police during the period in Orissa. The number for 1969, was highest being 802 and lowest 23 in 1959. Out of 387 delinquents, 100 were sent up to face trial and remain-ers were released for want of sufficient evidence. Out of 365 delinquents sent up for trial 271 were convicted, 62 acquitted and remaining 32 cases are subjudice. This study reveals that 94.6 per cent of the juveniles arrested by the Police were sent up in specifications and out of them 81.6 per cent were convicted. The study further reveals that a large group of juvenile delinquents, i. e., 100 members belong to the age-group of 16 to 17 years, 119 persons to 12—16 age-group and 102 belong to 7—12 years. It has been ascertained that delinquency among girls is negligible, i. e., there were only 8 girls out of 387 juvenile criminals.

Analysis of types of delinquency made in the report indicate that thieving has taken

the first place accounting for 63.4 per cent and out of these incidents pick-pocketing was very high. Besides thieving, juvenile delinquents are involved in violation of law; stone throwing, protest demonstrations and black-marketing of cinema tickets, etc.

A study of the causes of delinquency highlights the influence of unhappy family life, quarreling parents, maltreatment of child, negligence and indifference by the parents, broken homes due to death, divorce or separation of the parents, etc., on children produce delinquents. Besides treatment of the teachers in schools and other environmental influence also attribute to a great extent.

While emphasising the need for proper and adequate child-parent relationship, the study suggests introduction of Children's Act, and Juvenile Courts, establishment of reformation schools, remand homes, after care centres,; Juvenile guidance clinics and for providing institutional treatment of the destitute and delinquents for children.

## SETTLEMENT OF JAGIR LANDS

It has come to the notice of Government that some jagirholders of the ex-State of Athmallik comprised in the district of Dhenkanal have not been able to apply for settlement of their jagir lands with them on ryoti basis within the fixed time, i. e., within December 4, 1969 in response to the Press Note, dated July 15, 1969.

With a view to giving an opportunity to all the Jagirdars to apply for settlement of

their jagir lands with them, Government have after careful consideration been asked to extend the date fixed in the cited press note for filing of applications till the end of May, 1970.

The Jagirdars desirous of availing themselves of this opportunity may apply to the Collector, Dhenkanal or to any Revenue Officer authorised by the Collector in this behalf on or before May 31, 1970.

## INCREASED REVENUE THROUGH DISTILLERY SPIRIT

A monthly revenue of about Rs. 40 thousand is now expected for the State Exchequer with the introduction of distillery spirit this year in the Parlakhemundi Subdivision of Ganjam district adjoining Orissa-Andhra border. Supply of spirit for the purpose from the existing distillery at Rayagada in the Koraput district will be an additional advantage.

The out-still shops in Orissa, on the other hand, paid Rs. 3 crores, 27 lakhs and 91 thousand to the Government in shape of

licence fees during the current financial year. This accounts for an increase of Rs. 18 lakhs, 68 thousands over the year's receipts which stood at Rs. 3 crores, 9 lakhs 23 thousands.

Among the districts, Koraput tops the list having paid the maximum revenue from out-still shops. As against Rs. 52 lakhs and 10 thousands collected by way of licence fees from this district during the last year (1969-70), the current year's receipts have increased to Rs. lakhs 57 thousands.

## SAINIK SCHOOL BETTERS PERFORMANCES

The Sainik School, Bhubaneswar, has recorded a remarkable achievement during 1969 with 95.7 per cent of the students coming out successful in the All-India Higher Secondary Examination of the year. Of the 46 students who appeared in this examination 44 have come out successful with 9 in 1st Division and 34 in 2nd Division.

The Sainik School, Bhubaneswar, was established in the year 1962 and 6 batches

have passed out from this institution since 1964. The school has made a substantial contribution to the increasing representation of the officers cadre in the Armed Forces. In the All-India examinations, the students of Bhubaneswar Sainik School have shown excellent performances and 45 boys have joined the National Defence Academy for career in the Armed Forces.





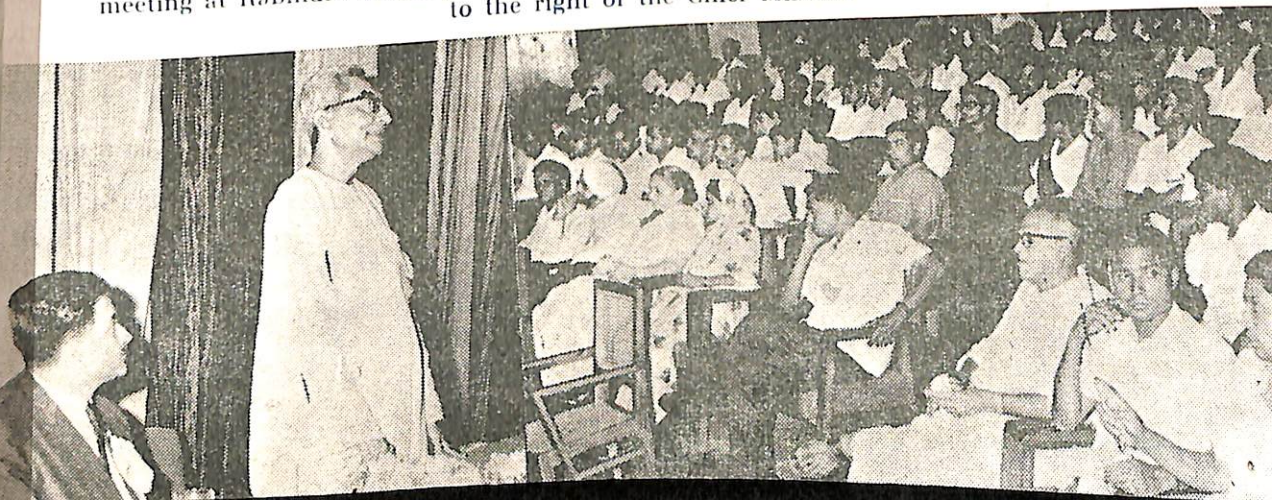
N. Singh Deo, Chief Minister, Orissa, was the Chief Guest in the annual prize ceremony of the N. A. C. girls High school in Old Bhubaneswar. The girls staged a cultural programme of open air opera on "Parsuram Matruhalya" written by late Baisnava Pani

Photo shows a scene of the opera, keenly watched by Chief Minister of Orissa on 30-3-70

## NEWS IN PICTURES

Dr. Hanneman's Birth Day was observed at Bhubaneswar on April 10, 1970

Photo shows the Chief Minister Shri R. N. Singh Deo speaking on the occasion at a public meeting at Rabindra Mandap. Dr. Bewan Harishchanda, who was the Chief guest, is seen to the right of the Chief Minister



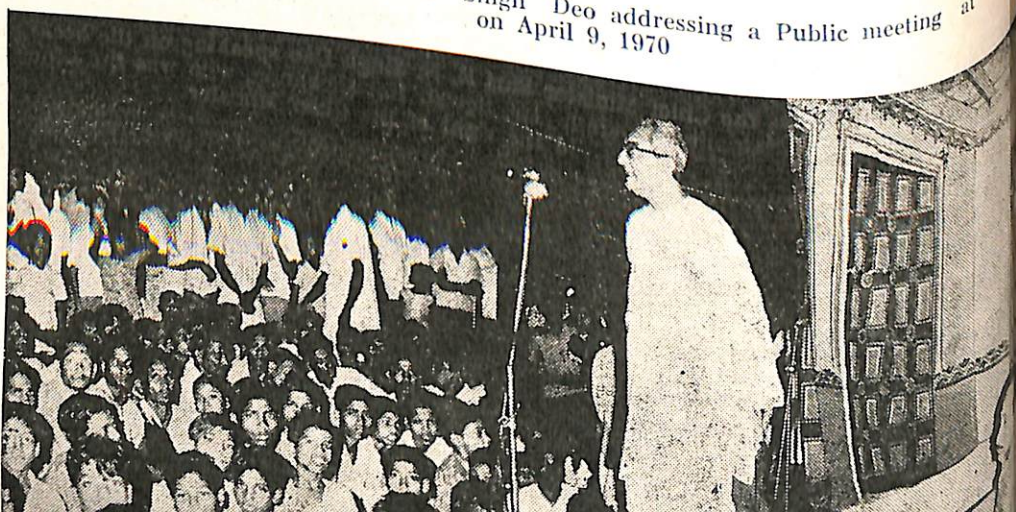


The annual State level function of the Small Savings Scheme was held at Rabindra Mandap on March 27, 1970

Photo shows the Chief Minister Shri R. N. Singh Deo awarding the shield to Shri S. Sundar Baian, I. A. S., Collector Sundargarh for highest collections under Savings Securities in Sundargarh district

## NEWS IN PICTURES

The Chief Minister Shri R. N. Singh Deo addressing a Public meeting at Raipur on April 9, 1970

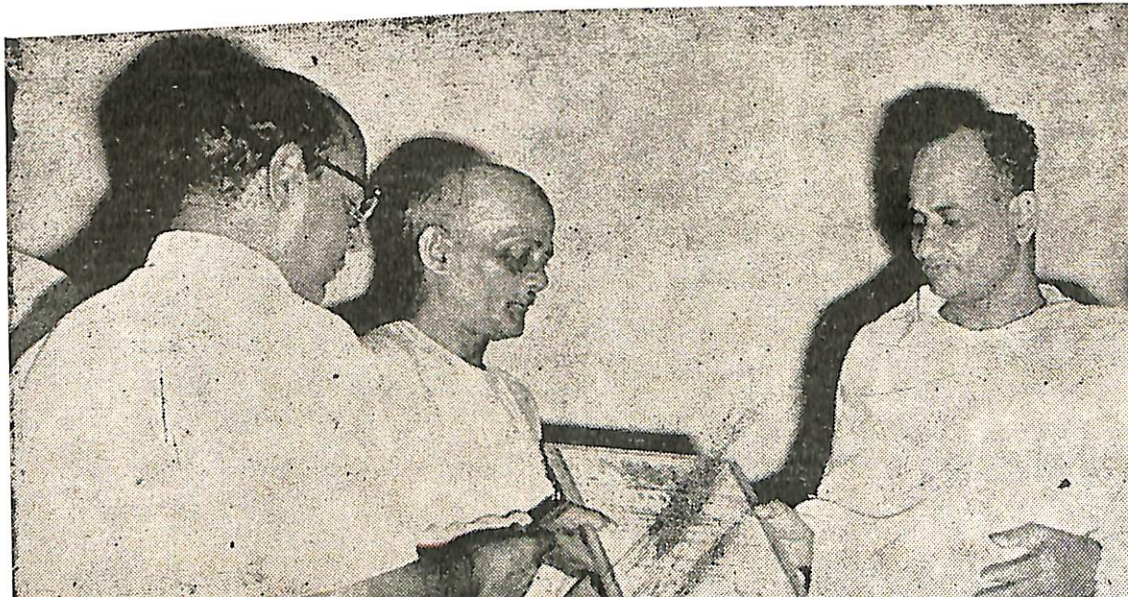




Handloom Exhibition was opened by the Cultural Affairs Minister, Nityananda Mohapatra at Bhubaneswar on April 5, 1970. The Minister is seen examining a handloom pattern

## NEWS IN PICTURES

Shri Raghunath Singh Samant, grand son of Mahamahopadhyaya Samanta Chandrasekhar, is presenting the 'Sanand' to Shri Nityananda Mohapatra, Minister for Cultural Affairs at a function held at Bhubaneswar on April 7, 1970 for preservation in the State Museum





The 4th General Body Conference of the Orissa Secretariat and Heads of Departments Typist's Association was held at Rabindra Mandap Bhubaneswar on April 19, 1970. Shri Nityanand Mohapatra, Minister for Supply and Cultural Affairs inaugurated the conference

### NEWS IN PICTURES

Shri Nityananda Mohapatra, Minister for Supplies and Cultural Affairs is seen here beating the drum for second draw of the State Lottery on 15 April, 1970 at Bhubaneswar



## POLICE AWARD FOR EXEMPLARY PUBLIC SERVICE



Rames Chandra Batra, Reserve  
 Constable of Police of Kalahandi district,  
 Nabandhu Kabi, Constable, Special  
 Constable of Berhampur and Shri Banchha  
 Constable of Ganjam district were  
 awarded with one wrist-watch each on the  
 Orissa Police Formation Day in reco-

gnition of exemplary devotion to duty,  
 determination and courage displayed by  
 them in the past to save the life of others.  
 Shri B. B. Misra, I.P., Inspector-General  
 of Police, presented the awards at the  
 ceremonial Police Parade held on the 1st  
 April 1970 at Cuttack.

## NEW RATES OF DEARNESS ALLOWANCE FOR STATE GOVERNMENT EMPLOYEES

Pay Ranges (Rs.)	Dearness Allowance (Rs.)
Below 110	71
110 and above but below 150	98
150 and above but below 210	122
210 and above but below 400	146
400 and above but below 450	160
450 and above but below 499	164
Above 499 but below 543	...
543 and above but up to 1,000	Amount by which pay falls short of Rs. 663.
1,001—2,250	120
	100

The above rates of Dearness Allowance will be admissible with effect from the 1st April 1969.

The arrears of Dearness Allowance on account of this increase for the period from the 1st April 1969 to the 30th April 1970 will be paid to the employees by transfer to their Provident Fund Account and not in cash.

These revised rates of Dearness Allowance will also be applicable to the staff borne on the work-charged and contingent paid establishments of Government drawing pay in the regular scales of pay under different Departments of Government.

Orders regarding the revised rates of Dearness Allowance of (i) Primary School teachers, (ii) employees of aided educational institutions and (iii) employees of local bodies will be issued separately.



Shri H. A. L. Mishra, Minister for Labour & Employment is seen addressing a Labour seminar at Sunabeda on April 18, 1970

Shri G. N. Das, Secretary, Labour, Government of Orissa, Shri U. N. Sahu, State Labour Commissioner and Shri A. N. Tiwari, G. A. O., H. A. L., are also seen in the Photograph

## NEWS IN PICTURES

The Seminar on Modern Concepts in Building was inaugurated by the Industries Minister Shri Harihar Patel at Rabindra Mandap, Bhubaneswar on April 5, 1970. The Minister is seen delivering his inaugural address





Health Minister Shri Murari Prasad Mishra opened the 24-bedded Homoeopathic Hospital at Bhubaneswar on April 10, 1970

## NEWS IN PICTURES

Union Minister of State for Health and Works Shri B. S. Murty who arrived at Bhubaneswar on April 18, 1970 to attend the Silver Jubilee celebration of the Sriram Chandra Ranj Medical College, Cuttack, was received at the airport by the State Health Minister Shri Murari Prasad Mishra and other high officials







Chhau Dance festival at Baripada on April  
13th and 14th, 1970



Chhau



Printed at  
Government  
Madhupatna.

Minister Shri R. N. Singh Deo is laying the foundation stone of the Blood Bank Building, Dhenkanal on 15-4-70

Shri Banamali Patnaik, Minister, Education seen inaugurating the Gandhi Dal at Rourkela Station on March 30, 1970. In the picture are, Shri Pitamber, Councillor, Shrimati Ava Gandhi and Shri S. Sunderarajan, Collector, Sundergarh.

