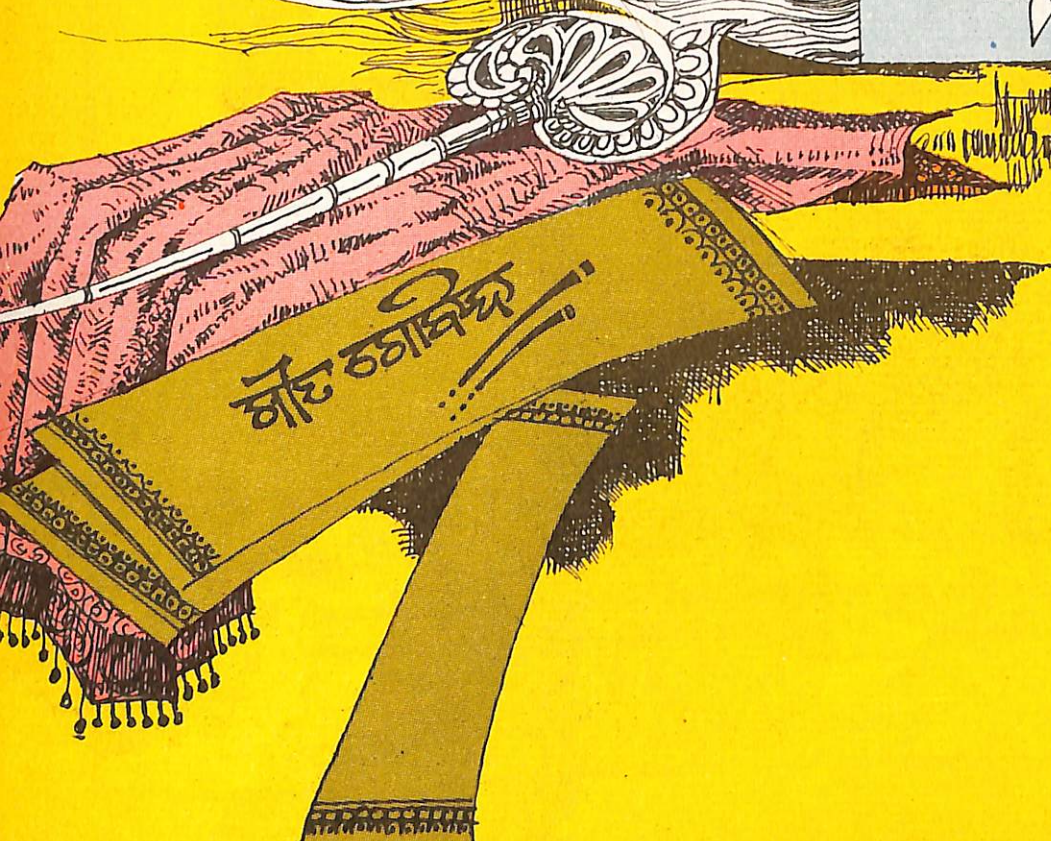


OR

1996

ORISSA REVIEW

May-June, 1996





Shri Janaki Ballav Patnaik, Chief Minister presiding over a special meeting on Sarbadharma Samanvaya at Unit-I High School, Bhubaneswar on 12-3-96 organised by Shanti & Sadbhavana Committee.



The Samkirtan party leaves the Ananta Vasudev Temple for Srikshetra, Puri on the Akshaya Tritiya day, i.e. 20-4-96 to commemorate the Jayanti of Mahakavi Jayadeva.

ORISSA REVIEW

Vol. LII No. 10 & 11
May-June, 1996

SURASEN JENA
Director, I. & P. R.

Editorial Board

RAJ KISHORE MISHRA
Editor

PRAHARAJ S. NANDA
Assistant Editor

BIBHU CHANDRA MISHRA
Editorial Assistance

Cover Design
Pradyumna Dash

The Orissa Review aims at disseminating knowledge and information concerning Orissa's socio-economic development, art and culture. Views, records, statistics and information published in the Orissa Review are not necessarily those of the Government of Orissa.

Published by the Information & Public Relations Department, Government of Orissa, Bhubaneswar-751001 and Printed at Orissa Government Press, Cuttack-753010.

Two Rupees/Copy
Twenty Rupees/Yearly

In this issue...

- Backdrop of Gitagovinda of Jayadeva**
Dr. Kailash Chandra Dash 1
- Jayadev and his love classic—
'The Geet Govind'**
Satyanarayan Mohapatra 6
- Small-Scale Industries in Orissa**
Dr. S. N. Tripathy 9
- Status of Women in Orissa : Need for
comprehensive approach**
Rama Chandra Parida 11
- Socio-economic conditions of senior citizens
in Orissa : Some highlights**
B. K. Tripathy 13
- Cult of Varahi in Orissa**
Dr. H. C. Das 16
- Empowerment of Women in Orissa**
Jyotirmati Samantaray 21
- Sambalpur—A place of tourist impact**
Basant Kumar Mohanti 23
- Economic liberalisation and industrial
development of Orissa**
Prof. Pramod K. Sahu 26
- South Eastern Railway's role in promoting
tourism in Orissa**
K. S. Sahoo 29
- A study of housing finance for the
urban sector in Orissa**
Subas Ranjan Barik 32
- Effects of storage conditions on
Rice Protein**
Dr. Ramesh Chandra Parida 36
- Sustainable Agriculture**
Pranab Kumar Ghosh 39
- Tea, the health drink**
Satyen Parida 44

Type Setting by—
Phototypesetting System,
Orissa Government Press

Backdrop of Gitagovinda of Jayadeva

Dr. Kailash Chandra Dash

Gita Govinda is an important Sanskrit text which was composed by Jayadeva. It gives an interesting description of the dalliance of Radha and Madhava and as such it claims a distinct place in the history of Vaishnava literature of mediaeval India. The homeland of Jayadeva is a subject of controversy as he is claimed as a son of Orissa, Bengal and Mithila by the scholars. Some literary evidences claim that Jayadeva was a poet of Utkal in the 12th century A.D.² We do not find unmistakable epigraphical evidences of the Ganga period on the nativity of the poet. The present paper does not aim to repeat the views of the scholars on the controversial aspect of the native place of the poet. It aims to review the socio-religious milieu which inspired and fed Jayadeva in the composition of his text which indirectly connects him with the mediaeval Orissan socio-religious milieu.

We have two interesting views about the milieu which inspired Jayadeva to compose *Gita Govinda*; (i) The first view has been presented by S. K. De, a renowned indologist from Bengal. He writes; The prominence given to Radha in the *Gita Govinda* makes it probable that the source of Jayadeva's inspiration could not have been the Krishna-Gopi legend of *Srimad Bhagavata* which avoids all direct mention of Radha as Krishna's consort and which speaks of autumnal, and not vernal, *Rasalila*.

The incident referred to in the opening verse of Jayadeva's poem again cannot be traced in the earlier *Puranas*, but it is supposed to refer to an episode described in the fifteenth chapter of the *Krishna-janma-khanda* of the *Brahma Baivarta Purana* in which the infant Krishna, similarly entrusted by Nanda during the rains to Radha, sports with her on the banks of the Yamuna. The

Brahma Baivarta Purana much more than any other *Purana* presents Radha in a vivid background of great sensuous charm and in no other *Purana* the erotic possibilities of the theme have been so elaborately worked out. The *Purana* is also singular in effecting a regular marriage between Krishna and Radha. But while the erotic *Madhurya* aspect of Krishna worship is emphasized in this *Purana*, the *Aisvarya* aspect of this worship is also made prominent by legendary descriptions of Krishna's greatness and power as the supreme deity. The opening *Dasavatara stotra* as well as the second *Jaya-jaya-deva-Hare* there, presents Krishna in his *Aisvarya* aspect, not as an *Avatara*, but as the veritable supreme deity of many incarnations, omitting all references to Radha but mentioning Shri or Laxmi. As the poet proceeds the *Dhirodatta Nayaka* becomes *Dhiralalita* and all the erotic *Madhurya* implications of the theme are developed to their fullest extent. While these parallelisms are admitted, there is no proof of Jayadeva's direct indebtedness to the *Brahma Baivarta Purana* and it is difficult to explain why Jayadeva should prefer its authority to that of the almost exclusively paramount Vaishnava scripture, the *Srimad Bhagavata*. The date of the *Brahma Baivarta Purana* is uncertain, but assuming the genuineness of the extant text, the *Krishna-janma-khanda* must be at least later than Sankara and his school to whom distinct reference is made. The suggestion that the whole of the *Uttara Khanda* of the *Purana* is a Nimbarkite interpolation is hardly convincing. Of all the Vaishnava schools the Nimbarkas appear, no doubt, to give prominence to Radha in their thought and worship; but there are chronological difficulties in assuming Nimbarkite influence either on Jayadeva or on the *Purana*. The date of Nimbarka has not yet been

fixed with certainty, but if he lived sometime after Ramanuja, he would be almost contemporaneous with Jayadeva and the theory of any influence by Nimbarka or by his sect on Jayadeva and his assumed source would be highly improbable. It is possible that Jayadeva derived and developed his erotic mysticism from the same source as Nimbarka himself and to the same obscure source probably the writer of the latter portion of the *Purana* was indebted for his extremely sensuous treatment of the Radha legend.³

(II) The second view has been presented by Chittaranjan Das, a noted Oriya writer of our time.⁴ Before the composition of *Gita Govinda* Jayadeva had completed the composition of *Dasavatara*. In the *Dasavatara* he placed Buddha in the ninth place and did not think to place Jagannatha which was actually stated by the later writers in Orissa. Another interesting fact is that he composed an interesting Kavya on the exciting part of Krishna's lila, but there is no place for Krishna in the eighth *avatara* who is Balarama. It deepens the suspicion that probably *Gita Govinda* was at first composed by him and *Dasavatara* was composed later on after the expansion of thought as a devotee of Vishnu (*Haribhakta*). This learned writer further states that before Jayadeva's composition of *Gita Govinda* in Orissa there was similar milieu. Small compositions on the erotic aspect of Krishna would have been there in Orissa in the pre-Jayadeva period; but Jayadeva alone became successful in expanding this field of the erotic thought by the creation of the extra-ordinary *Kavya-kadamba* (*Gita Govinda*) which could eclipse all other similar smaller works on Krishna and make a lasting memory in the religious and literary thought sphere in India.

The two views admit that there was an atmosphere for the composition on the theme of Krishna before Jayadeva (either in Orissa or in Bengal), although both the views do not present the exact source which was followed by Jayadeva in the creation of his masterpiece. I like to suggest that Jayadeva at first probably composed *Gita Govinda* stressing the *Madhurya* aspect of Krishna as a poet. The erotic aspect became so prominent in that Kavya that the orthodox and the Krishnaite followers could not like it deeply.

Himself Jayadeva as a poet would not have been happy at this creation based on eroticism; but as a man and as a religious thinker of his time, he became conscious of its weakness. In order to safeguard his stand for composing a kavya on Krishna's erotic thought, he composed the first two chapters of the Kavya (*Dasavatara* and the *Jaya-jaya-deva-Hare*) to stress from the beginning the *Aisvarya* aspect of Krishna. By this way he eluded the orthodox sections of his time by stating that his *Gita Govinda* is simply not erotic in nature, but it also lauds the *Aisvarya* aspect of Krishna. The study of *Gita Govinda* after the omission of the two chapters does not present any gap in thought. On the other hand the inclusion of the two sections indicates the interpolation by the poet himself for some purpose. The source of the two chapters (*Dasavatara* and *Jaya-jaya-deva-Hare*) was the Orissan religious milieu. But Jayadeva was influenced by the all-Indian thought on erotic relationship of Krishna while composing his simple *Gita Govinda* (without the two chapters).

The socio-religious milieu of the time of Jayadeva would have given him great inspiration for the composition of *Gita Govinda*. Jayadeva was familiar with the important texts—*Harivamsa*, *Bhagavata Purana* and *Mahabharata* before his composition of *Gita Govinda*. The Puranic sources in the pre-Jayadeva period presented the Bhagavata-Basudeva cult which became very popular in India even before the reign of the Guptas.⁵ As stated above Krishna's *Madhurya* aspect and *Aisvarya* aspect were also known in the pre-Jayadeva period.⁶ But there is something distinct in the text of Jayadeva which indicates that the regional milieu was a major source of inspiration for the poet.

We have at present no reliable source to present that regional milieu out of which sprang up Jayadev's thought. But we can have a look at the religious thought sphere of Orissa of the early mediaeval period which appears to have a great bearing on Jayadeva, although Jayadeva is not vocal in any part of his text about the source of his study. At first Jayadeva composed his Kavya based on the *Madhurya* aspect of Krishna showing

the dalliance of Krishna and Radha. As stated by S. K. De, as a poet of undoubted gifts, his chief aim must have been to create a beautiful and finished work of great lyrical, pictorial and verbal splendour. His emotional temperament preferred an erotic theme, but of all erotic themes of mediaeval times the externally fascinating love story of Krishna and Radha was probably found the most absorbing.⁷ When it was completed his regional milieu could not accept it for its amorous nature. Even if the regional milieu was not foreign to the amorous aspect of Krishna it did not like *Gita Govinda* which was a Kavya and not a *Purana*. Hence Jayadeva might have incorporated some more ideas which would have been appreciated by the people. At that stage he might have thundered his voice at those people who did not like his amorous text that only those who had a real desire to know about *Hari* and those who were true Vaishnavas could read *Gita Govinda*.⁸

In spite of that declaration *Gita Govinda* could not have been probably popular. Hence Jayadeva wanted after some years to incorporate some new ideas to justify the content of his Kavya based on amorous aspect. He composed the first two cantos *Dasavatara* and *Jaya-jaya-Hare* which associate the amorous Krishna with Vishnu with his *Aisvarya* aspect. The presentation of Krishna as the maker of ten incarnations indicates that it was incorporated in the *Gita Govinda* which would be acceptable to all. I am tempted to point out that Orissan religious thought had a great impact on Jayadeva for which he could include the first two cantos in his Kavya. It also indicates that Jayadeva had close association with the Orissan religious life during and after the composition of the text. Before the composition of the two cantos (*Dasavatara* and *Jaya-jaya-deva-Hare*) Jayadeva might have visited the new temple of Purushottama Jagannatha and might have thoroughly studied the elaborate decorative sculptural part of the temple (*Bada* and *Jagamohana*). He had also appreciated the iconology of Purushottama, the presiding deity of the temple. The huge temple for Purushottama was built during the reign of the Ganga king Chodaganga after the extermination of the Somavamsi rule in Utkal.⁹ The verses of the

copper plate grant of Rajaraja III, grandson of Chodaganga, definitely state that Chodaganga not only completed the construction of the huge temple, but also consecrated the deity Shri Purusottam and Lakshmi in the new temple during his reign.¹⁰ The *Bada* of the main temple has elaborate sculptural decoration which includes the ten *Avataras* of Vishnu, some interesting episodes of the early life of Gopinath-Benunath-Krishna and about twenty-four different icons of Vishnu.¹¹ The sculptured friezes of the *Pata* mostly depict episodes from the life of Krishna.¹² Noteworthy among these are *Sakata-bhanga*, *Kaliya-dalana*, lifting of Govardhana, fighting with Kesin, Kuvalaya and Aritsha etc. The *Jagamohana* of the temple represents erotic sculptures. After going through the interesting decorative representation of the *Bada* and *Jagamohana* of the Purushottama temple Jayadeva would have got inspiration for the equation of Vishnu-Purushottama with Madhava-Krishna. He might have at first composed his Kavya based on the *Madhurya* aspect of Lord Krishna. But when he saw the interesting representation of Vishnu-Krishna themes on the *Bada* he was tempted to add more. It indicates that before the composition of the above two cantos by the poet the temple of Purushottama with its elaborate sculptural decoration was completely built. It also points out the fact that the preliminary draft of Jayadeva based on the *Madhurya* aspect of Krishna was completed before he paid a visit to the temple of Purushottama. He was however suspicious or even not confident about its appreciation by the larger people around him or its appreciation by the socio-religious milieu of his time. At first probably he did not decide the course to be followed, i.e., the revision of the text. Then he might have visited the new Purushottama temple and might have been impressed by the decorative part of the temple (*Bada*) and the icon of Shri Purushottama.

The iconology on Purushottama (the deity worshipped in the temple of Purushottama-Jagannatha) provided him a ground for justifying his Kavya based on the important Vishnuite thought. It gave him inspiration to add the two

sections (*Jaya-jaya-deva-Hare* and *Dasavatara*) to his *Gita Govinda* which was based on *Madhurya* aspect. The presiding deity of the Purushottama Kshetra was Purushottama and it represented the amorous aspect of Vishnu (Kama-rupa).¹³ This aspect of Vishnu was well-known and was appreciated by all. *Murari Mishra*, a writer in the pre-Jayadeva period, in his drama *Anargha-Raghava Nataka* had accepted the amorous aspect of Purushottama, the presiding deity of the Kshetra.¹⁴ It seems to me that Jayadeva was considerably influenced by the amorous idea of Purushottama-Vishnu. He got a necessary sanction for his *Kavya* which was based on *Madhurya* aspect. In order to strengthen his view he added a canto by presenting Krishna-Vishnu as the consort of Lakshmi-Kamala and doubtlessly he was indebted to *Murari* in this context.¹⁵

This addition (Vishnu's *Dasavatara* and his amorous nature which were popular in the Purushottama Kshetra) was aimed to impress all sections of the society the ideas of his *Kavya* which was based on *Madhurya* aspect. Jayadeva might have been well aware that Vishnuism was very popular in India (particularly in Orissa) after its propagation by Ramanuja and his associates.¹⁶ As a poet his original *Kavya* (*Gita Govinda*) was excellent and might not have been based on religion. But afterwards Jayadeva as a man of his society thought about its appreciation from all sections of the society and so he added other cantos to it. Thus he was probably influenced by the iconology of Purushottama in his time in the Kshetra of Purushottama.

In his *Kavya* Jayadeva used the popular name of Vishnu as Madhava. Madhava was no doubt a popular form of Vishnu in India before Jayadeva; but in Orissa the name was associated with an interesting tradition on the Jagannath cult. This tradition is related to the worship of Madhava as the earliest deity in the Purushottama Kshetra.¹⁷ A study of the sections of *Purushottama Kshetra Mahatmya* of *Skanda Purana*, *Sarala Mahabharata* definitely state that there was an attempt to consecrate Madhav as the presiding deity of the Purushottama Kshetra in the early phase when the site was under the tribals.¹⁸ This attempt might have been made by the Prachi

people in particular and the Orissan people in general, but it could not be successful and the Purushottama Kshetra became the centre of a Hinduized tribal cult.¹⁹ The worship of Madhava was popular in Orissa in the pre-Jayadeva period.²⁰ During his time or shortly before king Madhava of the Prachi zone took fresh attempt for the consecration of Madhava as the presiding deity of the Kshetra of Purushottama.²¹ It seems that Jayadeva was well aware of this conflict and that he in his *Kavya* used the name of Madhava which would be more acceptable to the people of Orissa than any other name of Vishnu. Thus the religious milieu of Orissa had deep impact on Jayadeva which leads us to presume that he was a native of Orissa.

Jayadeva composed his *Gita Govinda* and he became well known in South eastern India for his Vishnuite theme. His mention of some of the names of the famous Bengali poets in the beginning of the text and the adoption of Vishnu-Purushottama cult in it add great strength to our conviction that he aimed the work for South eastern India. The background of this work thus may be found in the newly built temple of Purushottama where the Vishnuite themes are vigorously sculptured in the walls and doorways of it. That is why probably his homeland has been stated in *Bhaktamala* as a site on the border of Purushottama Puri.

NOTES AND REFERENCES

1. The homeland of Jayadeva became a subject of debate with the publication of a paper entitled "On the musical modes of the Hindus by Sir William Jones which was written in 1784 and published in 1799. *Asiatic Researches*, Vol.-III, 1799, pp. 83-84. In another paper published in *Asiatic Researches*, entitled "Gita Govinda or the songs of Jayadeva", Vol.-III, 1799, pp. 180-207. Sir William Jones states: The loves of Krishna and Radha are the subject of this pastoral drama entitled *Gita Govinda*, it was the work of Jayadeva who flourished it is said before Kalidasa and was born as he tells himself in *Kenduli* which many believe to be in Kalinga, but since there is a town of similar name in Burdwan, the natives of it insist that the finest lyrical poet of India was their countryman and celebrated in honour of him an annual jubilee, passed whole night in representing his drama and in singing his beautiful songs."

Bengali writers accept *Kenduli* on the bank of the river Ajaya in the district of Burdwan (West

Bengal) as the homeland of Jayadeva. *Banamali Das* wrote a book entitled *Jayadeva Charita*. This manuscript was written in 1801 and was published by Bangiya Sahitya Parishad.

In Orissa Babu Jagabandhu Singh on 22nd July 1917 in a hall of Normal School in Cuttack where a general session of the *Utkal Sahitya Samaj* was held under the presidency of Ramasankara Ray presented his paper entitled "Sanskrit literature in Utkala and Jayadeva." *Pandit Mritunjaya Rath* in the same *Utkala Sahitya Samaj* on 24th November 1917 presented another paper entitled "Discussion on the birth place of Jayadeva" which was published in *Utkala Sahitya*, Vol.-21, 1325(sala) and this gave emphasis on the Bengal background of Jayadeva. Jagabandhu Singh emphasised the Utkala connection of Jayadeva. From that time the debate on the homeland of Jayadeva continued in Orissa. See for this the most important text of Kedaranath Mahapatra which is *Shri Jayadeva and Shri Gita Govinda* published in 1973.

2. N. K. Sahu, "Jayadeva of the Gita Govinda—His date and place", *Souvenir on Jayadeva*, Jayadeva Sanskritika parishad, Bhubaneswar, 1968.

3. S. K. De, *Early History of Vaishnava Faith and Movement in Bengal*, 1961/1986, Firma Klm Private Limited, Calcutta.

4. Chittaranjan Das, *Santha Sahitya* (Devotional literature) Orissa Sahitya Akademi, Bhubaneswar, 1982.

5. D. C. Sircar, *Studies in the religious life of ancient and mediaeval India*, 1971, Delhi, p. 20—22.

6. De, op. cit., p. 10—12.

7. *Ibid.*, p. 9.

8. See *Gita Govinda*, 1st canto and 12th canto. Barbara Stoler Miller, *The Gita Govinda of Jayadeva*, 1977, Delhi; p.129, 169.

"If remembering Hari enriches your heart,

If his arts of seduction arouse you,

Listen to Jayadeva's speech,

In these sweet soft lyrical songs."

"His musical skill, his meditation on Vishnu

His vision of reality in the erotic mood

His graceful play in these poems,

All show that master-poet Jayadeva's soul

Is in perfect tune with Krishna —
Let blissful men of wisdom purify the world
By singing his Gita Govinda."

9. Kailash Chandra Dash, "Date and builder of the temple of Purushottama Jagannath", *Orissa Historical Research Journal*, Vol. 40 No. I to IV.

10. *Ibid.*

11. See *Krishna Pratibha, Studies in Indology (Prof. K. C. Panigrahi Commemoration Volume)*, Vol. I, ed. H. C. Das, S. Tripathy and B. K. Rath, Delhi, 1994, p. 162—168, p. 188—192.

12. *Ibid.*

13. For Purushottama as the amorous deity see G. C. Tripathy, "On the concept of Purushottama in the Agamas", in *The cult of Jagannatha and the regional tradition of Orissa*, ed. Eschmann, Kulke and Tripathy, 1978, Delhi, p. 42.

14. For Murari's work see Tripathy, op.cit., p. 39, The necessary verse of Murari has found its echo in the first canto of *Gita Govinda*.

Srita Kamala kucha mandala, Dhrita kundala kalitalalita Banamale.

15. *Ibid.*

16. For Ramanuja see A. Govindacharya, *The life of Ramanujacharya*, Madras, 1906.

B.R. Gopal, *Sri Ramanuja in Karnataka—an epigraphical study*, Delhi, 1983.

17. Kailash Chandra Dash, "Nila Madhava and Gala Madhava: A study of a legendary tradition on the early phase of the Jagannatha cult." *The Journal of the Asiatic Society*, Vol. XXXIII, No.1 and 2, 1991, p.87-98.

18. *Ibid.*

19. *Ibid.*

20. H.V. Stietencron, *CJRTO*, Chapter-I, 1978, p. 20-21.

21. See No. 17.

P.G. Department of History,
Dhenkanal College, Dhenkanal.

Jaydev and His Love Classic—'The Geet Govind'

Satyanarayan Mohapatra

Many critics through their invaluable commentaries and references to the contemporary sanskrit creations have made brilliant analysis on the greatness of the Geet Govind as a religious epic having an edge over other such creations. This finds vent in the Jagannath Cult, being a confluence of many sects and faiths. To this generous cult are drawn Saints and Philosophers having their faith in Vaishnavism, Shaivism, Buddhism and Jainism, what to speak of the effulgence in which the Krishna Cult has travelled in the international sphere, is a well known phenomenon.

Jayadev was born in Kendubilwa now Kenduli in the district of Puri and after coming to Shri Kshetra Puri he was meditating upon Lord Jagannath. As the legend goes one Brahmin of Berhampur who was childless gave birth to a daughter namely Padmavati with the blessings of Lord Jagannath. Lord Jagannath through a dream directed the Brahmin to give the hand of Padmavati in marriage to Jaydev. Jaydev rejected the idea at the outset but after receiving orders of Lord through a dream accepted Padmavati, the charming damsel as his wife.

Once as the legend goes, Jaydev while composing his Geet Govind was unable to complete a couplet. Having this serious thought in mind, he proceeded towards the river to take his bath. It is said that Jagannath in the disguise of Jaydev entered the residence of the poet and completed the couplet which reads in sanskrit as 'Dehi pada pallava Mudaram'. Subsequently seeing Jaydev returning from his bathing ghat his wife was bewildered to find that somebody else had visited their residence. Who else this man could be? Finally finding from his *Geet Govind* the above couplet written in beautiful hand by no

other than Lord Jagannath himself, the poet's devotion to Lord Jagannath was multiplied beyond bounds. After unravelling the mystery, Jaydev was deeply indebted to the Lord for solving this tangle and presented the entire *Geet Govind* as a 'Song Offerings' at the feet of the Lord in the Puri temple. Thus *Geet Govind* became the 'Song of the Temple' and is being recited by Devadasis (Maharis) in the Jagannath Temple as a regular feature. This piece of Sanskrit poetry by afflux of time travelled from village to village and was favourite with the masses.

Geet Govind undoubtedly has a place of pride to be reckoned with the creations of the stature of Mahakavi Vyasa, Kalidasa, Magha, Bharavi, and Bhavabhuti. This piece of devotional epic appears to have been composed by Jaydev in Puri, the abode of Lord Jagannath.

Lord Jagannath is described as 'Jagdish Hari'. At the very beginning, the poet in his invocation in *Geet Govind* addresses his prayer to 'Jagdish Hari' who is no other than Lord Jagannath. *Geet Govind* exclusively deals with Shri Krishna as Purusottam or Lord Jagannath which has been clearly expressed in his 'Dasavatara' poem. In *Geet Govind* Shri Krishna has been described as an 'Avtara Purusa' and no other than 'Bhagavan Vishnu'.

This is comparable to Lilashuka's *Krishnamrut*. The poet in it has portrayed the immortal love of Krishna with the Gopis based on the *Basanta Raasa* or the Spring Festival in Brindaban.

Geet Govind has twelve chapters and in each chapter the poems are embellished in separate *raagas*, rendering them utterly musical in form and style. This is an asset with every Krishna devotee

who reads with devotion while performing worship or *Aarati* to the Lord.

In retrospect we may briefly dwell upon the background in which Jaydev weaved his lyrical epic *Geet Govind*. In *Srimad Bhagavat* we find reference of Krishna with Gopikas. Radha finds no place therein. Jayadev's *Geet Govind* seems to have been influenced by the contemporary Maithili poets who have written on the theme of Krishna and Radha.

During the period of Shri Chaitanya the influence of Bhagavata as a scripture was well established. Vaishnavism however underwent a transformation in diluted form and lost its coherence with Shri Bhagavat. As discussed earlier apart from being a 'Dharmashastra' *Geet Govind* has virtually transformed itself into a 'Rasashastra'.

It is admitted by critics that *Geet Govind* has been accepted as a religious epic in Oriya household. One should remember that Rasashastra of Rupa Goswami (*Ujjala Nilamani* and *Bhakti Rasamrita Sindhu*) was a later creation. In view of this *Geet Govind* was an original creation uninfluenced by any contemporary Sanskrit literature. If a parallel is drawn between the writings of Leela Shuka's 'Krishnamrita' and that of the lyrics of Shri Jaydev in *Geet Govind* the former is purely devotional while the later is pseudo-devotional and literary in form and style.

The contents and love between Radha and Krishna remaining the same in spirit and character its form is original. This has been created in melodramatic form, its soul being utterly lyrical.

Music in all contents of *Geet Govind* mostly deals with love and loving dialogue between Krishna and Radha. Besides the entire composition depicts Krishna in compromising positions with Radha and her *Sakhis* or maids attending upon her.

The stanzas in *Geet Govind* contain Radha's bereavement and reunion with Shri Krishna. In description, recitation and enunciation of love, depiction of mental agony at the bereavement of

Shri Krishna, Jaydev's *Geet Govind* has broken the tradition of Sanskrit literature. Sex has been sublimated to heights of devotional love and ecstasy.

The poet does not seem to have followed the tradition of the contemporary Sanskrit poetry but tried to attain perfection by drawing itself closer to traditional Indian poetry with slight deviation. Though composed in Sanskrit verse, *Geet Govind* by language and spirit is more or less synonymous with contemporary regional literature.

According to *Madala Panji* Maharaja Narasimhadev I (1278—1309 A.D.) of Puri had introduced singing of *Shri Geet Govind*. But during the reign of Prataparudra Deb (1497—1540 AD) this system was discontinued in the later years, because he wanted to introduce the singing of 'Abhinaba Geeta Govind' written by Maharaja Purusottam Dev. During the reign of Mukundadeb (1559—1568 A.D.) many unforeseen disturbances took place. During this period it was very difficult to protect the deities of Jagannath from the invasion of Muslim rulers. As a result recital of Shri Geet Govind was discontinued for a few days.

After some interval Mahari seva now known as Devadasi system was re-introduced accompanied with the singing of *Shri Geet Govind*.

During the British rule Collector Grome had submitted a report to the Commissioner, Cuttack on 10-6-1805 intimating on the system of Puja in vogue in Shree Jagannath Temple of Puri. The said letter is a testimony to the prevalent practice of Devadasis who used to perform their dance with the Chanting of *Shri Geet Govind* during the morning *Dhupa* or Puja of Shri Jagannath. Similarly after the *Badasimhara Bhoga* the Devadasis used to sing *Geet Govind* by standing. This ancient seva only establishes the traditional glory and reverence attached to Lord Shree Jagannath. In addition a legend surrounds as regards its introduction. Once the daughter of a Mali (flower server) while, reciting the melodious *Geet Govind* was engaged in plucking brinjal from a nearby garden. Being enchanted with the melodious voice of this solitary singer, Lord Jagannath followed her and by accident the silken

veil used by Lord Jagannath got stuck in the thorny brinjal plant and consequently was torn. The Pandas of the Puri Temple having expressed their surprise at this, reported the matter to the king. The king could also know about this in his dream. Subsequently the king arranged for the singing of *Shri Geet Govind* in front of Lord Shree Jagannath by appointing this lady for life. From that day onwards and in succession, the Mali daughters or Maharis were being appointed for this purpose. Others getting envious of this requested the king to stop the singing of *Shri Geet Govind* in the temple. In order to surpass Jaydev's *Geet Govind* king Purusottam Dev composed *Abhinab Geet Govind*. Jaydev's *Geet Govind* and *Abhinava Geet Govind* composed by the king were placed at the feet of the Lord and it is reported that the Pandas after opening the temple saw '*Geet Govind*' at the feet of Lord Jagannath whereas *Abhinava Geet Govind* was kept apart.

It may be mentioned that Shri Chaitanya Dev of Nabadwip in West Bengal, a devotee of Shri Krishna visited the Puri Temple and was visibly moved in having *darshan* of Shri Krishna in Shree Jagannath. According to him Puri is *Nitya Brindavan* and Shri Jagannath is no other than Shri Krishna Himself. Shri Chaitanya did not leave Puri until his death.

Shri Geet Govind is a manifestation of Lord Jagannath and in its sweet stanzas, we find no other God than Shri Jagadisha/Jagannath Himself.

SOURCES :

1. *History of Sanskrit Literature* by Dr. S. N. Dasgupta and Dr. S. K. De.
2. *Shri Jagannath* by Dr. Banshidhar Mohanty.
3. Writings of Dr. Gangadhar Bal, Dr. K. C. Acharya and Dr. Basudeb Sahu.

L3/ 134, Acharya Vihar,
Bhubaneswar-13.



Ghumura Folk Dance, Bhawanipatna

Small-Scale Industries in Orissa

Dr. S. N. Tripathy

It is a lamentable fact that despite plenty of mineral and forest resources, Orissa is one of the most backward states in India. In view of colossal poverty, under-utilisation of natural resources, abundant labour force and acute unemployment, it is imperative to emphasize the development of small-scale industries as a strategy for socio-economic development of Orissa.

Needless to mention that small-scale industries have immense potentialities for development as these can generate alternative avenues of employment with moderate capital investment. Small-scale industries can supply mass-consumption articles with a short gestation period by the fruitful utilisation of the available natural as well as human resources. Thus, small-scale

industry occupies a unique position in the development of Orissan economy.

The latest definition as pointed out in the new Industrial Policy of 1992, analyses small-scale Industry as one in which the capital investment is within Rs. 60 lakhs.

Problems :

In Orissa the development of small-scale industries has been obstructed because of wrong selection of industrial unit, lack of entrepreneurial ability, inadequacy of equity capital, obsolete equipments, lack of assured availability of raw-materials at reasonable rate, shortage of power, financial constraints and infrastructural bottlenecks.

TABLE-I

DISTRIBUTION OF SMALL-SCALE INDUSTRIES IN ORISSA BY 1992-93

Sl. No.	Districts (Undivided)	No. of Units	Investment (Rs. in Lakhs)	Employment
1.	Balasore ..	3,209(7.56)	6,163.86(10.21)	70(5.26)
2.	Bolangir ..	1,995(4.70)	3,303.92(5.47)	35(2.63)
3.	Cuttack ..	8,237(19.41)	10,627.43(17.61)	510(38.32)
4.	Dhenkanal ..	2,813(6.63)	3,002.70(9.97)	57(4.28)
5.	Ganjam ..	4,411(10.39)	4,578.14(7.58)	103(7.74)
6.	Kalahandi ..	1,860(4.38)	1,695.15(2.81)	19(1.50)
7.	Keonjhar ..	1,865(4.40)	1,135.80(1.88)	20(1.50)
8.	Koraput ..	2,804(6.61)	2,830.90(4.69)	49(3.68)
9.	Mayurbhanj ..	2,960(6.97)	2,053.13(3.40)	71(5.33)
10.	Phulbani ..	1,142(2.69)	567.56(0.94)	29(2.18)
11.	Puri ..	3,988(9.40)	11,299.93(18.72)	245(18.41)
12.	Sambalpur ..	3,292(7.76)	4,205.37(6.97)	55(4.13)
13.	Sundargarh ..	3,866(9.10)	8,896.22(14.74)	68(5.11)
	ORISSA ..	42,444(100.00)	60,360.11(100.00)	3,09,832(100.00)

(Figures in parenthesis indicate percentage to total)
Source : Directorate of Industries, Cuttack

Growth and Dimension :

There has been an unprecedented expansion in the number of small-scale industries, especially, after the announcement of Industrial Policy of 1980.

Table-I demonstrates the data pertaining to total number of small-scale industries, capital investment and employment generation in the undivided districts of Orissa.

It is revealed from the table that in Orissa, there were 9119 small-scale industries with a total capital investment of Rs. 68.94 crore and employment generation of 75,798 persons during 1979-80. By the year 1992-93, the total number of small-scale industries has increased to 42,444 with cumulative investment of Rs. 603.60 crore and employment generation of 3,09,832 persons.

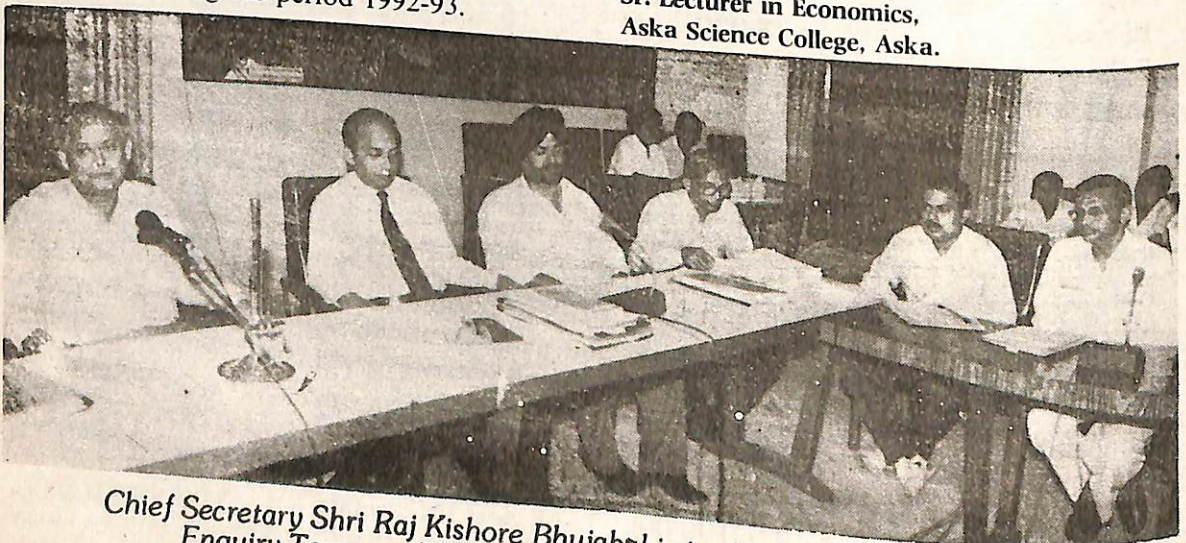
The table highlights the regional disparity in the growth of industries in Orissa. It is found from the table that the coastal districts of Cuttack, Ganjam and Puri enjoy a better position in the distribution of small-scale industries. Together these three districts account for about 40 per cent of concentration of small-scale industries in Orissa. On the contrary, the backward tribal districts like Phulbani, Kalahandi and Keonjhar present a dismal picture in the sphere of concentration of small-scale industries (total 11.47 per cent). With regard to capital investment and employment generation, these backward districts are also in the most disadvantaged position compared to coastal districts during the period 1992-93.

New Horizon :

The new Industrial Policy 1992, has been designed to accelerate the flow of investment and development of entrepreneurship in Orissa, with the main thrust of providing a conducive environment for rapid industrialisation. As a result of liberalised industrial climate, a large number of small-scale industries have to emerge in Orissa. In order to provide industrial, technical and financial assistance to the Small Scale industries a plethora of Organisations like D.I.C. IPICOL, IDC, IDCOL, OSIC, OSFC and Commercial Banks have played their paramount roles.

However, it has been observed that in Orissa, more than 80 per cent small-scale industries are in the investment slab of upto 5 lakhs. Thus, more correctly, they are in the tiny sector. Therefore, the need of the hour is to explore the possibility and to promote small-scale industries by adopting appropriate high productive technology so as to keep pace with the new paradigms of globalisation and liberalisation policy. Moreover, labour intensive viable industries should be developed after careful planning in the backward tribal districts for the removal of poverty and regional disparity, ensuring social justice to the weaker sections of the society.

Sr. Lecturer in Economics,
Aska Science College, Aska.



Chief Secretary Shri Raj Kishore Bhujabal is in discussion with the Central Enquiry Team on 16-3-1996 at the Secretariat Conference Hall

Status of Women in Orissa : Need for Comprehensive Approach

Rama Chandra Parida

Women's empowerment and women's enlightenment—the twin challenges are major issues in recent times. A large proportion of decision and policy making and responsibilities is in the hands of men all over the world. India being male-dominated, has demonstrated the monopoly of men in all spheres of human living. The days are gone. In current scenario a good number of innovative approaches have been implemented. To make consciousness among women their rights have been emphasised. They have been given reservation in employment sector. In spite of all these they have not emancipated from social evils. "When a woman is assaulted she may not stop to think in terms of *himsa* or *ahimsa*. Her primary duty is self protection. She is at liberty to employ method or means that come to her mind in order to defend her honour. God has given her nails and teeth. She must use them with all her strength and, if need be, die in the effort. The status of women, due to socio-economic factors, is down-trodden owing to various historical and traditional factors. Even though they constitute more than 50 per cent of total population, they are confined to illiteracy, poverty, exploitation etc. Their emancipation is now being increasingly realised to bring women into the mainstay against male counterparts to play an equal, active and meaningful role in all spheres of living.

Women Work-force in the State :

As per 1991 census, female population in Orissa was 155.95 lakhs constituting 49.26 per cent of the total population. The women workforce is 20.79 per cent while it is 48.10 per cent in all India level. The maximum number of female workers in Orissa are engaged in unorganised sector including agriculture, animal husbandry, forestry, fishery etc. The plight of women, especially labour class is beyond imagination. In fact, as per 1991 census

report, the participation of woman worker in primary sector (agriculture) is about 80/90 per cent. It is due to wide spread illiteracy, lack of social mobility etc, which have aggravated their lower standard of living. Even female workers got less wages in comparison to male counterparts. It is noteworthy that female workers are more proficient (in tea gardens) and also hardworking in group operations. The employment of women in organised sector of the state constitutes 9.85 per cent (during 1993). As regards to this, from 1989 to 1993 employment of women in organised sector has increased by 27 percent. It is meagre in comparison to their population.

Efforts to improve life style of women :

Even though efforts at Government level have been chalked out in different periods of time, there has not been much progress or appreciable achievement. The share of women in regular employment is just 13.88 per cent. Since the status of women in employment sphere is judged by social conditions, level of education etc., the dimension of women employment in factories, doctors, nurses, clerks etc., is far from satisfactory. The low female literacy rate (34.7 per cent) which is below from all India level i.e. 39.3 per cent. In order to improve their living standard, Balwadi and Creche programme has been undertaken in the state. It provides amenities for physical and mental growth of pre-school children in age group of 9-6 years. The State Welfare Board undertakes various measures for women with assistance from Central Social Welfare Board. The failure is more than success. Due to half-hearted and weak-attempts the achievement of various schemes is beyond satisfaction. The accomplishment of desired objectives, none the less, is very meagre as compared to their dimension of population. Their plight is as it was. Even after 49 years of

independence the state has not progressed much in area of development of women. Other measures like Working Women's Hostels, MSY, Mahila Samities, Family Councelling Centres, DWCRA etc. are of recent times. So its achievement is yet to be established.

Implications of Dowry Prohibition Act :

In the sphere of dowry, in marriages, an enactment has been made in the right direction i.e., Dowry Prohibition Act, 1961. Its main objective is to ensure social justice and speedy disposal of cases. An amendment was made in 1984. Its primary provision is to widen the scope and penalty both in terms of fine and imprisonment. The Government of Orissa has fixed a ceiling of Rs. 25,000 as dowry and up to 50 guests will be entertained in a bride's marriage. It outlines the more stringent measures for enforcement dowry (prevention) act, which is the mostly prevalent offence in the state. The amendment is in the right direction. So to get fruitful result anti-dowry campaigns have been made by NGOs, Seminars and Workshops have been organised. In this regard the State Government has constituted State Commission for Women in 1993. The Commission receives complains and hears cases against females in the state. It is a matter of pride that the commission has legal status. The apex body receives grievances/complains including atrocities, dowry death/cases, tortures etc. The Commission has so far taken action on 2920 cases out of 2970 complains filed up to December, 1994. So also, legal counselling has been provided to redress their grievances.

As per constitutional 73rd amendment, 33 per cent reservation has been earmarked for women in the grassroot level of democracy in India (i.e. Panchayati Raj institutions). So also the State

Government has made mandatory for one third reservation of employment for women. These are bold steps but due to lack of proper follow-up actions the programmes are not working satisfactorily, even some are lopsided. We have not yet able to weed out disparity among urban and rural women. Their emancipation is a time taking affair. Hence, can not topped in an overnight. It needs long term approach.

Conclusion :

The role of women in State's Development is most intimately related to the goal comprehensive socio-economic development. Unless multi-dimensional and multi-sectoral processes are instituted and implemented the status of women will not be enhanced. The failure of programmes, nevertheless has aggravated the changing scenario of status of women. The gender inequality, women belonging to backward and tribal areas of the state etc. are the major issues to be given priority for their all round development. The majority of programmes/schemes are of recent times. So the achievement is meagre. No doubt, the above welfare policies will help to improve the status of women and their quality of living in comparison to male counterparts in a largest democracy like India. In order to realise quick response, it needs well thoughtout and regulatory policies.

References :

1. Gulati, U. "Violence against women", Kurukshetra, Vol. XL III, No. 5, February, 1995.
2. Kurukshetra, Vol. XL II, No. 12, September, 1994.
3. Census Report, 1991 (Orissa).
4. Kurukshetra, Vol. XL III, 11, August, 1995.
5. Economic Survey, 1994-95, Government of Orissa.

Room No.—A/ 31,
Godabarish Hostel, Utkal University,
Bhubaneswar—751004.

Socio Economic Conditions of Senior Citizens in Orissa : Some Highlights

B. K. Tripathy

INTRODUCTION :

At the instance of the Ministry of Social Welfare, Government of India, the National Sample Survey Organisation conducted countrywide survey to collect information regarding Socio-Economic condition of persons aged 60 years and above and their psychological integration with their family and the society.

The survey was conducted in 736 villages and 240 urban blocks spread over the erstwhile 13 districts of the State. But as per the pattern of distribution of sample, the State Directorate of Economic and Statistics conducted survey in 368 villages and 120 Urban blocks as matching state samples. A total of 1452 households in the sample villages and 461 households in the urban blocks were surveyed for the purpose.

REFERENCE PERIOD :

The survey was conducted between July 1986-June 1987.

SOME HIGHLIGHTS ON THE FINDINGS OF THE SURVEY :

Some of the important findings of the survey based on the results of State sample data of 42nd round N.S.S. are highlighted in the following paragraphs :-

(i) The estimated No. of aged persons based on the result of N.S.S 42nd round as compared to 1981 census data are given below :-

Sector Sex Census (1981) NSS results (42nd round, 1986-87)

Rural	Male	7.46 (48.4%)	9.13 (50%)
	Female	7.95 (51.6%)	9.12 (50%)
	Total	15.41 (100)	18.25 (100)

Urban	Male	0.70 (48.3%)	0.72 (47.37%)
	Female	0.75 (51.7%)	0.80 (52.63%)
	Total	1.45 (100)	1.52 (100)

(ii) The usual activity status of aged persons in rural and urban areas of Orissa is as under :

Code	Usual activity status	Percentage of persons in	
		Rural	Urban
1	2	3	4
(a) Employed			
(i)	Self employed in agriculture	15.49	7.22
(ii)	Self employed in non-agriculture.	4.87	11.05
(iii)	Regular wage/salaried employee.	1.04	2.79
(iv)	Casual wage labour	9.02	3.65
Sub-Total		30.42	24.71
(b) Un-employed			
	Did not work but seeking and/or available for work	0.44	0.25
Sub-Total		0.44	0.25
(c) Not in labour Force			
(i)	Attend domestic duties	15.91	18.88
(ii)	Rentier/pensioner	3.97	5.46
(iii)	Others	49.26	50.70
Sub-Total		69.14	75.04
Total (a+b+c)=		100.00	100.00

(iii) The State economic independence of the aged persons is presented below :

State of economic Independence	Percentage of persons estimated	
	Rural	Urban
1. Not dependent on others	26.08	29.46
2. Partially dependent on others.	14.53	9.77
3. Fully dependent on others	59.39	60.77
4. All types	100.00	100.00

(v) The living arrangements of the dependent aged persons in rural and urban areas indicated below :

Category of persons supporting aged persons	Percentage of aged persons	
	Rural	Urban
1. Spouse	10.00	10.48
2. Own children	75.70	77.32
3. Grand children	5.79	4.75
4. Others	8.51	7.45
5. All categories	100.00	100.00

77.32% of the aged persons in Urban areas depend on their own children. A little over 75% dependent aged persons lived with their own children in rural areas. Around 10% both in rural and urban areas lived with their spouse. About 5% both in rural and urban areas lived with their grand children and around 8% lived with other relations and non-relations categorised as "others" both in rural and urban areas.

(iv) The percentage of aged persons having chronic diseases both in rural and urban areas as may be seen below :

Type of chronic diseases	Percentage of persons	
	Rural	Urban
1. Cough	19.38	24.01
2. Piles	3.76	2.57
3. Problems of joints	56.62	53.00
4. Blood pressure	7.49	8.32
5. Heart disease	4.32	3.42
6. Urinary problems	5.49	5.23
7. Diabetes	2.94	3.45
8. All types	100.00	100.00

(v) In the rural areas 72.45 per cent of the aged persons staying alone were willing to move home for aged persons within village/town, 26.19 per cent outside village/town inside the state and 1.36 per cent outside the state. In the urban areas, 84.35

percent of the aged persons staying alone were willing to move home for aged persons within village/town and 15.65 per cent outside village/town, inside the state.

(vi) In the rural areas 630 per lakh of aged persons having their own economic independence and living alone were willing to move home for aged persons outside the state but partially and fully dependent aged persons were not willing to move outside the state. In the urban areas no aged persons were willing to move home for aged persons outside the state. But the aged persons in urban areas having economic independence who lived alone were willing to move home for aged persons within the village/town and outside the village/town, inside the state. 2619 per lakh of aged persons having economic independence who lived, alone were willing to move home for aged persons outside the village/town inside the state where as 14117 per lakh of aged persons were willing to move home for aged persons within the village/town inside the state.

(vii) 69,245 per lakh of aged persons in rural areas and 68,849 per lakh of aged persons in urban areas participated in religious activities.

(viii) In the rural areas, 48,995 per lakh of aged persons participated in house-hold chores which included activities like going to market, going to laundry, taking children to school, taking ailing members of the household to doctor's chambers etc. In the urban areas, 45,277 per lakh of aged persons participated in daily household chores.

(ix) In rural areas, the highest proportion of aged persons participated in social and in religious activities belonged to the category "Currently married" whereas, the highest proportion of the aged persons engaged in daily household chores belonged to "divorced/separated category". In the urban areas, the highest proportion of aged persons participated in social and religious activities belonged to divorced/separated category. It has been found out that divorced/separated aged persons were not involved in daily household chores in towns and cities.

CONCLUSION

(i) A substantial proportion of the aged persons both in rural and urban areas (60 per cent in rural

and 75 per cent in urban areas) have not been able to adopt any gainful activity, obviously, on account of inherent problems of old age.

(ii) Around 60 per cent of the aged persons both in rural and urban areas have no economic independence and as such they are fully dependent on others and therefore they do need support from their family members for survival.

(iii) Around 82 per cent of the fully dependent aged persons in both rural and urban areas who need support for their survival have been supported by their own children and grandchildren. This is indicative of a value-based living in our society.

(iv) The highest percentage of aged persons, 57 per cent in rural areas and 53 per cent in urban areas, chronically suffer from "joint problems". The percentage of aged persons suffering from other serious types of chronic diseases is perceptibly low.

(v) As high as 73 per cent of the aged persons staying alone in rural areas and 84 per cent in urban areas express willingness to move to home for aged persons only within village/town where

they are living. This shows the obvious inclination/attachment of the persons in their old age for the place they are living even alone.

(vi) A sizeable proportion of aged persons (69245 per lakh of population in rural areas and 68849 per lakh of population in urban areas) participate in religious and social functions and in the process they are in the mainstream and lead a happy social life.

(vii) A good proportion of the aged persons (about 49,000 per lakh of population in rural areas and 45,000 per lakh of population in urban areas) participate in household chores. This speaks of a sense of involvement of the aged persons in the household chores and a good gesture on their love for discharging responsibilities aimed at benefitting the members of the family.

(viii) It is suggested to organise old age houses for dependant Senior citizens of the state which will provide hope for them to live till death. Cost can be met from Government and other sources as well as from the people themselves.

**Director, Economics and Statistics, ORISSA,
Bhubaneswar.**

Cult of Varahi in Orissa

Dr. H. C. Das

Varahi, one of the Mother Goddesses, a manifestation of 64 Yoginis and the counterpart of Varaha-Vishnu was created to annihilate the powerful demons like Chanda, Munda, Sumbha, Nisumbha, Raktavirjya and the *tripuravijayi* Mahisasura. The goddess Varahi associated with the other mothers—Brahmani, Maheswari, Koumari, Vaisnavi, Indrani and Chamunda assisted Ambika in her combat against the demons. Since she is linked with other mother goddesses her origin is also associated with them. Worship of the goddess in her individual form has been prevalent in Orissa and other parts of India.

Similar to other gods and goddesses of the Hindu pantheon her origin is traced from the *Puranas*, the last great authority of Indian religion. The Skanda, Markandeya, Matsya, Devi, Brahmavaivarta, Devi Bhagabata, Varaha and Linga Puranas have lucidly narrated interesting legends of Matrikas' origin, their iconographic features, and their role in the religious life. These *Puranas* record the names of numerous Matrikas. But the seven mothers have been accepted universally, supported by the iconographic texts.

The antiquity of the worship of the mother goddess is traced from the Indus Valley Civilization (flourished in 4th/3rd millennium B. C.). In fact, the worship of Siva and Sakti in the Indus Civilization is proved by the archaeological treasures unearthed from excavations at Harappa and Mohenjodaro. While speaking about the religion of the Indus people, Sir John Marshall (the famous archaeologist and the excavator of the sites) remarks that Sakti worship was of great antiquity in India; it originated out of the mother goddess and was closely connected with the cult of Siva. The continuity of the Sakti cult since then till the beginning of the historic period is attested by the stray finds and excavation at Rajghat, Rupar, Kausambi, Pataliputra and in the south has retrieved remains pertaining to the Sakti cult. The epics particularly the *Mahabharata* highlighted the

Sakta principle. The two Durga *stotras*, one chanted by Judhisthira and the other by Arjuna in the form of eulogy are considered basically the genesis of Mahadevi-Durga manifestation, which was fully reflected in the *Puranas* and *Upa-puranas*. On the basis of iconographic conception as recorded in the *Puranas*, the manifestations of Sakti were carved in sculptures and worshipped in the temples.

Of the numerous puranic legends, I touch upon in short, a few of them to signify the importance of the Sakti in different forms. The Markandeya Purana (compiled in the 4th century A. D.) relates that the Matrikas were created by Brahma, Vishnu, Siva, Indra, Kartikeya etc. to fight the demons as the assistants of the Mahadevi-Durga. Particularly the demons like Chanda, Munda and Raktavirjya were endowed with quality of multiplying into demons equal to themselves in strength and prowess no sooner their drops of blood oozed out from the wounds touched the ground. To kill the demon, Raktavirjya, Siva created from his energy the goddess Yogeswari and similarly the other major gods created *saktis* from their energies. It was with the assistance of the Matrikas Mahadeva was able to kill the demon Raktavirjya. This story is recorded in different forms in other *Puranas*. The account of the *Matsya Purana* runs that when Siva discharged his Pasupata weapon against Andhaka demon, numerous demons of similar stature sprang up from the drops of blood gushing out of his body. In order to assist him in the combat Siva created as many as 132 goddesses of formidable countenance, who drank all the blood of the demon finally killing him in the battle ground. Thereafter, the ferocious goddesses started their campaign of destroying the whole universe. Having no other alternative to subdue the goddesses Siva prayed to Narasimha who appeared instantly with his claws besmeared with the gorge of Hiranyakasipu, his tongue flapping out like the spark of electricity, with the formidable fangs sparkling like a thousand Sun. He created 32 Matrikas who were more terrible than the goddesses created by Siva. The earlier mothers asked to stay in different parts of the world and look after the human beings and animals as their children. This indicates various manifestations of the Sakti conceived iconographically and were propitiated. To highlight each of them *Upa-Puranas* and interesting legends were composed.

It is pertinent to note that the Matrikas were created as the war goddesses but in iconic forms they are seated at ease either in *lalita* or *yogasana*, associated each with a child on the lap (except Chamunda who is seated in *Rajalilasan*) and flanked below by their respective *vahanas*. They bear forms and cognisances of their male counterparts. According to the *Markandeya Purana* these are the female counterparts who are armed with the same weapons, wear the same ornaments, and ride the same *vahanas* and carry the same banners as the corresponding male gods do. Accordingly Brahmani should be sculpted like Brahma, Maheswari like Maheswara, Vaisnavi like Vishnu, Varahi a short-statured women with the face of a boar (like Varaha-Vishnu), Indrani like Indra, Koumari like Kumara (Kartikeya) and Chamunda created from the third eye of the Mahadevi represents a skeleton in appearance—flesh dried up, bones and sinews shown through the dried skin, eyes sunken and abdomen contracted, with hairs shooting upwards in the shape of flames tied with snakes, with the tongue and teeth protruding out, wearing a garland of skulls, and a tiger skin, sitting on a deadbody flanked by an owl or vulture and jackals drinking blood dropping from the severed head of the demon.

According to the iconographic features Varahi has the face of boar and the colour of the storm cloud. She wears on her head a *karandamukuta* and is adorned with ornaments made of corals. She weilds the *hala* (plough) and the *sakti* and is seated under a *kalpa* tree. Her *vahana* as well as the emblem on her banner is the elephant. To this description Vishnudharmottara adds that she has a big belly. According to this authority she has six hands, in four of which she carries the *danda*, *khadga*, *khetaka*, and *pasa*, the two remaining hands being held respectively in *abhaya* and *varada* poses. The Purva karmagama relates that she carries the *saranga dhanu*, the *hala* and the *musala* as her weapons.

Leaving aside the iconographical references we have the archaeological treasures of the Matrikas from the Gupta period. The Gangadhar stone inscription of Kumara Gupta speaks of the Matrikas. In the chronological sequence the inscription of the early Chalukya ruler, we come across the names of seven mothers. The Bihar stone charter of Skanda Gupta refers to the Matrikas with Kartikeya. It may be pointed out here that from the time of the Guptas the Matrikas appeared in the sculptural representation throughout India. In the succeeding period the



Varahi Temple of Khakhara order,
Chaurasi in Puri District

Sakti cult became so prominent that the Mothers appeared in the mainstream of Indian religions in some form or other.

Orissa became a prominent centre of Saktism in Eastern India. According to the Hevajra Tantra, the Sakta-Tantrism flourished in four major centres of India—Uddiyana (Orissa), Purnagiri, Kamarupa and Jalandhara. The Kalika Purana (11th century A. D.) emphasises that the first Brahmanical tantric pitha in India originated and developed in Odra Desa (Orissa), the presiding deities of which were Jagannatha and the goddess Katyayani. The archaeological evidences prove the prevalence of Saktism in Orissa from the Gupta period, Viraja being the earliest Sakti goddess (in Mahisasuramardini form). The earliest group of Sapta Matrikas is sculpted in the Parasurameswar temple (7th century A. D.) of Bhubaneswar. The images here are seated in *Yogasana* flanked by Ganesa and Virabhadra. The next in order of chronology comes Matrikas of Vaital temple (8th century A. D.). Here the images beautifully sculpted bearing the art tradition of the Bhaumakaras. They are all seated in ease in *Yogasana*. They are not associated with the child. Chamunda is the presiding goddess locally known as Kapali. Dr. K. C. Panigrahi referring to the grim atmosphere created in the dark cella of *Khakhara* (Vaital) temple and a stone *yupa* in front of the temple suggests the prevalence of Kapalika form of worship in the temple. Chamunda was the presiding goddess of the Kapalika sect of Saivism. It is interesting to note that in Orissa a separate order of temple known as the *Khakhara* was erected in honour of a form of the Sakta deity. The Vaital shrine is the earliest shrine of this order. We have in Orissa as many as thirteen extant *Khakhara* temples in different stages of preservation. No male deity was ever enshrined in such temple. We have a separate *Silpasastra* in regard to this type of temple along with the temples of *Rekha* and *Pidha* order.

Varahi in the group of Matrikas in the Vaital temple is a sow-faced deity holding a fish and an axe in her two hands. She may be identified as Matsya Varahi. The ceiling of the Mukteswar temple (C. 10th century A. D.) contains a set of Saptamatrikas on an eight-petalled lotus, each

petal having a Matrikas. For the first time here we find the association of a child each (except Chamunda). Child was perhaps associated with the mother from about 10th century onwards. All other Matrikas set to be discussed in the succeeding pages are linked with children.

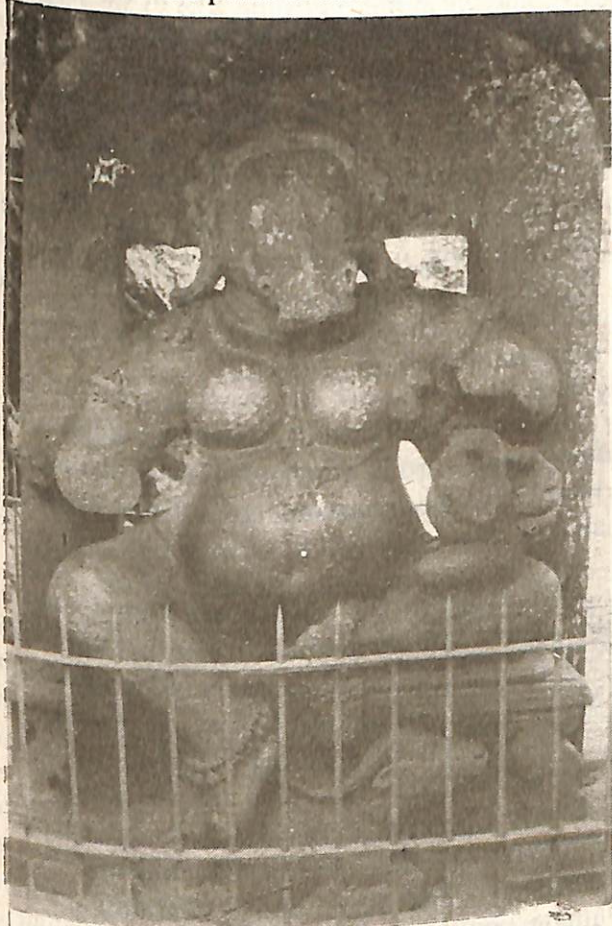


Varahi in Keonjhar District

Contemporary to this group there is a set of Saptamatrikas on the edge of the Markandesvara tank in Puri town (assignable to the Somavamsi period) and the Saptamatrikas of Sathalpur near Jagatsinghpur town. Facing to the temple is enshrined a beautiful image of Ajaikapada Bhairava in a separate structure signifying the tantric aspect of the Matrikas. The association of Bhairava with the Matrikas reminds us of the concept of Sakta Pithas. There is a set of Saptamatrikas in the front facade of the Simhanath temple near Vaideswar (in Cuttack district) on the river Mahanadi. Here the Matrikas on the door jamb flanked on either side by Ganga and Yamuna is a novel feature in Orissan architecture. The Saptamatrikas of Khiching in the district of Mayurbhanj are beautiful pieces of

art of the Bhanjas. Chamunda of the Matrika group is worshipped as Kichakesvari, the tutelary deity of the Bhanjas. The other Matrikas are preserved in the Khiching museum. At Belkhandi in the district of Kalahandi there is a group of Saptamatrikas (only lower portions are available) belonging to the early Somavamsis ruling from Sirpur (now in Madhya Pradesh).

The Orissa State Museum preserves four beautiful Matrikas from Dharmasala in Cuttack district. From the point of view of artistic imagery



Varahi, Jajpur

these are the best images so far discovered from Orissa. These images may be assigned to the late Somavamsis or the Gangas. Similar in style and workmanship are the two sets of Matrikas at Jajpur in Cuttack district. The Matrikas of colossal stature kept in the compound of S. D. O's residence are by far the biggest sculptures of this order in India. In broken stage they look terrific, but elegant. Another group of Matrikas (seven) is enshrined in a modern structure on the Dasavamedha ghat on the Vaitarani.

In the door lintel (now detached) of the Durga temple at Shergarh in the district of Balasore we come across in miniature form a set of Saptamatrikas flanked by Ganesa and Virabhadra. The temple is of Khakhara order assignable to 9th century A. D. A set of dancing Saptamatrikas is engraved in relief form in a part of the door jamb now preserved in the Balasore Museum. The workmanship of the images is of low order indicating their execution in a period of decadence.

Yoginis are basically the Matrikas. The 64 Yogini temples at Hirapur near Balkati and at Ranipur Jharial in Balangir district contain the images of some Matrikas. The above survey relates the prevalence of the cult of Saptamatrikas in Orissa. Of the seven Matrikas, Varahi and Chamunda became very popular in Orissa as their individual manifestations are found in different places.

A life-size image of Varahi (6 ft. 1 in. high and 2 ft. 9 in. wide) is enshrined in the temple of her



Enshrined image of Varahi, Chaurasi Temple
name at Chaurasi in Prachi valley. She is in perfect state of preservation. Seated in *lalitasana* on a

cushion placed on a plain legged seat with her hanging right leg resting on a life-like crouching buffalo, the figure holds in her right hand a fish and in the left a blood-cup. Decked in finger rings, anklets, valayas, armlets, two kinds of necklace, large ear studs and a *tiara* over the hair which rises upwards in spiral coils, the three-eyed deity is pot-bellied and is clad in a *dhoti*. The plain halo is oval, and the back side of the figure is cut out of the oblong back-slab. The temple enshrining the image of Varahi comes in the order of *Khakhara* and bears resemblance to the Gouri temple at Bhubaneswar. On stylistic ground the temple and the image are assignable to the early part of 10th century A.D. In the *Jagamohana* of the temple are seen two loose sculptures of Varahi seated in *maharajalilasana*, having a skull cup and a fish in two hands. The other is four armed holding in the lower left a skull cup, in the upper left a rosary, a water-pot in the lower right (upper left broken) associated with the mount buffalo and kneeling devotee. These two images were probably enshrined in some other temples in the locality.

An image of Varahi (3' 6" by 2' 2") in chlorite stone, two armed, seated in *maharajalilasana* holding a fish and a wine cup is enshrined in a modern temple in the village, Bonchuo in Anandapur Subdivision of Keonjhar district. She is worshipped as a *pitha devi* and is considered as important as Tarini of Ghatagaon. A colossal sculpture of Varahi (in broken state measuring 8ft. in height) at Narendrapur of Bhadrak district is the biggest image in Orissa. Narendrapur is famous for Patani Mangala who is enshrined in modern temple built by the Raja of Kanika.

Orissa has the distinction of having a shrine of Panchavarahi at Satbhaya in the district of Cuttack. Out of five one is lost and is replaced by an image of some other goddess. All the existing four images are of the same stature, seated in *Rajalilasana* holding a skull-cup and a fish each. Stylistically these sculptures are assigned to C.11th

century A.D. J.N. Banerjee is of opinion that the cult of Panchavarahi flourished only in Orissa as no other such shrine is not seen anywhere in India. The images are locally named as Batakumari, Panchurai, Vimalai, Kamalai and Janjali. This shrine has no history but is associated with a legend. Initially the goddesses acted as the protectress of the forest clad area in the previous Kanika state. People of the locality were not aware of them. The deities while wandering in the forest thought the way to receive homage from the people. They caused blazing fire in the jungle at night. People were terrified to see such unusual blazing fire in their haunted forest. The blazing fire continued for days together. The Raja of Kanika was informed of the happening. At last under the orders of the king the jungle was cleared. Surprisingly the fire extinguished. The goddesses told the king in a dream to worship them. A temple was constructed and worship was introduced. However, this is a very important sakta-tantric centre of Orissa.

An image of Varahi (two armed holding a fish and a wine cup) is worshipped in Balisahi of Puri town. Her workmanship is bold and similar in style to that of Varahi of Chaurasi.

The above survey reveals that Varahi not only flourished with the Saptamatrikas and 64 Yoginis but also rose to eminence as an independent cult. Most of the individual images of Varahi were carved and installed during the Bhauma cultural epoch (736-940 A.D.). This cult along with other sakta-tantric cults developed with the spread of Tantrism. It was during the Bhauma period Saivism, Saktism and Buddhism were amalgamated with tantrism resulting in creation of gods and goddesses of tantric character based on the Tantras.

Retd. Superintendent of Museums, Orissa,
Plot No.4918 & 4919,
Tankapani Road, Bhubaneswar-751014

Empowerment of Women in Orissa

Jyotirmati Samantaray

Development does not mean only economic development, through economic indicators like growth of G.N.P. and per capita income. It is a multifaceted concept. True development today is human development. The emphasis is on the formation of human capacity such as improved health, knowledge and skills and the use to which these are put in order to improve the quality of life. The development paradigm puts the focus of development on people and their participation. Implicit in participation is empowerment or transfer of power to the people.

The participation of women is setting the agenda for their own and other's development requires immediate action. This would require empowerment. At the sametime such an empowerment can come to women only with their socio-political advancement and an increase in their number and participation in decision making positions and political roles. There is thus a close interaction and dialectical relationship between women's empowerment on the one hand and their role in politics and decision making on the other.

The early 90s saw the reshaping of strategies of socio-economic development and the emphasis shifted from "development" to "empowerment". The constitution 73rd and 74th amendment Acts of 1992 constitute a major milestone on the road to the empowerment of women.

Orissa was carved out as an independent, political and geographical entity on 1st April 1936. In 1991, the male female ratio was reduced to 1000:976. Orissan women have played a prominent role in the freedom struggle. At least in the political participation of Orissa the position of women was not completely subdued. In this context, it is proposed to probe into political

participation of Orissan women in Assembly, Lok Sabha and Rajya Sabha.

Participation of Women in Orissa (1952-1995)

SL. No.	Year	No. of women in the Orissa Legislative Assembly	No. of Lady Ministers in the Assembly
1.	1952	03	01
2.	1957	05	01
3.	1961	05	01
4.	1967	05	..
5.	1971	01	01
6.	1974	04	01
7.	1977	07	..
8.	1980	05	01
9.	1985	08	03
10.	1990	09	01
11.	1995	05	01

Source :—Secretariat of the Orissa Legislative Assembly (Research and Reference Wing)

The table shows the percentage of women representatives are meagre in Orissa. Today even after 50 years of independence about only 7% of India's 545 member of parliament are women. The activists lament saying that, this happened in spite of the fact that 450 million voters of India are women. Criminalisation of politics, increasing role of money and mafia, are some of the main reasons for women not coming to participate actively in the political process. There is 30% reservation for women in the political sphere. Government have also introduced various developmental programmes like Integrated Rural Development (IRDP), Training of Rural Youth for Self-employment (TRYSEM), The Development of Women and Children in Rural Areas (DWCRA), Jawahar Rojgar Yojana (JRY), Indira Awas Yojana (IAY), Rural Sanitation Programme,

Mahila Samridhi Yojana (MSY), Council for Advancement of people's Action and Rural Technology (APART), etc.

Still, in our society many constraints restrict women moving forward, though there has been increase in women participation due to reservation. Majority of them feel that the women are politically meaningless and powerless. Orissan Society is male dominated. The real infrastructure at the grassroot level has not been made recognising the worth of women. Our society has yet to come forward to give full education, economic and political freedom to women. Women have been reduced to sex symbols. Cultural values are heavily loaded against the women in our state.

The opportunity is there in the political field but among the Chief Ministers who headed the ministry in Orissa only Smt. Nandini Satpathy was a woman. Similarly there are only 5 women who have represented Rajya Sabha till now. The representation in Lok Sabha is also low.

In conclusion, it can be said that, in Orissa innovative strategies are to be adopted for

empowerment of women. First, the level of education has to be raised from 37% to at least 70%. Special schemes are needed to raise women's literacy in tribal districts. Secondly, the poor and helpless women of remote villages are to be provided jobs to maintain their subsistence level of living. Regional imbalances of economic development have to be removed to give opportunity to women of remote rural villages to come up economically. Thirdly health & nutrition is important preventive measures have to be taken to check infant mortality in respect of girl child. Last but not the least, new legislations are necessary to save women from social violence. Special Courts are to be set up to punish women oppressors. Again, new thinking is necessary to create social awareness to give equality in case of property rights. The hard truth that women contribute potentially to the process of nation building and boosting of national psyche has to be comprehended without any pretension and without any further delay.

Assistant Information Officer,
State Information Centre,
Bhubaneswar.



Lift Irrigation in rural areas for development of Agriculture



Chief Minister Shri Janaki Ballav Patnaik inaugurating a Hindi Book, "Navakalevara Aur Ratha Jatra" authored by Shri Ashok Kumar Panteya in his Secretariat Chamber on 25-6-1996.



Chief Minister Shri Janaki Ballav Patnaik laying the foundation stone of the Life Sciences Institute near the Kalinga Hospital at Bhubaneswar on 10-6-1996.



Chief Minister Shri Janaki Ballav Patnaik is addressing the General Body Meeting of All-India Tele Communication Engineers at Tirupati Kalyan Mandap, Bhubaneswar on 9-6-1996.



Commissioner-cum-Secretary, Law Shri P. K. Mishra, Dr. Kanhu Charan Mishra and Shri Raj Kishore Mishra are on the dias on the occasion of Shri Jayadev Jayanti Celebration at Kenduli, the birth place of Jayadeva organised by I. & P. R. Department.



A Seminar on sensitizing women on protection awareness of environs was organised by Press News Service at Keshari Hotel, Bhubaneswar. Many environmentalists attended the workshop-cum-seminar on 8-6-1996.



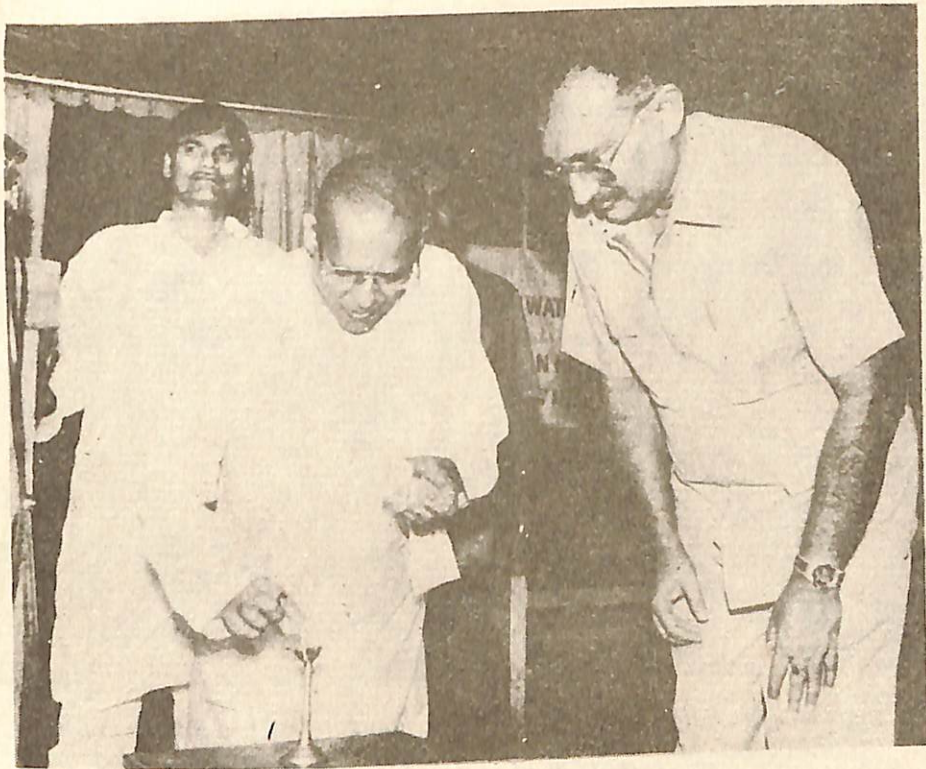
The State level function of Martyrs' Day of Raghu and Dibakar, the leaders of Ranpur Praja Mandal was held at Soochana Bhavan, Bhubaneswar on 4-4-1996.



Chief Minister Shri Janaki Ballav Patnaik inaugurating Gramya Unnayana Bhavan at Kendrapara on 24-6-1996. Minister, Higher Education and P. & C. Shri Bhagabat Prasad Mohanty is present.



Vice-Chancellor, Utkal University, Shri Gour Kishore Das; Commissioner-cum-Secretary, I. & P. R. Shri Ajit Kumar Tripathy; Shri Pathani Patnaik and Additional Director, I. & P. R. Shri P. K. Behera spoke on the occasion of State-level Madhusudan Das birth anniversary on 28-4-1996.



Chief Minister Shri Janaki Ballav Patnaik inaugurating the Rajahansa-1996 at the Regional Research Laboratory, Bhubaneswar on 24-6-1996.



Deputy Chief Minister Shri Basanta Kumar Biswal reviewing the progress of construction of Major Irrigation Projects in a meeting held at the Secretariat Conference Hall on 25-5-1996. Principal Secretary Shri Samar Ballabh Mohapatra & Chief Engineer Dr. B. P. Das are also present.



Chief Minister Shri Janaki Ballav Patnaik inaugurating two Sanskrit books "Smrutidutam" and "Satabdi Purusha Bhakti Sumanam" authored by Pandit Prabodh Kumar Mishra on 22-6-1996.



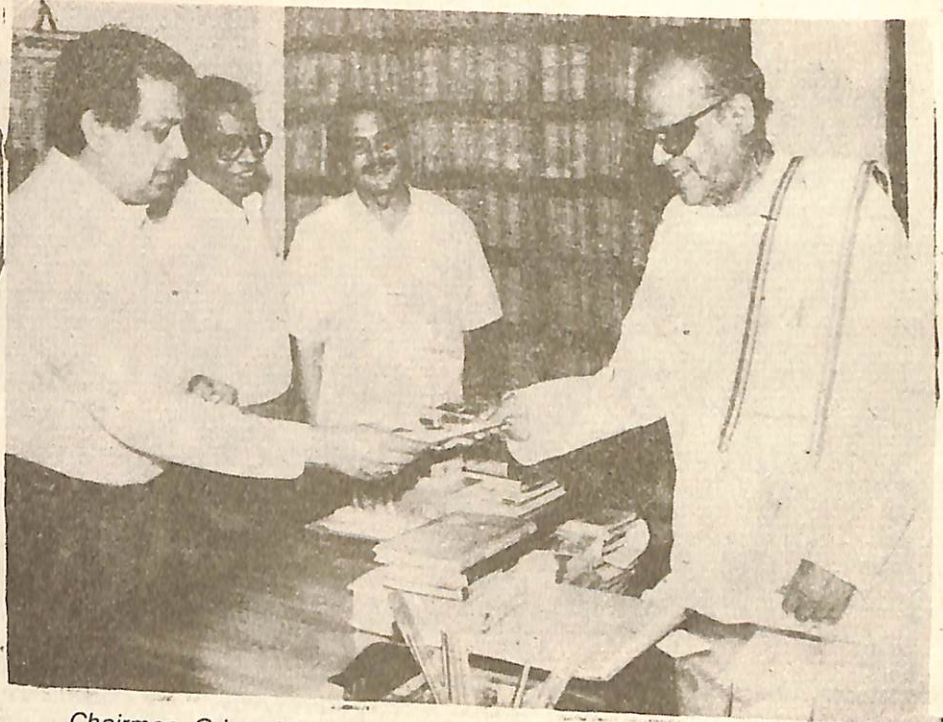
Chief Minister Shri Janaki Ballav Patnaik receiving a cheque of Rs. 10 lakhs towards Chief Minister's Relief Fund on 25-5-1996 from the State Bank of India, Bhubaneswar Division.



Hon'ble Governor Shri G. Ramanujam addressing the Diamond Jubilee Celebration of Orissa Day held at Unit-3 Exhibition Ground. Among others present are Commissioner-cum-Secretary I. & P. R. Shri A. K. Tripathy, Shri R. K. Mishra, Secretary, Orissa Sahitya Akademy and Director, I. & P. R. Shri Surasen Jena.



State Level Krushna Chandra Gajapati birth anniversary celebrated. Commissioner-cum-Secretar I. & P. R. Department Shri Ajit Kumar Tripathy, Commissioner-cum-Secretary, Department of Energ Shri Amulya Ratna Nanda, Prof. Gauri Kumar Brahma are present on the occasion.



Chairman, Orissa Mining Corporation presenting a cheque of Rs. 20 lakhs to Chief Minister Shri Janaki Ballav Patnaik towards Chief Minister's Relief Fund on 23-5-1996.



Chief Minister Shri Janaki Ballav Patnaik inaugurating the book entitled "Nisanga Padatika Part-II", an autobiography of poet Shri Rabi Singh in a celebration held at Soochana Bhavan on 21-6-1996.

Sambalpur — A Place of Tourist Impact

Basant Kumar Mohanti

Sambalpur is the gateway to Western Orissa, comprising the districts of Bargarh, Balangir, Kalahandi, Nawapara, Sonepur, Jharsuguda, Deogarh and Sundargarh. Sambalpur has been named after the presiding deity "SAMALESWARI". Though the district of Sambalpur has undergone so many administrative changes, it has been able to maintain its typical feature i.e. Sambalpuri "Tie & Dye" weaving art in cotton and silk. Its cultivated plains yield numerous varieties of paddy, some of which have got record appreciation in the country. The people use to speak their own romantic dialect known as "Sambalpuri Oriya".

Sambalpur is 311 KM away from state capital—Bhubaneswar. The district has been richly endowed with places of tourist impact. A few tourist spots are: Huma, Ushakothi, Hirakud, Pradhanpat and Narasingnah besides some other individual choice spots.

HIRAKUD DAM

Situated at a distance of 16 kms from Sambalpur in the north the Hirakud Dam is the longest main-stream Dam of the world bridging across the river Mahanadi. From horizon to horizon the reservoir forms the largest artificial lake in Asia which extends over 80km up-stream with a shore-line over 64km. A twentyone km drive on the dykes provides unique experience. The water is blue in winter and green in summer and becomes brown in rainy season. One can notice this change of colour while standing on the Minars in the North and in the south known as Gandhi & Nehru Minars. Hirakud is a multipurpose Dam for Irrigation, Power generation and flood control.

NRUSINGHNATH

On the northern slope of the Gandhamardan Hills in Padampur sub-division (Bargarh district) at a distance of 165 km from Sambalpur, there is a pilgrimage centre 'Narsingnath' identified as the seat of Buddhist University of Parimalgiri as described by Hiuen Sang. There stands the holy

temple "Nrusinganath of 12.20 mts high. It is revealed that Lord Vishnu in the form of Cat-God waits in ambush for the mouse-demon who took refuge in the depth of the crevices of the Gandhamardan hills. There are various water falls at different stages known as "Papaharan", (that washes away all sins by her transparent water) Bhimdhar, Gada-dhar, Gupta-dhar Pitru-dhar, Kapil-dhar and Chala-dhar and other water-falls are known as Gandhamardan, Sitakund and Gokund. Thousands of pilgrims from Phuljhar, Chatisgarh, Raipur and many other places of Madhypradesh come every year to take a holy dip in the sacred pools.

HUMA

Huma is situated at 32km from Sambalpur. It is famous for its leaning temple being the only one of its type and the second only to the leaning tower of Pisa, so far discovered. Tgis "Bimaleswar" temple is adorned with Lord Siva. The temple leans southward but its pinnacle stands vertical to the ground. Not only the main temple but also the auxiliary temples and the Northern Gate are leaning southwards.

PRADHANPAT

The distance is about 99km from Sambalpur on the National Highway No. 6. It is now in Deogarh district and close to Deogarh town on the back-drop of a green mountain. It is known as "Pradhanpat" water falls and one gets refreshing experience.

USHAKOTHI

On the way from Sambalpur to Deogarh on the National Highway of No. 6 falls Ushakothi (Badrama)—the wild life sanctuary. The sanctuary abounds in elephants, tigers, Sambars, black panthers and deer. One could have a sight of these animals within a radius of 16 kms from the two watch towers near the saline tank or the water-holes.

Journalist, Sambalpur

RESULTS OF LOK SABHA ELECTION, 1996, ORISSA STATE

STATEMENT SHOWING THE NEAREST RIVAL

Sl. No.	Name of the Constituency	Name	Name of the Party	Votes Polled	Difference	Party Elected
1.	Mayurbhanj	Kumari Sushila Tiriya Shri Salkhan Murmu	Congress B.J.P.	2,18,613 1,07,424	1,11,189	Congress Elected
2.	Balasore	Shri Kartika Mohapatra Shri Arun Dey	Congress Independent	4,11,168 2,20,487	1,90,681	Congress Elected
3.	Bhadrak	Shri Muralidhar Jena Shri Rath Das	Congress Janata Dal	3,36,265 2,71,693	64,572	Congress Elected
4.	Jajpur	Shri Anchal Das Shri Anadi Das	Janata Dal Congress	2,94,110 2,90,237	3,873	Janata Dal Elected
5.	Kendrapara	Shri Srikanta Kumar Jena Shri Batakrishna Jena	Janata Dal Congress	3,28,190 2,88,478	39,712	Janata Dal Elected
6.	Cuttack	Shri Biju Patnaik Shri Anadi Charan Sahu	Janata Dal Congress	3,44,092 2,86,285	57,807	Janata Dal Elected
7.	Jagatsinghpur	Shri Ranjib Kumar Biswal Shri Nityananda Samantray	Congress Janata Dal	3,65,157 3,17,879	47,278	Congress Elected
8.	Puri	Shri Pinaki Mishra Shri Braja Kishore Tripathy	Congress Janata Dal	3,52,837 2,40,529	1,12,308	Congress Elected
9.	Bhubaneswar	Shri Soumya Ranjan Pattnaik Shri Sivaji Pattnaik	Congress C.P.M.	2,98,289 2,19,870	78,419	Congress Elected
10.	Aska	Shri Biju Patnaik Shri Rama Chandra Rath	Janata Dal Congress	2,97,560 2,16,466	81,094	Janata Dal Elected

Sl. No.	Name of the Constituency	Name	Name of the Party	Votes Polled	Difference	Party Elected
11.	Berhampur	Shri P. V. Narasimha Rao Smt. V. Sugyana Kumari Deo	Congress Janata Dal	3,40,555 1,72,015	1,68,540	Congress Elected
12.	Koraput	Shri Giridhari Gamango Shri Jayaram Pangi	Congress Janata Dal	3,01,241 1,63,588	1,37,653	Congress Elected
13.	Nawarangpur	Shri Khagapati Pradhani Shri Jadab Majhi	Congress Janata Dal	3,20,103 1,16,299	2,03,804	Congress Elected
14.	Kalahandi	Shri Bhakta Charan Das Shri Subash Naik	Samata Party Congress	2,00,080 1,47,047	53,033	Samata Party Elected
15.	Phulbani	Shri Mrutunjaya Naik Shri Padmanav Behera	Congress Janata Dal	2,42,565 2,08,907	33,658	Congress Elected
16.	Bolangir	Shri Sarat Pattanaik Shri Ananga Udaya Singh Deo	Congress Janata Dal	1,99,303 1,87,601	11,702	Congress Elected
17.	Sambalpur	Dr. Krupasindhu Bhoi Shri Bijaya Singh Bariha	Congress Janata Dal	2,92,894 2,08,387	84,507	Congress Elected
18.	Deogarh	Shri Sriballav Panigrahi Shri Debendra Pradhan	Congress B.J.P.	2,20,648 1,73,266	47,382	Congress Elected
19.	Dhenkanal	Shri K. P. Singh Deo Shri Adwait Prasad Singh	Congress Janata Dal	2,69,966 1,83,872	86,094	Congress Elected
20.	Sundargarh	Kumari Frida Topno Shri George Tirky	Congress J.M.M.	1,71,937 1,58,864	13,073	Congress Elected
21.	Keonjhar	Shri Madhaba Sardar Shri Harihar Soren	Congress B.J.P.	2,79,971 1,54,061	1,25,910	Congress Elected

Economic Liberalisation and Industrial Development of Orissa

Prof. Pramod K. Sahu

Since independence India adopted economic planning as the process for its resource allocation and attaining balanced economic development. The economic environment was dominated by the licence regime under the State led economic growth programmes. Frequent state interventions in the economic affairs with political administered prices have resulted in huge fiscal deficit. Large scale dependence on public enterprises, including a good number of sick units, resulted in state monopoly increasing the inflationary pressure. Restrictions in currency movements and state controlled credit and interest rates reduced the investments in the private industrial sector. High tax rates and under development of the capital market are some of the other factors responsible for low capital formations in the country¹. Even though the basic objectives of the economic planning was to attain rapid economic growth coupled with social justice by reducing regional imbalances in the country, but due to a number of weaknesses in the implementation process even the minimum basic objectives could not be attained. As a result the country suffered with low economic growth, inadequate capital formation, large scale unemployment and huge domestic and external borrowings. The high rates of inflation coupled with rise in the prices of basic goods resulting in high cost of living, unequal distribution of economic wealth, widespread regional imbalances and many other economic miseries meted out to a large section of the population.

Regional Imbalance

One of the glaring examples of regional imbalances during the plan period is the East, which fed the prosperity of the Indian West with the wealth in its vast belly, is today the laggard, the vanished poor man of India, itself hungry and

groaning to be fed. The East, comprising Bihar, West Bengal, Orissa, Assam and all other North Eastern States, one of the most well endorsed in terms of human and material resources was the leader of Indian industry when British left India in late 1940s. Political confusion and lethargy, lack of prospective planning, ill constructed socio-economic growth pattern, the excess union activity and lack of work culture, cultural aversion to business and profit making are some of the reasons to explain away and even justify the fall of the East. As a result the total number of registered factories in the East in 1948-49 was 2,215, a number that grew to 12,331 in 1988-89. During the same period, factories in West grew from 1,519 to 29,464. Employment in the factory sector in the East in 1948-49 was 6,67,000 a number that grew to 14,20,000 in 1988-89. During the same period employment in West grew from 6,27,000 to 22,84,000. Fixed capital in manufacturing in East in 1948-49 was Rs. 8,796 lakh a figure that grew to Rs. 15,72,951 lakh in 1988-89. During the same period fixed capital in manufacturing in West grew from Rs. 6,153 lakh to Rs. 26,99,279 lakh. The total value of industrial output in East in 1948-49 was Rs. 38,546 lakh a figure that grew to Rs. 24,10,432 lakh in 1988-89. During the same period, industrial output in West grew from Rs. 24,532 lakh to Rs. 57,78,892 lakh².

Backwardness of Orissa

From among the backward states of the East, Orissa presents a paradoxical picture. There are two faces of Orissa, as a few basic facts about the East coast state show. Its population 31.512 million at the time of 1991 census-represents a little over 3.7 per cent of the country's iron ore reserves, about 24 per cent of coal, 70 per cent of bauxite (aluminium ore), 98.4 per cent of chrome ore, over 95 per cent of nickel ore, 32 per cent of

manganese ore, 31 per cent of mineral sands of strategic value and large reserves of other minerals, including gemstone. Orissa also has considerable hydel potential, vast stretches of fertile agricultural land, perennial rivers, a 480 Km. coastline with rich marine resources and some of the best tourist attractions in the country³.

But on the other hand, according to an expert review committee report to the Planning Commission in 1993, Orissa is the poorest State, 44.11 per cent of its urban population and 57.64 per cent of its rural population live below the poverty line, as against the national average of 33.4 per cent. Its per capita income in 1993-94 was Rs. 1,578 against the national average of Rs. 2,225. About 51 per cent of the people in the state are illiterate, and unemployment is high. The level of urbanisation is very low, 87 per cent of the population being rural. The industrial development as well as agricultural development in Orissa has lagged far behind its potential with irrigation yet to go a long way, the state's per capita food production was about 12 per cent below the national average in 1993-94. On the other hand, according to 1990-91 annual survey of industries the state had only 3.19 per cent of the total number of industries, 1.85 per cent of the industrial work force and 2.24 per cent of the value added by the country's manufacturing sector. The per capita investment in industry was much lower not only than the major states, but also than the national average⁴.

The major industries of the state are SAIL's Rourkela Steel Plant, NALCO's Alumina Refinery at Damanjodi near Koraput, Alumina Smelter at Angul, two fertiliser plants of the Fertiliser Corporation of India at Talcher and the Paradip Phosphates Plant at Paradip, a Heavy Water Plant at Talcher, the Hindustan Aeronautics Ltd. Plant at Sunabeda, and the facilities of Indian Rare Earth at Chatrapur. All these plants are in the central sector. Besides, there are also some basic plants in the private sector. They are the Larsen and Toubro's Utkal Machinery at Kansbahal, Dalmia's Orissa Cement Ltd. at Rajgangpur, Orient Paper Mill at Brajarajnagar, Indian Aluminum Ltd. at Hirakud, Indian Metals and Ferro Alloy Ltd.'s Ferro

Silicon Plant at Thiruvelly and Charge Chrome Plant at Choudwar, Ferro Alloys Corporation's Ferro-Chrome Plant at Bhadrak and J. K. Paper Mill at Rayagada. In addition, the two state-sector industrial promotion bodies, the Industrial Promotion and Investment Corporation Ltd. (IPICOL) and the Industrial Development Corporation of Orissa Ltd. (IDCOL) are playing major role in the industrialisation of the State.

Economic Liberalisation

In the first six months of the Narasimha Rao Government in 1991, radical measures were pushed through as significant deviations from the traditional economic process adopted in the country for the last forty years. As a first step, it abolished industrial licensing. This was a big change in the rules of the game. The game as it was played from the early 1950s was to create a corporatist state. Its purpose was to control competition, slow it down, and make it predictable. Now, with the abolition of industrial licensing there is no state entered protection against competition—except in products reserved for the government and small scale sectors⁵. The government also abolished import licensing on industrial inputs although it retains them on consumer and agricultural goods. There has been a significant reduction of central taxes, specially in respect to import duties. The maximum rate has fallen from 300 per cent to 50 per cent. This tariff reduction has brought in a whiff of foreign competition into some though not all-Indian markets. But it has made the future more uncertain for industry, and the only weapon that industry has against threat is to grow, increase efficiency and reduce cost. Besides import duties, excise duties have also been brought down and made more uniform. There has also been reduction in personal and corporate tax rates towards international levels, and made people somewhat more willing to pay. Finally, the abolition of the Controller of Capital Issue (CCI). This resulted in the abolition of bribery of speculators at the expense of companies has brought about a tremendous efflorescence of capital issue. They have quadrupled since before the reforms, and many more new companies have raised capital⁶.

The euphoria of economic reforms continued for some early years of its introduction. During this period the rate of inflation was brought down from more than 17 per cent to less than 5 per cent. The country's foreign exchange reserves reached a comfortable level of more than 20 Billion Dollars. The rate of growth of exports increased to 20 per cent during the last couple of years. There has been considerable increase in the business of the capital market of the country with more companies approaching it for raising new and additional capital. A good number of foreign investors have shown interest both for joint ventures and direct investments in the country. But due to some political and other social compulsions the pace of the reforms has been considerably slowed down during the last couple of years.

Economic Scenario of Orissa Under the Economic Liberalisation.

In the early years of liberalisation most of the investments, specially the foreign investments went to advanced regions where developed infrastructural facilities are available. These investments are mostly in areas of consumer goods and high tech computer and electronic industries. But, more and more domestic and foreign investors have started searching for new unexploited areas, specially for the investments in the basic and infrastructure sectors. As a result, Orissa received considerable attention along with other backward regions of the country. During the last five years out of the total investments made in the country, about 47.56 per cent was garnered by the states like Gujrat, Maharastra, Orissa, Karnataka and Uttar Pradesh. From this Orissa's share is about 9.69 per cent. The investments made in the power and steel sectors of Orissa amounted to Rs. 67,318 crores, which is about 70 per cent of the total investment made in these sectors in the country. The Indian Oil Corporation is going to have a project with investment of Rs. 4,000 crores. The three integrated steel plants coming up in near future are the Tata Iron and Steel Company (TISCO) with Rs. 4,600 crores, Larsen and Toubro (L & T) with Rs. 7,000 crores and

Ganapati exports with Rs. 6,000 crores of investments. The first two projects are going to be located near the Gopalpur-on-Sea in Ganjam District. The per capita investment in Orissa is going to be the highest with Rs. 10,116.

At the beginning of 1995, Orissa had investments of Rs. 80,000 crores, while it is Rs. 97,000 crores at the beginning of 1996. This indicates that during the controlled economic period most of the economic decisions were taken on political basis taking into account the political pull and push of each state with the centre. But in the economic liberalised period the decisions are mostly based on market mechanism and the investors look into the input advantages and generation of profit compared to other considerations. As a result more and more investments are flowing to Orissa, which has the abundance of mineral and other resources. The people of Orissa have to rise to the occasion and take advantage of the changed economic scenario. There should be change in the mind set both at the Governmental and social levels and develop better work culture to make Orissa not only to reach the national level but also to attain the international level in the years to come.

References :

1. Gadem, Ratnakar; Sources of Finance in Liberalised Market, Yojana, Planning Commission, New Delhi, Vol. 39, No. 9, July 1995, P. 24.
2. Thakur, Sankasan; A message to the East: Move; Manmohan, India and Bharat, The Telephoph Anniversary Supplement, July 7, 1995, P. 5.
3. Ray, Tapas; Pushing for Growth; Orissa's Development Potential and Problems; Frontline, Madras, February 23, 1996, P. 105.
4. Ibid; P. 106
5. Desai, Ashok V.; The First Four Steps to Freedom, Manmohan, India and Bharat, Op-Cit, P 6.
6. Ibid. P. 7
7. Centre for Monitoring Indian Economics, New Delhi, Survey Report, March, 1996.

Department of Commerce,
Berhampur University,
Berhampur-760007

South Eastern Railway's Role in Promoting Tourism in Orissa

K. S. Sahoo

South Eastern Railway has the proud privilege of serving the State of Orissa exclusively. Six out of eight divisions of this Railway have their territorial jurisdiction in the State. Therefore, improvement of railway infrastructure and services is on the top of SER's agenda.

Orissa offers not only nature in all its glory with its expansive sea beaches, verdant green forests, lofty mountains, variegated wild life and tribal life, but also its great tradition of architecture, monuments and sculptures. The entire length and breadth of Orissa is dotted with about 4000 monuments, which include early Jain caves and temples, Buddhist monasteries, chaitas and stupas, Hindu temples and ancient and medieval forts.

Considering the vast tourism panorama presented by the State, the Railway has provided excellent rail links to the important nodal points serving the places of tourist interest.

In the east, the golden triangle of Puri-Konark-Bhubaneswar accounts for about 70 per cent of the tourists visiting Orissa. The Jagannath Temple and the sea beach at Puri, the Lingaraj Temple, Nandankanan wildlife park and Dhauli Stupa at Bhubaneswar and the world famous Sun Temple of Konark, situated only 28 Kms. from Puri are delight for tourists, pilgrims and connoisseurs of history. Bhubaneswar and Puri are well connected with Calcutta by Puri Express and Shri Jagannath Express. Direct trains are available to New Delhi in the form of Utkal Express, Neelachal Express, Purushottam Express. Bhubaneswar is linked with Bombay by Konark Express and with Madras by Coromandal Express and Madras Mail and recently with a prestigious train to Delhi, i.e., Rajadhani Express.

The diamond triangle of Ratnagiri, Lalitgiri, Udaygiri contains the marvellous Buddhist

monuments of yore along Birupa river and are also approachable from Cuttack. The Bhitarkanika wildlife sanctuary is also situated in Cuttack district. Cuttack with a history of more than 1000 years is well connected by rail with important metropolitan cities of India.

Rourkela, in North Orissa boasts of the first public sector steel plant in India and the highest waterfall of Orissa, Khandadhar is located not very far. Being the Commercial Capital of Orissa, it is well connected by rail being located on the Howrah-Bombay Trunk route.

Sambalpur, an ancient city is famous for its tie and dye textiles, folk dance and Hirakud dam. Sambalpur is connected to New Delhi, Madras and Calcutta by direct trains.

In South Orissa, Berhampur is an important shopping centre for silk sarees and handicrafts. Gopalpur on Sea—a sleepy resort is only 16 Kms. away from the city. The largest inland lake Chilka is approachable from Berhampur. Berhampur is situated on the Howrah-Madras east coast line. The nervecentre of tourism in Orissa is slowly shifting towards Koraput having number of attractive tourist spots, which is having a varied and rich tribal life. Koraput is linked by Kottavalasa-Kirandul and Koraput-Rayagada Branch lines.

Chandipur, near Balasore has a unique seabeach where the sea recedes back for miles. This seabeach is flocked by tourists mostly from Bengal. Dhauli Express is a convenient train to come from Calcutta. The World famous Similipal wildlife sanctuary is near Baripada. When the Rupsa-Bangiriposi narrow gauge line would get converted to a Broad gauge, the tourists to Similipal would be benefited.

SPECIAL TRAINS:

During the festive occasions South Eastern Railway runs additional trains and augment existing trains services to cater to the tourist traffic materialising for Bhubaneswar, Puri, Balasore, Cuttack, Berhampur etc. During 1995-96, 5 pairs of additional trains were run during Puja period towards Puri direction and 9 pairs of train for Madras direction. In addition arrangements were made for augmentation of coaches on trains like Puri Express, Shri Jagannath Express, Coromandal Express to meet the traffic demand. During Rathayatra, six pairs of special trains from Kharagpur, Bhadrak, Cuttack, Palasa and Khurda Road were run towards Puri. Besides tourist coaches as and when programme are run providing requisite amenities.

NEW TRAINS :

The following train services have been recently introduced, which would boost tourist traffic in Orissa.

- (a) Introduction of prestigious Shatabdi Express between Howrah-Rourkela with effect from June 1995.
- (b) Introduction of Bhubaneswar-New Delhi Rajdhani Express with effect from 1-4-1994.
- (c) Introduction of Puri-Ahmedabad Express with effect from July 1995.
- (d) Extension of Ispat Express upto Sambalpur with effect from February 1996.

BOARDING AND LODGING FACILITIES:

(i) Dormitory and Retiring Room facilities are available at important rail links viz., Bhubaneswar, Puri, Khurda Road, Cuttack, Berhampur, Rourkela, Sambalpur for accommodating the tourists. Adequate arrangements for catering also exist at the important stations.

(ii) Additional Retiring Room facilities have also been planned for Bhubaneswar, Balugaon, Khurda Road, which will also cater to the tourist traffic.

Bhubaneswar : Provision of 5 Retiring Rooms with 2 beds each (Non-AC Rooms) with all required facilities.

Balugaon : Provision of 2 Retiring Rooms with 2 bedded each (one non-AC and one AC retiring room).

Khurda Road : Provision of one AC 2 bedded retiring room and one non-AC 2 bedded retiring room at Khurda Road Station in addition to existing one non-AC 2 bedded retiring room.

Reservation arrangements :

Computerised reservation arrangements have been provided at Puri, Bhubaneswar, Cuttack, Rourkela, Berhampur and Sambalpur. Out of these the last three locations were computerised during 1994-95. Computerisation of the reservation at Jharsuguda has been planned in the current year. The computerised reservation has helped the tourists coming from outside.

SER Hotels :

South Eastern Railway is the only Railway which runs two prestigious hotels, one at famous sea beach of Puri and another at Chhotanagpur plateau, Ranchi. SER Hotel, Puri earlier known as BNR Hotel was founded in 1922, which is patronised not only by inland tourists but by tourists from various parts of the globe. The hotel has all facilities for tourists, i.e., Airconditioned and non-Airconditioned rooms, a bar, a retiring room, telex services, STD/ISD facilities etc. The hotel also provides train reservation facilities. The attraction of this hotel is its exclusiveness and personalised service.

Seasonal discount of 20 per cent is offered to customers including tourists in lean period when they book their accommodation in S.E. Railway Hotel, Puri.

Week-end package tour:

For the first time in the eastern region, a novel week-end package tour programme with assured rail-reservation from Calcutta to Orissa and back has been introduced by S. E. Railway in collaboration with OTDC for promotion of tourism.

The novel venture has been started from August '94. These are in three directions-Puri, Bhubaneswar and Balasore.

1. The first package (Puri, Konark, Bhubaneswar, Nandankanan) meant for Puri begins on every Friday by 8009 Up Shri Jagannath Express and is back to Calcutta by Down Jagannath Express on every Monday.

2. The second tour (Bhubaneswar-Konark-Puri meant for Bhubaneswar) also starts on every Friday by 8007 Up Puri Express and is back to Calcutta on every Monday morning by Down Puri Express.

3. The third tour (Chandipur-Nilagiri-Panchalingeswar-Remuna) for Balasore starts from Howrah on every Saturday morning by 2821 Up Dhauri Express and is back by Down Dhauri Express, on every Saturday night.

While the S. E. Railway takes care of the tourists in their week-end rail journey by giving confirmed reservation OTDC provides local arrangements for lodging, touring and sight-seeing.

Tourist Offices in Railway premises:

In order to guide the tourists and furnish all relevant tourist information S.E. Railway has provided accommodation to set up tourist information centres at various stations viz., Bhubaneswar, Puri, Cuttack, Rourkela,

Jharsuguda, Rayagada, Berhampur, Jajpur Road, Sambalpur. Even this facility has been provided in stations outside Orissa like Vizianagaram.

NEW LINES:

In December 1995 the biggest Railway project of the decade Koraput-Rayagada rail link was dedicated to the nation by the-then Prime Minister Shri P. V. Narasimha Rao. This rail link covers the most picturesque districts of Koraput and Rayagada having maximum tribal population and tourism potential. There are several important places of tourist interest like Nandapur, Daduma, Sabarsrikhetra etc. near Koraput. Orissa Government is planning in a big way to develop these places as tourist attraction. The other rail link in the offing are Banspani-Daitari rail link, Talcher-Sambalpur rail link, Lanjigarh Road-Junagarh rail link and Khurda Road-Balangir rail link. When commissioned these new lines would give a big fillip to the tourism in Orissa by connecting beautiful places in interior Phulbani, Keonjhar, Boudh districts.

Chief Public Relations Officer,
South Eastern Railway,
11, Garden Reach Road, Calcutta-700043



*Bank loans being given in rural areas
for development of Agriculture*

A Study of Housing Finance for the Urban Sector in Orissa

Subas Ranjan Barik

1.0. INTRODUCTION

1.1. The basic needs of life are air, water and food besides that of cloth and house. Despite quantitative increase in the housing stock over successive plan periods the housing situation in the century continues to be daunting. As per available figures in 1951 housing shortage in India was 9.00 millions and as per estimates of National Buildings Organisation, it will be 41.00 million units by 2001 A.D.

The gap between demand and supply in the housing sector has also been widening in the state of Orissa. National Housing Bank has estimated the housing shortage in Orissa by the turn of this century would be 1.41 million while it was 1 million according to 1981 census.

Despite an increase in usable housing stock from 688 lakh units in 1961 to 1027 lakh units in 1982, shortage increased from 152 lakhs units to 233 lakhs units which is estimated to be 410 lakhs units in 2001.

In recent years RBI has actively involved in evolution of a sound and healthy housing finance system recognising the volume of funds required. Resources available in formal sources are inadequate. A committee headed by Dr. C. Rangarajan recommended institutional frame work for housing finance like :—

(a) Regional and local level institutions household savings providing home loans include private sector as well.

(b) National level apex housing finance institutions like National Housing Bank (NHB) was set up at the apex level.

RBI has been encouraging commercial banks to set up subsidiary companies for housing either on

their own or in collaboration with other financial institutions including HUDCO and HDFC which have done pioneering work in the field of housing finance. The housing finance companies established by the insurance corporations together with the housing finance subsidiaries of commercial banks should go along in filling the institutional gap which exists for delivery of credit for housing.

Housing activities are being financed by both institutional and non-institutional sources. Institutional sources include central housing finance institutions such as Housing and Urban Development Corporation (HUDCO), Housing Development Finance Corporation Ltd. (HDFC), Provident funds, Unit Trust of India and several institutions in co-operative sector. Public and private sector employers also provide houses or housing loans for their staffs. Housing activity is, however, still financed predominantly by households themselves.

As land prices have escalated greatly and the cost of construction materials keeps on rising there is a marked tendency on the part of relatively younger persons to acquire houses. In view of this strong motivation, it should be possible to devise schemes which encourage additional savings, both past and future for the housing sector.

It has to be recognised that the availability of concessional finance for housing is limited. Low cost subsidised funds, to the extent these become available, have necessarily to be beamed to weaker sections of society through appropriate institutions. A large and growing housing finance system has necessarily to operate on non-subsidised rates of interest.

1.2 Principles for a sound housing finance company are—

- (a) It should be self sustained and can recover cost.
- (b) It should not depend upon the refinance of NHB but should raise funds from open market by developing new instruments.
- (c) Secondary market for house mortgages should be developed to attract more resources into housing sector.
- (d) Professional personnel and mechanised accounting & records should be used.
- (e) It should obey the rules of NHB.

1.3 DEVELOPMENT OF HOUSING FINANCE

The emerging and expanding institutional set up notwithstanding the system of credit delivery of housing is still quite underdeveloped in the context of huge demand for housing.

Certain important points must be kept in mind while planning the development of housing finance system—

(a) Housing finance institutions from the public and private must become self sustaining bodies which work on full cost recovery basis— lower rate for smaller loans and higher rate for larger loans. National Housing Bank is there to refinance them.

(b) They should mobilize household savings at market rate. They should devise innovative instruments. RBI stipulated companies are to mobilize deposits of maturities beyond two years only. They are allowed to give 14 per cent and 11 per cent on bank deposits. A linkage between deposits and home loans should be established.

(c) The housing finance companies should stress both demand and supply in their activities.

(d) The working of these companies is to be regulated, monitored and supervised by RBI through 'NHB'.

(e) Finance can not grow much unless steps like enforcement of mortgage and development of secondary market for mortgage are taken.

2.1 Housing Scenario in India

In India as population is much more, the demand of house is certainly more but supply is

not accordingly adequate. So there is shortage in housing sector. As it is highly capital intensive, sufficient funds are not available. According to estimation made by Federation of Indian Chamber of Commerce and Industry (FICCI) the requirement of funds for housing during 8th plan will be about Rs. 51,576 crores which is based on 1989 price which will give direct employment to 15.4 million persons and indirect employment to much more than this.

Housing shortage in 1981 was 16, 3 millions in rural areas, 7, 8 millions in urban areas having total 23.3 millions, out of that 14 million for replacement of kutcha houses and 1.2 million for replacement of old houses.

More than 23 million people being homeless, over 572 lakhs living in slums, 50 per cent of urban households are staying on over-crowded in one-room tenements. According to NBO in 1991 shortage was 31 million of which 20.6 million in rural areas and 10.4 million units in urban areas. In 2001 shortage will be 41 million while in 1996 it will be 35.9 millions.

ESTIMATED HOUSING SHORTAGE IN INDIA (in millions)

YEAR	RURAL	URBAN	TOTAL
1951	6.5	2.5	9.8
1961	11.6	3.6	15.2
1971	11.6	2.9	14.5
1981	16.3	7.0	23.3
1991	20.6	10.4	31.0
1996	23.2	12.7	35.9
2001	25.5	15.5	41.0

Source—Housing need, August, 1988 (NBO)

ESTIMATED HOUSEHOLDS HOUSING STOCK & HOUSING SHORTAGE IN YEAR 1991 AND 2001

Particulars	1991			2001		
	Rural	Urban	Total	Rural	Urban	Total
House hold	113.5	47.1	168.6	297.0	72.2	289.2
Useable housing stock	92.7	36.7	129.6	111.5	56.7	168.2
Housing shortage	20.6	10.4	31.0	25.5	15.5	41.0

Source—Hand book of housing statistics part-I (1990) NBO

Total investment required according to 1985 price from 1982 to 2001 for both removing backlogs and creating new houses will be Rs. 1,90,000 crores while that of 1991-2001 will be Rs. 1,40,000 crores.

PLAN WISE INVESTMENT IN HOUSING SECTOR IN INDIA (RUPEES IN CRORES)

Plan period	Public sector Investment	Private sector	Total	percentage of housing investment to total Investment.
1st	250	900	1,150	34%
2nd	300	1,000	1,300	10%
3rd	425	1,125	1,550	15%
4th	625	2,175	2,800	12%
5th	1,044	3,636	4,680	10%
6th	1,491	11,500	12,991	7.5%
7th	2,458	29,000	31,458	9.0%

Source—Draft National Housing Policy, May—1990

2.2 HOUSING FINANCE AGENCIES IN INDIA

1. National Housing Bank started from 9th July 1989 under statutory act wholly owned subsidiary of Reserve Bank having following schemes—

- Home loan account scheme.
- Housing finance companies.
- Refinance schemes.
- Land development and shelter projects.
- Rental housing projects.

2. Housing and urban development corporation Ltd. (HUDCO) which is incorporated in 1970 having aims to finance for housing to economically weaker and low income group. Generally 55 per cent or more of total investment is for EWS & LIG. It mainly gives loans to Housing Boards and other housing agencies. Upto 31-3-1990 Rs. 4346 crore loans were sanctioned and Rs. 2789 crores released and about 82.48 per cent of its investment were made for construction of houses.

PROGRAMME-WISE PERFORMANCE OF HUDCO UPTO 31-3-1990

PROGRAMME	LOAN SANCTIONED (IN RS. CRORES)
Urban housing	2599
Rural housing	538
Land acquisition	259
Staff housing	232
Co-operative housing	216
Urban infrastructure	215
Construction loan	209

(1)	(2)
Basic sanitation	52
Improvement of slum	15
Building material	11
Total	4346 crores

Source – Information from HUDCO

3. Scheduled commercial banks—Banking are also involved in housing finance. Upto 1988 Rs. 1279.97crores have been advanced while in 90-91 it was Rs. 225 crores.

4. Other agencies—like HDFC has given total loan of Rs. 1556.96 crores. Upto 1989 G.I.C. has disbursed loans of Rs. 538.73 crores upto 31-3-1990.

3.1 HOUSING SCENARIO IN ORISSA

As per 1981 census the housing shortage in rural area is 0.73 million and in urban area 0.27 million. According to estimations made by 1991 total shortfall would be 1.21 million and by 2001 it would be 1.41 million. Government of Orissa has estimated in 1987 for 1991 Rs. 556 crores and Rs. 878 crores for the decade 1991–2001. Housing shortage is growing due to urbanisation. In 1981 there were 108 towns while in 1991 there were 119 towns population increased to 42.32 lakhs from 31.10 lakhs. During 8th plan period 2,75,000 units are required in rural sector and Government of Orissa provided Rs. 11,531 lakhs for housing and urban development.

3.2 HOUSING AGENCIES IN ORISSA

There are 2 development authorities, 6 improvement trusts, 22 special planning authorities. With State Housing Board upto 31st March 1990 53,226 no. of houses are constructed. Except these Orissa Co-operative Housing Corporation, Private organisations like AB Home finance, Canfin housing finance, SBI home finance etc., LIC, GIC are also helping in this sector.

HUDCO has started giving loans in India from 1973. Till 31-3-1990 total loan sanctioned was Rs. 121.79 crores and dispersed Rs. 67.62 crores.

Out of 81,935 units constructed with HUDCO finance upto 1990: 51,613 units in urban and 30,318 units in rural areas. Housing development finance corporation started working from 26th July 1986 in Orissa. Upto 1986 total loan sanctioned by it is Rs. 25 crores and disbursed Rs. 22 crores. It stressed to finance individuals like employees of different organisations.

LIC home finance, AB home finance, SBI home finance etc, are also working in Orissa. There are different schemes used by Government and other agencies to give houses/loans for this purpose.

ANNUAL COMMITMENT BY HOUSING FINANCE AGENCIES FOR ORISSA
(Rs. in crores)

Name of Housing Finance Agencies	Annual Commitments	
	Urban housing	Rural housing
AB Home Finance	30	30
HDFC	12	50
LIC Home Finance	5	40
SBI Home Finance	10	10
CANFIN Home Finance	..	5
HUDCO	12	10
Total	69	145

Mainly HUDCO finance for rural housing and CANFIN Homes in private sectors. In future private organisations are expected to play a vital role. Till today negligible effort is made for rural housing. In 8th plan period Orissa State Co-operative Housing Corporation has proposed to borrow Rs. 3,655.75 lakhs from LIC and loans given to societies is Rs. 4,116,76 lakhs till 31st March 1994.

3.3 TYPES OF FINANCE

Mainly housing finance is given as term loans with mortgages. Some organisations like

HUDCO, NHB etc, are purely Government organisations give loans to only corporate or Government bodies not the individuals. But some corporate bodies and private organisations are giving loans to both individuals and organisations long term loans for 10 to 25 yrs. and in case of co-operative societies it may be in 36 instalments. It may be from Rs. 20,000 to Rs. 2,00,000. In some cases it may be extended upto Rs. 5,00,000 to individuals. Some organisations give bridge loans also. All are long term loans. So rate of interest varies from 10 per cent to 15 per cent depending upon the amount of loan.

3.4 SOURCES OF FINANCE

The source may be broadly divided into two parts :

- (a) External finance,
- (b) Internal finance

External finance— In external finance share capitals, Bonds securities, loans from Government Organisations—LIC, GIC, etc., using fixed deposits from contractors and others. Some organisations get loans from organisations outside India like World Bank etc. private companies get finance from owners fund.

4.0 Conclusion—

Housing is a basic need but it is capital intensive Government should give new types of housing finance schemes and policies which will help the poor and middle class people to acquire a house. Loan procedure and repayment conditions should be more flexible. Influences should not work but the actual need or necessity should be taken into consideration.

C/o Niranjan Barik,
Issue Section General,
Utkal University Office, Vani Vihar,
Bhubaneswar—751004.

Effects of Storage Conditions on Rice Protein

Dr. Ramesh Chandra Parida

Storage of grain is as important as its production. Improper storage conditions not only cause loss of grain due to rodents and insects, but also, change physical and chemical characteristics, which affect its nutritional quality adversely. Therefore, many research workers have attempted to evaluate the nature and extent of changes that grains undergo under different conditions of storage for different lengths of time. The following pages depict the outcome of some such efforts with regards to the changes in protein content and composition of protein in rice grain.

Esh et al. (1951) observed that when rice is stored for several years, its total nitrogen content, which is a measure of protein content, diminished significantly. Besides, the solubility as well as the digestibility of protein also showed a similar trend. However, Rao et al. (1954) reported that the total nitrogen content of milled rice remained constant during storage for one year, under ordinary conditions, though the solubility of protein was affected. Such a decrease in solubility was due to denaturation of protein. Therefore, it can be concluded from these observations that on storage, the protein content of rice does not change initially, but when stored for a longer period, it is adversely affected. This view was confirmed from the work of Parida et al. (1993).

Hunter et al. (1956) observed a significant loss of free amino acids in aged parboiled rice, stored at 27.8°C for 28 days. On the other hand, Schroeder et al. (1965) noted an increase in the number and concentration of free amino acids in rice, when stored under poor conditions. They explained it to be due to the growth of a microorganism "Fusarium Chalydosporium",

which is capable of hydrolysing proteins. Therefore, it can be concluded that storage under proper conditions, although does not affect the protein content of rice during the early period, there is a loss of free amino acids. However, when stored under poor conditions, protein gets hydrolysed to amino acids, resulting in an increase of the later and obviously, a loss of the former. A similar observation had also been made by Primo et al. (1968). According to them free amino acid content of rice vary during storage, which is more significant in the outer layers, where it decreases. It may be due to the fact that the outer layers are more exposed to the environment. However, they also agreed that storage under poor conditions increased the free amino nitrogen, due to the action of contaminants and micro organisms capable of hydrolysing proteins.

Changes in physico-chemical properties of protein during storage of rice at different temperatures was studied by Villareal et al. (1976). They reported that both at a low temperature of 2°C as well as at a relatively high temperature of 29°C, there was a decrease in salt soluble fraction of protein in all the samples studied. It is because this fraction is more concentration at the periphery of the grain and as such is more exposed to the environment. Besides, it constitutes the active proteins, namely, albumin and globulin, which are more susceptible to denaturation as compared to the storage proteins, constituting prolamin and glutelin. However, the loss of salt soluble fraction during storage is comparably less at the low temperature.

Moisture content of the grain influences the protein and amino acid contents of rice during storage. Beloglazova et al. (1976) observed that during storage the protein content decreased and

nonprotein nitrogen and free amino acids increased with the increase in moisture content of rice grain (range 13.5 per cent to 22.1 per cent). So, they concluded that higher moisture content favoured the chemical changes in the grain which generate free amino acids and nonprotein nitrogen at the cost of protein. According to them rice should be stored with a moisture content of 14.5 per cent. At higher moisture levels, storage results in the deformation of cells at the aleurone layer, which decreases rice quality.

That the moisture content of rice influences its protein content and protein characteristics has also been reported by Prudnikova et al. (1977). According to them, under most of the storage conditions, the rice protein is stable, but some decrease in protein solubility and increase in ammonia occurs in rice at 20°C–30°C temperature and 80–90 per cent relative humidity. They further observed that protein of stored rice can be stable under different climatic conditions, provided its moisture content does not exceed 15 per cent.

Drying of rice before storage also has a bearing on its protein. It has been observed by Fedorova et al. (1977) that as the grains are heated for drying the protein solubility decreases and non protein nitrogen content increases. When rice is dried at 40°C, its proteases are activated but at 50°C those are inactivated and protein hydrolysis decreases. During low temperature drying the protein becomes more susceptible to proteases attack, whereas, 50°C it becomes less susceptible, because of molecular compacting from hydrophobic interaction. Rice with high protein content has been found to be more resistant to heat damage than the low protein ones. The best drying temperature according to them is 50°C.

The shelf-lives of rice and rice flour were studied by Kim et al. (1988). They monitored the quality, the correlation between physico chemical properties and sensory scores by storing rice and rice flour for 6 months at different temperatures and observed that the shelf-lives of those were 378 days and 358 days at 13°C and 163 days and 145 days at 23°C respectively. According to them, rice can be stored for longer at a relatively lower

temperature, without affecting its nutritional quality. It is because, protein, upon which the nutritional value of rice is largely dependant gets adversely affected by storage at higher temperatures.

Parida and Mitra (1993) stored rice for 2 years at 30°C in air tight containers. They observed marginal decline in protein content as well as the protein fractions in the first year of storage, but, at the end of the second year all these declined sharply. Out of the four fractions of rice protein, glutelin, the major one suffered from the most quantitative loss, followed by albumin, qualitatively the most superior one. However, the percentage of loss was the maximum for albumin, followed by globulin, glutelin and prolamin. Therefore, the study suggested that prolonged storage of rice affects its nutritional quality seriously.

From all the above observations, a general conclusion can be derived that rice should be stored at a lower temperature after the grains are dried at 50°C and the moisture content of it, should be limited to 15 per cent, in order to minimise the quantitative loss of protein and its quality. Besides, the period of storage, under ordinary conditions should be one year and in no case it should exceed two years.

REFERENCES :

1. Beloglozova, L.K: Prudnikova, T.N., Fedorova, S.A. and Shcherbakov, V.G.(1976). *Izv. Vyssh. Uchebn. Zaved, Pishch. Tkhol.*, 6: 17–20 (Russ).
2. Esh, G. C. Som, J.M. & Bagchi, E.N.(1951). *J. Proc. Inst. of Chem. (India)*, 24(10): 23.
3. Fedorova, S.A., Prudnikova, T.N. & Beloglazova, L.K.(1977). *Isv. Vyssh. Uchebn., Zaved, Pishch Tekhnol.*, 5:57–61(Russ).
4. Hunter, I.R:Febrel. T.E. & Houston, D.F.(1956). *J. Agric Fool Chem.* 4(10):874.
5. Kim, B.S. Park, N.H. & Shin, D.H.(1988). *Han'guk Yongyang Siklyong Hakhoechi*, 17(3):220–5(Korean).
6. Parida, R. C. & Mitra, G.N.(1993). *Current Research*, 22:5–7.

7. Primo, E. Casos, A:Barber, S. Benedito do Barber, C. & Sanchoz, L.(1968). Rev. Agron. Y Technol. Alimentos, 8(2):231.
8. Prudnikova, T.N., Anastasiadi, I.P. & Gospadinova, V.S.(1977). Izv. Vyssh. Uchbn. Zaved, Pishch. Technol, 4:55 7(Russ).
9. Rao, N., Viswanath, M., Mathus, T. Swaminathan, P. B. & Subrahmanian, V.(1954). J. Sci. Food Agric. 5:405.

10. Schroeder, H. K.(1965). Cereal Chem. 42:539.

11. Villareal, R. M., Resurreccion, A.P., Suzuki, L. B. & Juliano, B. O.(1967). Staerke, 28(3):88-96.

Department of Chemistry,
College of Basic Science & Humanities,
Orissa University of Agriculture &
Technology, Bhubaneswar-751003.

Orissa Day was organised at Talkatora Indoor Stadium in New Delhi on 1st April, 1996. Hon'ble Justice of Supreme Court of India Shri G. B. Patnaik attended as Chief Guest on the occasion. Noted writer, poet and artist Dr. J. P. Das was the Chief Speaker in the function. Thousands of Oriya people residing in Delhi including Member of Parliament, Journalists, Advocates, Social Workers, students etc. witnessed the Diamond Jubilee celebration. Popular Baishnab Pani Gitinatya "Dronacharya Badha" was presented by Sanskruti Vihar, Cuttack. Principal Resident Commissioner, Shri Pritiman Sarkar delivered the welcome address. Shri Tapan Das, State Information Officer proposed a vote of thanks at the end of the function.



Sustainable Agriculture

Pranab Kumar Ghosh

The concept 'sustainability' is hardly new, as it has long been a familiar notion in fisheries and forestry.

Sustainability is defined by the dictionary as the ability to maintain an effort at a given level or intensity. Many traditional agricultural production systems were characterized by sustainability in this static sense. They were able to maintain a continuous, stable level of production for many centuries. However, the needs of growing numbers of people have received changes in production practices, many of which impose heavy demands on natural resources. Concern for the earth's threatened ecology has increasingly focussed on agricultural technology as a major contributor to the problem (CIP Circular, 1991).

However, ecologists in the 1960's applied the term 'sustainability' at the planetary level and elevated it into something like a holistic goal. Sustainable agriculture was defined (CGIAR) as the "successful management of resources for agriculture to satisfy changing human needs while maintaining and enhancing the quality of environment and conserving natural resources." Hence, CGIAR's research is directed at finding alternatives to reliance on fertilizers, insecticides, herbicides and fungicides to keep crop production rising. Such "interventions" can involve using biological means of pest control, taking advantage of cultural practices, finding better agronomic methods such as minimum tillage for soil erosion, developing substitutes for slash and burn systems and prospectively, exploiting biotechnology. Resolving this conflict essentially means achieving a better balance between work on productivity and sustainability.

The International Union of Conservation of Nature (IUCN) defines sustainable development

as "improving the quality of human life while living within the carrying capacity of supporting ecosystems." The concept of carrying capacity implies the conservation of natural ecosystems as well as their continuous improvement through research, training, technology, community co-operation and public policies (Naik, 1993).

Harwood (1988) defined "sustainable agriculture" as an agriculture that can evolve indefinitely towards greater human utility, greater efficiency of resource use and a balance with the environment that is favourable to humans and to most other species.

Edwards (1988) defined sustainable agriculture "To produce an abundance of safe and nutritious food that is sustainable both economically and physically, and that has positive effects or at least minimum adverse effects on human health, natural resources, environmental quality and rural communities."

In legislation establishing the Leopold Centre for Sustainable Agriculture at IOWA State University, sustainability was defined in terms of preservation of land productivity and quality supported by activities which maintain economic and social viability.

Ruttam (1988) defined sustainability as: the development of technology and practices that maintain and/or enhance the quality of land and water resources, and the improvement in plants and animals and the advances in production practices that will facilitate the substitution of biological technology for chemical and mechanical technology.

Lowrance et al (1986), suggested that sustainability be addressed by recognizing constraints at the field, farm, watershed and

national or international levels. In so doing, sustainability can then be applied at the agronomic, microeconomic, ecological or macroeconomic level. They defined agronomic sustainability as the ability of a tract of land to maintain acceptable levels of production over a period of time. This requires evaluation over the course of multiple growing seasons.

A sustainable agricultural system is defined as one that provides for the replacement of any resources removed (on a global scale). Lamm (1989) has documented the rapid rise of sustainable agriculture to what he terms common currency in the agricultural community.

Françis (1990) points out that crop cultivars have been selected for improved productivity, wider adaptation and sustainable production since before the time of recorded history.

Sustainable agriculture is a balanced management system of renewable resources including soil, wildlife, forests, crops, fish, livestock, plant genetic resources and ecosystems without degradation and to provide food, livelihood for current and future generations maintaining or improving productivity and ecosystem services of these resources. Sustainable agriculture system has to be economically viable both in the short and long term perspectives. Natural resources, not only provide food, fibre, fuel and fodder but also perform ecosystem services such as detoxification of noxious chemical within soils, purification of waters, favourable weather and regulation of hydrological process within watersheds. Sustainable agriculture has to prevent land degradation and soil erosion. It has to replenish nutrients and control weeds, pests and diseases through biological and cultural methods.

Microeconomic sustainability then involves the basic unit of productivity, the farm and reflects the level of decision making to shift productivity among tracts of land.

Ecological sustainability is the maintenance of life support capacity or large scale landscape units overtime. For example watershed.

Ecological sustainability must be accomplished to ensure the achievement of long term economic and agronomic sustainability.

Macroeconomic sustainability is based on monetary and fiscal policies at the national or international scale which determine the focus of national economies and the ability of national agricultural systems to feed their population.

Sustainable agriculture should involve the successful management of resources for agriculture to satisfy changing human needs while maintaining or enhancing the quality of the environment and conserving natural resources. No system can be considered sustainable if it cannot accommodate increased demand. Shifting cultivation is found not sustainable over the time because under population pressure intensive agriculture became the alternative. Therefore, one system may not be found suitable under all agro ecosystem, what is sustainable in one place may not be in other. But for each agro-ecosystem one or, a few other systems may be found sustainable; those are ecologically sound, economically profitable, socially equitable and politically supported. Therefore, sustainability can only be achieved by considering all aspects of crop production and taking the short and long term variable and their impact on yield into account (Rath, 1993).

Much of confusion over sustainable agriculture has been generated by various terms used to refer to it. These include "Alternate Agriculture", "Organic Farming", "Regenerative Farming", "Ecological Agriculture", "Ecofarming", "Permaculture", "Low Input Sustainable Agriculture" (LISA).

It is known as ecofarming as ecological balance is given importance. It is also called organic farming as organic matter is the main source for nutrient management. But some scientists consider that it is a misconception to think that sustainable agriculture is by some as integrated, low input and highly productivity farming system.

DIFFERENCES BETWEEN MODERN AND SUSTAINABLE AGRICULTURE

Sustainable agriculture substantially differs from modern day chemical based agriculture. The differences are summarised in Table 1. The main differences between the two are that in modern agriculture, synthetic fertilisers containing NPK

are used to enrich the soil and chemical pesticides are used to control pests whereas in sustainable agriculture farm made farmyard manure, compost, green manure and biofertilisers are used. Sustainable agriculture also involves agroforestry and multilevel cultivation and integrated animal husbandry have to be employed as an integral system for sustainable agriculture to succeed.

Table 1 : Difference between sustainable and modern agriculture.

Particulars	Sustainable agriculture	Modern agriculture
Plant nutrients	Farmyard manure, compost, green manures, biofertilisers and crop rotations are used.	Chemicals fertilisers are used.
Pest control	Cultural methods, crop rotation and biological methods used.	Toxic chemicals are used.
Inputs	High diversity, renewable & biodegradable inputs are used.	High productivity & low diversity chemicals are used.
Ecology	Stable ecology	Fragile ecology.
Use of resources	The rate of extraction from forests, fisheries underground water sources and other renewable resources do not exceed the rate of regeneration.	The rate of extraction exceeds the rate of regeneration. Felling of trees, deforestation, overgrazing & pollution of water bodies take place.
Quality of food materials.	Food materials are safe.	Food materials contain toxic residues.

CHARACTERISTICS OF SUSTAINABLE AGRICULTURE

To elaborate the issue it would be appropriate to deal with the characteristics of sustainable agriculture rather than to define the same which are as follows:

- Adequate economic returns to farmer
- Maintenance of natural resources and productivity indefinitely.

- Minimal adverse environmental impact.
- Optimal production with minimal external inputs.
- Satisfaction of human needs for food in income,
- Provision for the social needs of farm variables.

This prescribes a system which is environmentally, socially and economically compatible. It is a combination of technological practical intervention and good resource management those one found all over the world and are suitable to a particular locality at a specific time frame (Rath, 1993).

GOALS

Keeping in views the different aspects of conventional agriculture, the new concept 'sustainable agriculture' was worked out. The "Sustainable Agriculture" or "Alternative Agriculture" involves rich technology and information and is much less intensive in the use of energy and market purchased inputs. It will incorporate the following goals:

- (a) Incorporate natural process such as nutrient cycles, nitrogen fixation and pest predators relationships into agricultural production process.
- (b) Reduce the use of off-farm inputs with the greatest potential to harm the environment or the health of farmers and consumers.
- (c) Make greatest use of biological and genetic potential of plant and animal species.
- (d) Improve the match between cropping pattern and productive potential and physical limitation of agricultural lands to ensure long term sustainability of current production levels.
- (e) Emphasize improved farm management and coservation of soil, water and biological resource.

DIMENSIONS

Dr. M. S. Swaminathan, the eminent Agricultural Scientist, identified 14 major dimensions of sustainable agriculture covering the

social, economical, technological, political and environmental facets of sustainability.

These dimensions are:

1. **Technological appropriability** : Refers to how far agricultural technology, be it a seed, fertilizer, pesticide or improved machinery suits the social and/infrastructural of the end users.
2. **Economic feasibility** : Refers to capacity of farmers to afford to incorporate the technology in his farm within his realm of financial status and position.
3. **Economic viability** : Refers to the returns to investments of every rupee counts.
4. **Environmental Soundness** : Refers to whether the technology results in enriching the environment or at least does not harm the existing agro-ecological conditions.
5. **Temporal Stability** : Refers to whether the positive aspects of the technology remain stable over the long run.
6. **Resource use efficiency** : Refers to how efficiently the technology can utilize the inputs to convert them into useful, productive and eco friendly outputs.
7. **Local adaptability** : Refers to the extent to which the technology is adaptable to the existing local conditions of the farmers.
8. **Socially acceptability and Social Sustainability** : Social acceptability refers to the extent to which the technology is acceptable by the different sectors of the society, whereas social sustainability means it has to fulfil the personal needs. Since farmers will still prefer to grow crops which are needed for their home consumption, whether or not those crops are desirable from the ecological standpoint. Even today farmers in the higher altitudes of the Himalayas as well as the Western and Eastern Ghats grow annual crops in highly erodible till to meet their domestic requirement.
9. **Political tacitness** : Refers whether the technology can be used unhampered in the existing intricacies and implications of political set up.

10. **Administrative managibility** : Refers to the extent to which the technology can be practically implemented under the existing bureaucratic structure.
11. **Cultural durability** : Refers to the extent to which the technology fits with the cultural patterns and values of the society.
12. **Renewability** : Refers to the extent to which the technology can be used or re-used without much additional efforts and inputs.
13. **Equity** : Is a measure of how evenly the products of the agro-ecosystem are distributed among the local producers and consumers.
14. **Productivity** : Is a quantitative measure of the rate and the amount of production per unit of land or input. In ecological terms production refers to the amount of yield or end product and productivity is the process for achieving that end product. Yield per unit area can be one of the dimensions of sustainable agriculture, it can also be expressed in other ways such as per unit labour input or per unit of cash investment or as energy efficiency ratios (Muthuraman, 1995).

SCOPE

The nine C's of sustainable economic agriculture helps to define the scope viz.

1. Conservative
2. Competitive
3. Comprehensive
4. Collective
5. Communicative
6. Comparative
7. Composite
8. Conclusive
9. Conductive (Kushwaha, 1991).

ADVANTAGES AND DISADVANTAGES

The main advantage of sustainable agriculture are ecological balance, low cost of cultivation, clean environment and nutritious food without residues that harm human health. Some of the disadvantages are low yields, lack of timely and effective control of weeds, insects and diseases.

The conversion process from modern agriculture to sustainable agriculture usually takes from three to six years. The sustainable agriculture movement was started in 1981. There is insufficient and reliable research data to recommend sustainable agriculture. Much is now subjective, programmatic and even hypothetical. There is no well founded body of knowledge. Doubts are expressed by some scientists whether it is possible to produce food and other requirements for the burgeoning population without the use of chemical fertilisers and discreet application of small quantities of target specific pesticides at critical stage of crop damage will be in agreement with principle of sustainable agriculture (Reddy & Reddi, 1995).

BIBLIOGRAPHY

- CIP circular (1991) Volume 18(3) : 6.
 Edwards, C. (1988) Agricultural outlook. USDA Economic Res. Services : 17.
 Francis, C. A. (1990) Breeding hybrids and varieties for sustainable systems. In : C. A. Francis et al (ed.) *Sustainable Agriculture in Temperate Zones*, John Wiley and Sons, New York : 24-54.
 Kushwaha, S. (1991) Sustainable Economic Agric. *Kisan World* : 14.

Lamm, T. (1989) Guidelines for developing university sustainable agril. Programmes. Wisconsin Rural Development Centre, West Indies.

Lowrance, R., Hendrix, P. F. and Odum, E. P. (1986), A hierarchical approach to sustainable agriculture. *Am. J. of Alternate Agril.* 1 : 169-173.

Muthuraman (1995): Towards sustainable Agriculture : dimensions and components. *Employment News.* 20(34) : 1-2.

Naik, M. K. (1993), Sustainability and the environment with special reference to food production in the semi-arid topics *Everyman's Science* Feb.-March : 11-13.

Rath, S. (1993), *Sustainable Horticulture*. Proc. of the workshop held in February 22, 1992, Bhubaneswar, NISTHAA Publication.

Reddy, T. V. and Reddi, G. H. S. (1995), Sustainable agric. *Principles of Agronomy*. Kalyani Publishers, New Delhi. 457-464.

Regional Centre at C.T.C.R.I. (ICAR),
 Dumduma, Bhubaneswar-751019.



Chief Minister Shri Janaki Ballav Patnaik addressing a Press Conference at the Secretariat Conference Hall on 8-3-1996

Tea, The Health Drink

Satyen Parida

Tea is the most popular beverage, consumed all over the world. A cup of it dispels physical tiredness and boasts lethargic spirit. Our outlook towards tea has undergone a sea of changes within the last two decades. Then, misunderstood as an addictive drink, capable of causing various health problems, the beverage is now promoted as a health drink by the World Health Organisation, thanks to the recent findings regarding its therapeutic properties.

The major chemical constituents of hotwater extract of tea are given in the table below.

Table : Major constituents of a standard cup of tea, without milk and sugar.

Sl. No.	Constituent	Quantities in mgs.
1.	Catechins (oxidized & unoxidized)	500-600
2.	Theaflavins	30
3.	Thearubigens	300
4.	Caffeine (5 minutes infusion)	96
5.	Caffeine (33 minutes infusion)	110
6.	Sugar	100
7.	Organic acids	110
8.	Amino acids	50-60

Besides all these, it also contains useful quantities of vitamins, minerals, polyphenols, theophylline etc.

The following are the therapeutic and health promoting properties of tea.

Organ Stimulant

The active ingredients of tea are caffeiens and theophylline, two alkaloids, which when taken in large doses show toxic properties. However, the quantity and the form, in which these are present in tea render valuable service to our health.

Assam tea contains 3 to 4.5 per cent caffeine and 0.14 per cent theophylline (dry weight basis). The

tolerance limit of pure caffeine is 650 mgs. whereas, only 480 mgs of it, in a less harmful complex form with thearubigen is present in 6 cups of tea.

Caffeine activates many of our organs . It enables muscles for its maximum performance, its diuretic properties enhance the excretion of water, urea, uric acid and salts, increases flow of blood through kidney, stimulates respiratory functions, acts as an antidote for certain narcotic poisons and promotes circulation of blood without altering pulse rate.

Reduces heart problems

According to Dr. Allen Conny and Dr. John Washburg of Cancer Research Institute of Newjersey, heart attack is relatively less among the tea drinkers, due to the therapeutic effects of caffeine and theophylline. Therefore, tea can be administered to patients with cardiac diseases, which can increase the cardiac index, stroke index, oxygen consumption etc.

The flavonoids present in tea, make it an wonderful health drink. Those are known to influence the adrenal pituitary axis and regulate the level of adrenaline as well as other catecholamines. In an article published in December 1993 issue of the Lancet, a leading Dutch Food Specialist Dr. Michael Hertog and his co-workers have claimed that flavonoids can lower the risk of death from coronary heart disease and myocardial infraction. Therefore, they have recommended that not only tea, but also onion, apple and other flavonoid containing food as a part of the daily diet.

Prevents Cancer

Recently, Dr. R. R. Burk of the Institute of Virology, Glasgow, has observed that cyclic AMP

(Adenosine Mono Phosphate) in combination with caffeine and theophylline can prevent tumor formation. Even in absence of cyclic AMP, these active ingredients of tea can inhibit tumor, induced by carcinogens in mammals.

The scientists of the Institute for Medical Research of Japan, the Department of Fundamental Radiology of Osaka University and the Biology Department of Michigan Cancer Foundation have found that caffeine can prevent or inhibit both physical and chemical carcinogen induced damages to the mammalian cells. While experimenting with mouse, they have observed that the transformation of cells induced by a potent carcinogen 4-NQO (4-Nitro Quiniline 1-Oxide) as well as by exposure to heavy doses of ultraviolet radiation, was reduced by post treatment with caffeine.

Some other therapeutic properties

Caffeine, present in tea, is useful in the treatment of hypertensive and nervous headache. It is found to induce the synthesis and secretion of catecholamines in mammalian tissues, which in turn increase the rate of glycogenolysis and reduces lipogenesis. This explains the atherogenic properties of caffeine. Theophylline and caffeine act synergistically with the lipolytic hormones.

The other ingredient of tea, which for long was considered as detrimental to our health, is tannin.

But, a few years back Dr. Jacob John and Dr. P. Mukher Dan, two virologists of Christian Medical College, Vellore made a startling discovery, which reversed the role of tannin with regards to its impact on health. According to it, tannin has anti-viral properties. Further research has shown that it can be used to formulate a new polio vaccine. Besides, when tea is prepared with milk, the harmful effects of tannin are reduced, as it forms calcium tannate.

Theaflavins and thearubigins present in black tea have been found to act against bradykinin, secreted during certain inflammatory responses. Therefore, tea can be used as an anti-inflammatory.

Poly-phenols can cure indigestion and stomach disorders, when supplemented by caffeine. Since both of these are present in tea, contrary to the common belief, it can be taken during stomach upset. Similarly, one of the polyphenols, named galocatechin cures hyperthyroidism and vitamin-K, another ingredient of tea cures hyper prothrombinaemia. Polyphenols of tea also contribute to strengthen the walls of blood vessels and to its anti-inflammatory property.

10, House Staff Hostel,
S. C. B. Medical College,
Cuttack-753003



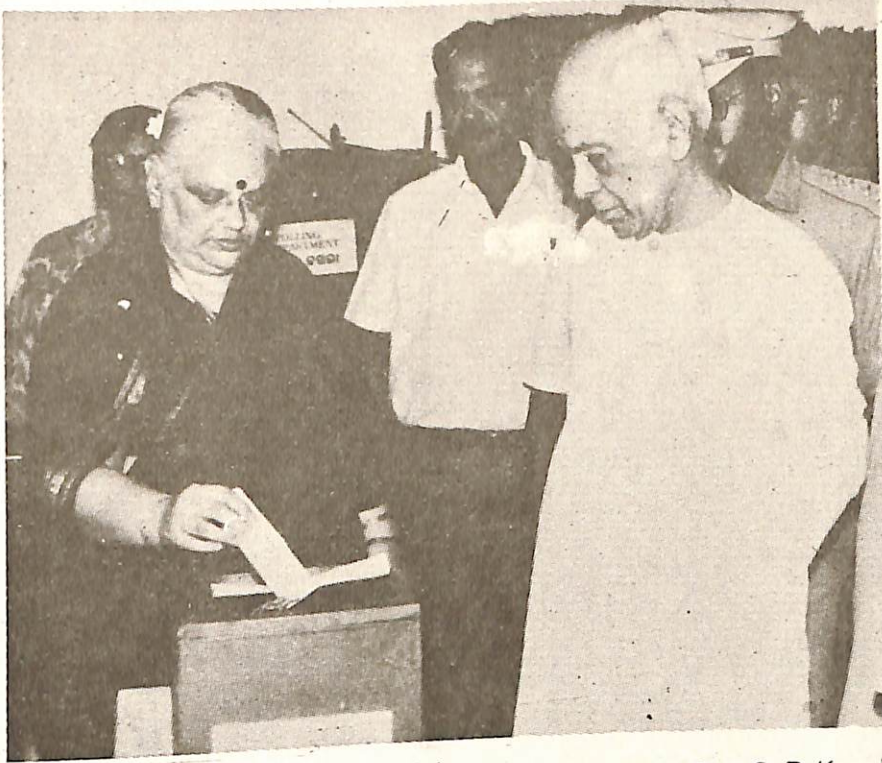
Minister of State for School & Mass Education inaugurating the Sahidnagar Alaka Branch and sale of nationalised text books counter at Menaka on 20-6-1996, Bhubaneswar

MAHAKAVI JAYADEV JAYANTI CELEBRATED

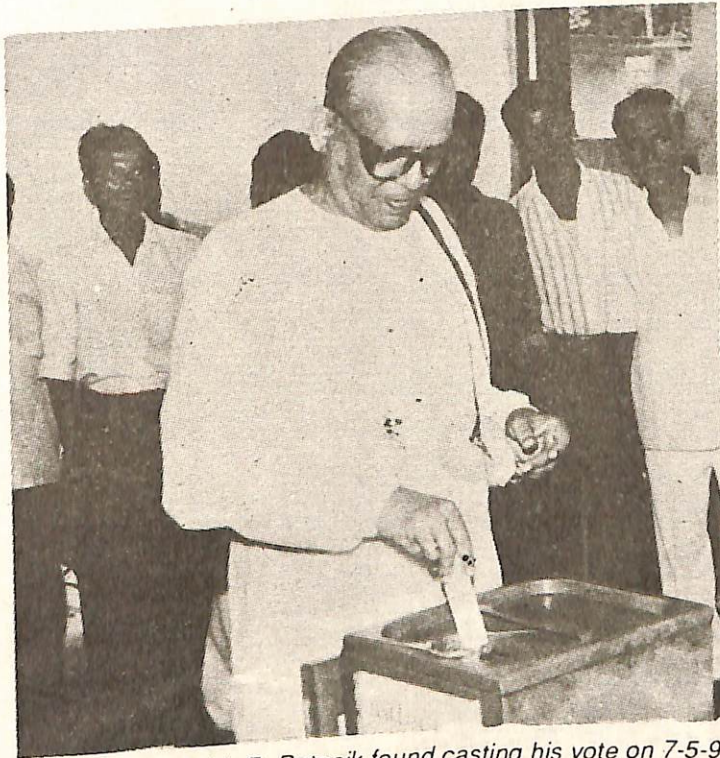
The Jayanti of Kaviraj Jayadev, the author of Gita Govinda was observed throughout the State on 20th April, 1996 the holy *Akshaya Trutiya* Day. Kavi Jayadev who was born in the village Kenduli nearly 20 kms. towards the east of Bhubaneswar had had his training in Sanskrit, classical music and religious texts at Srikurma Pataka in ancient Kalinga Nagara. Later Jayadeva came back to Srikshetra, Puri where it is said, he composed his magnum opus "Gita Govinda" an experimental work modelled on classical music and Odisi dance form describing various mores of divine love of Lord Krishna and Radha. The book was dedicated to Sri Jagadish Hari alias Lord Jagannath of Srikshetra.

Vaishnava Lilamruta, a recently discovered post-Chaitanya work of the 16th century in Oriya gives details of Jayadev's hallowed personality and how his birth place was held in high esteem by Chaitanya and his followers.

In order to commemorate the birth anniversary of Jayadev, various Government Departments i.e., the Department of Culture, Department of Information and Public Relations and autonomous organisations like Orissa Sahitya Akademi, Orissa Sangeet Natak Akademi and devotees from ISCON, and Bayababa Math participated in sending out a roving Sankeertana party like preceding years. The party started off early morning on 20-4-1996 from the Temple of Ananta Vasudev at Bhubaneswar. It was given a hearty send-off by Gajapati Raja of Puri and townsmen of Bhubaneswar in a ceremonial pageant. The party went on asinging and chanting the holy names, and native enthusiasts. The places the Kirtan Party visited were strictly in accordance with the prescribed route that Shri Chaitanya used to take with his followers in the solar month of *Makara* during his long stay at Puri. Special celebrations were held at the State Capital, Kenduli, Kakatpur and Puri. Learned speakers who addressed the gatherings included Hon'ble Gajapati Maharaja of Puri; Prof. Gouri Kumar Brahma; Prof. Kanhu Charan Mishra; Sri P. K. Tripathy, Secretary Law; Sri R. K. Mishra, Secretary, Orissa Sahitya Akademi; Sri A. K. Tripathy, I.A.S.; Sri Sahadev Sahoo, I.A.S.; Sri T. K. Mishra, I.A.S.; Collector, Puri and other important dignitaries. A brochure on 'Mahakavi Jayadeva & Gitagovinda' basing on *Vaishnava Lilamruta* of Madhav Patnaik and the recent findings by Dr. S. N. Rajguru was released on this occasion.



Hon'ble Governor of Orissa Shri G. Ramanujam and his wife Smt. G. R. Kannamal exercise their franchise at Raj Bhavan U. P. School, Bhubaneswar on 7-5-96.



Chief Minister Shri J. B. Patnaik found casting his vote on 7-5-96 at Sanat Nalini Girl's School, Cuttack



Chief Minister Shri J. B. Patnaik conversing with his cabinet colleagues and high officials regarding the forthcoming Navakalevara and Car Festival at the secretariat on 25-5-96.



The Daitapatis leaving the Jagannatha Temple proceed to Kakatpur Mangala on 29-3-96 as a part of ritualquest of Holy Wood for Navakalevara.