

# Hymns to Jagannatha

## JAYADEVA

Translations by Dr. Subas Pani



Jayadeva lived in the twelfth century and is the well-known author of the musical epic *Sri Geetagovinda*. He hailed from the Kenduli village in the Prachi valley between Bhubaneswar and Puri. He spent most of his life at Puri and composed the songs of *Sri Geetagovinda* as musical offerings to Lord Jagannatha. Padmavati, his beloved wife, danced to the songs sung and choreographed by Jayadeva. The composition was probably performed first on the twin occasions of the dedication of the Srimandira and the coronation of Kamaamava as the crown prince in 1142 AD during the reign of Chodagangadeva, the founder of the great Ganga Empire in the east coast of India. Jayadeva, a great scholar and composer was a devotee first and a poet next. His *Sri Geetagovinda* is a glorification of the essence of *Jagannatha Chetana* or Jagannatha Consciousness - the path of simple surrender, which later Sri Chaitanya popularised as the *Gopi Bhava* or the *Radha Bhava*.

Jayadeva presents Sri Jagannatha as Jagadeesha and Hari and identifies him with the Supreme Divinity, the creator of incarnations or *avatari* rather than an *avatara*. Jayadeva's presentation of the ten *avataras* became so popular that the sequence and the set has been accepted as the final version of the many variants of the *avatara* concept found in classical

literature. The ten *avataras* are also presented in sculptures on the outer walls of the sanctum of the Srimandira. These have been revealed to us only recently after the de-plastering of the temple surface. The monastery established by Jayadeva is also known as the *Dasavatara* Matha and is situated near the Gundicha temple to the east of the Saradhabali, the open grounds in front of the former. Many of the *avatara* sculptures can still be found in this temple today.

The main dramatic theme of *Sri Geetagovinda* relates to the dalliance of Radha and Madhava on the banks of Yamuna and their secret love play. Yet throughout the twenty-four songs and seventy-two *slokas*, the thread of deep devotion runs like a subterranean stream. Jayadeva hints at the true import of the composition in the following words in one of the introductory *slokas*.

If chanting the name of Hari  
Does please your heart,  
If to know the art of amorous enjoyment,  
Does your curious mind desire,  
Then should you hear  
The songs, sweet, soft and pleasant,  
The verses, melodious and tender,  
Those that poet Jayadeva, composed !

He, by the Goddess of Speech is blessed.

“Remembrance of Hari”, is, in fact, the thread, which holds the entire composition together.

This collection includes translations of the first two songs of Sri GeetagoVinda. Both are invocatory songs addressed to Lord Jagannatha. The first one is famous as the *Dasavatara Song* and covers the ten *avataras*. Jayadeva presents the entire legend and mythological episode connected with each of the ten incarnations- in a succinct two-line stanza. In conveying the essential narrative, Jayadeva uses deceptively simple but exquisitely beautiful visual imagery through the use of apt similes. As in his entire composition, the lilting lyricism and essential musicality of the song, enhances the attraction of his words manifold. Jayadeva also highlights the great compassion of the Lord in each of his incarnations. The words have a nectarine sweetness, an ineffable *madhurya*, which is the hallmark of his composition. After presenting the ten incarnations, Jayadeva offers his salutations to Krishna as the creator of these and thus categorically identifies Krishna and Jagannatha as the *avatari*. He does so twice, first in the *bhanita*, or the signature stanza of the hymn and later in a *sloka*, which summarizes all the ten incarnations in a capsule form. The concept of *avataara* is explained in the *Bhagavad Gita* and in the *Srimad Bhagavat*, Krishna is called God Himself - "*Krishnastu Bhagabana swayam.*" However, perhaps Jayadeva alone states this subtle distinction between an incarnation and the creator of an incarnation so loudly and clearly.

The great popularity of this song is evident from the embellishment of the Srimandira with sculptures depicting the ten incarnations, the name of the *matha*, monastery established by Jayadeva, the appellation of *Dasavatara Kshetra* used for Puri and even the name of *Dasavatara Jatra* used for the famous festival of chariots. Its popularity has not diminished even after a thousand years and even today it is part of the repertoire of every classical dancer in Odissi,

Bharata Natyam, Kuchipudi, Manipuri or Mohini Attam as it is of every singer of devotional music or *bhajan*. Depiction of the ten *avataras* is also popular in all forms of plastic arts in Orissa -as sculptures in temples or as decorative pieces, palm leaf etchings, *pattachitra* paintings and woodcarvings.

The second song of *Sri GeetagoVinda* is also an invocation but instead of focussing on the incarnations it draws upon the episodes of *Krishna Leela* while at the same time emphasizing the Supreme Divinity of Krishna-Jagannatha. In place of Jagadeesha, or the Lord of the Universe, Jayadeva uses the simpler appellation of Hari in the refrain of the second song. What is important to note is the subtle juxtaposition of the Vishnu aspect with the Krishna aspect of Jagannatha in this song. This song, in a way, captures the process of Krishnaization of Jagannatha and his transformation from Nilamadhava or a manifestation of the more orthodox and classical representation of Vishnu-Narayana to his more popular and almost folk representation as the cowherd God Krishna. More detailed discussion of the topic is beyond the scope of the present brief introduction.

This song is equally popular with singers and dancers but more importantly with the lay public. Devotees in the Puri temple sing it almost daily by devotees, especially in the evening hours.

### Dasavatara

From the depths of the great deluge  
Did you the Vedas rescue,  
Taking the form of a boat did you salvage  
With ease, the scripts, auspicious and noble.<sup>1</sup>  
Glory to the Lord of the Universe !  
To Keshava, who took the body of a Fish !

On thy vast back doth the earth repose.  
The weight of carrying the world's load Does etch  
thereon, a giant wheel-mark.<sup>2</sup>

Glory to the Lord of the Universe!  
To Keshava, who took the Tortoise form !

Perched on the tip of thy tusk,  
The earth to you does cling  
As the petite blemish does the moon embrace.<sup>3</sup>  
Glory to the Lord of the Universe !  
To Keshava, who took the form of a Boar ! (3)

On thy lotus hands did strange nail-peaks sprout,  
With which you did, the demon, tear apart  
As if crushing the body Of some giant bee,  
You did gore Hiranyakasipu's heart.<sup>4</sup>  
Glory to the Lord of the Universe !  
To Keshava, who took the Man-Lion form !

As the strange dwarf your prowess you displayed.  
You beguiled Bali and his pride curbed.  
Water from thy toenails became a stream  
That absolved men from worldly woes.<sup>5</sup>  
Glory to the Lord of the Universe !  
To Keshava, who took the Dwarf form !

Drenched in the blood of the warrior race,  
As if in water performing your daily rites,  
You rid the world of all its sins.  
You cooled the world's burning heats.<sup>6</sup>  
Glory to the Lord of the Universe !  
To Keshava, who as chief of Bhrigu clan was born !

Destroying the ten-headed demon, O Lord,  
To each handsome God of the ten Directions,  
You did prorate one severed head,  
As fair oblation of battleground.<sup>7</sup>  
Glory to the Lord of the Universe !  
To Keshava, He who took the body of Rama !

Thy ample figure is adorned  
By robes dark as the rain-filled cloud,  
Blue as the deep waters of river- Yamuna  
When afraid of being struck by thy mighty plough,  
Scared, she came running to you.<sup>8</sup>  
Glory to the Lord of the Universe !  
To Keshava, who took the Ploughshare-carrier form !

Touched was thy tender heart  
By every sight of sacrificed beast.  
You did disapprove the *yagnic* rite,  
Although the *Vedas* did deem it right.<sup>9</sup>  
Glory to the Lord of the Universe !  
To Keshava, who took the body of Buddha !

To slay the unclean hordes, did you wield the sword,  
Strange and fierce, as some terrible comet.<sup>10</sup>

Glory to the Lord of the Universe !  
To Keshava, who took the body of Kalki !

Sri Jayadeva, the bard, presents these noble songs,  
These that contain the world's essence.<sup>11</sup>  
Hear, hear, these auspicious, joyous songs.  
Glory to the Lord of the Universe !  
To Keshava, who took the ten incarnations !

### Sloka

Rescuer of the *Vedas*, carrier of the world,  
Upholder of the earth, tearer of demon,  
Deceiver of Bali, destroyer of the warrior clan, Victor  
of Pulasti's progeny,<sup>12</sup>  
Wielder of the ploughshare,  
Dispenser of mercy,  
Killer of unclean hordes,  
Creator of the ten incarnations,  
To Thee ! O Krishna,<sup>13</sup>  
I offer my salutations ! (S -5)

Source for original Sanskrit hymn, "*Pralaya payodhijale*" and  
the *sloka* following it: Panda, Bhagaban. Ed. *Sri Gitagovinda  
Mahakavyam*. Bhubaneswar: Directorate of Culture,  
Government of Orissa, 1985. pp. 19-42.

### Kamala

Sheltered in the orb of Kamala's bosom,<sup>14</sup>  
O, Lord, whom the ear pendants adorn !  
You sport a pretty garland of wild blossoms.<sup>15</sup>  
Glory be to Lord Hari!

By the halo of the Sun bedecked,  
Destroyer of the travails of the world.<sup>16</sup> !  
You do reside in the minds of the sages  
As on a serene lake, the goose.<sup>17</sup>  
Glory be to Lord Hari !

Humbling the serpent Kaliya<sup>18</sup>  
Did you the people please.  
As to the lotus bloom, the sun,  
Dear are you to the Yadu clan.  
Glory be to Lord Hari!

Destroyer of the demons Madhu, Mura, and Naraka,<sup>19</sup>  
O Lord ! You ride the eagle Garuda.<sup>20</sup>  
You are the essence and the cause  
Of joyous songs and merriment of Gods.<sup>21</sup>  
Glory be to Lord Hari !

Beautiful as the lotus flowers are thy eyes  
O Lord, you relieve the world's woes !

You are the only refuge  
In all the three Worlds !  
Glory be to Lord Hari !

By the daughter of Janaka<sup>22</sup> adorned,  
You triumphed over Dushana,<sup>23</sup>  
You did in end on the battleground  
Life of the ten headed demon,  
Glory be to Lord Hari !

Charming as the very first rain cloud  
Is thy face, O Lord !  
You held the mount Mandara<sup>24</sup>, you did !  
You dote on Sri's beauteous countenance,  
As the *Chakora*<sup>25</sup> pines for the moon's face !  
Glory be to Lord Hari !

The poet Jayadeva does great joy derive,  
Singing these bright and auspicious songs !  
He does, doing so !  
Glory be to Lord Hari !

Source for original Sanskrit hymn, "*Shrita Kamala kucha mandala. ..*" Panda, Bhagaban. Ed. Sri Gitagovinda Mahakavyam. Bhubaneswar : Directorate of Culture, Government of Orissa, 1985. pp. 43-50

<sup>1</sup> Fish Incarnation: In the first incarnation the Lord, during the apocalypse rescued the Vedas, the most sacred and ancient scriptures from the demon Sankhasura who had stolen the same. The demon had the shape of a conch and was hiding in the bottom of the deep ocean. The Lord vanquished the demon and taking the form of a giant Fish, he negotiated the turbulent apocalyptic deluge or *Pralaya* with utmost ease. Assuming the character of a boat, the Lord in his Fish form saved the Vedas for his devotees.

<sup>2</sup> Tortoise Incarnation: In his second incarnation the Lord assumed the form of a giant tortoise. During the process of the new creation his vast back was the base on which stood the Mandara Mountain. The latter was used as the staff for churning the milk ocean with the divine serpent Vasuki pulled by the gods and the demons on two sides. This yielded the nectar, the Kamadhenu or the wish-fulfilling sacred cow, the Parijata flower and the Airabata elephant among

others. The process of churning left on the vast back of the Lord large calluses in shape of a wheel. The wheel mark also indirectly alludes to the celestial wheel, which is a mark of Vishnu-Krishna and the Sudarsana Chakra, their *ayudha* or weapon.

<sup>3</sup> Boar Incarnation: This refers to the Varaha Avatara or the Boar Incarnation. During the apocalyptic deluge mother earth sank to the bottom of the ocean. The Lord emerged as tiny boar from the nasal cavity of Brahma and soon grew in size to huge proportions. He rushed into the raging sea to rescue Mother Earth. As he emerged out of the sea, carrying Mother Earth at the tip of his great tusk, he was challenged by the demon Hiranakshya. The Lord vanquished the demon and killed him. The image of Mother Earth clinging to the tusk of the Lord, in his boar incarnation is a popular theme for the artists of Orissa and numerous sculptures, paintings and carvings can be found from ancient times till date. In the Puri temple, the Varaha Avatara is one of the Parswa Devatas, the other two being Tribikrama or Vamana and Narasimha. Mother Goddess Earth is conceived as a spouse of Lord Vishnu-Jagannatha. She is called Bhudevi and a small metal image of the Goddess is placed on the Ratna Simhasana in Srimandira along with the principal deities. The exquisitely beautiful visual imagery presented by Jayadeva, brings out the tender love of the divine couple.

<sup>4</sup> Narasimha: In the fourth Avatara, the Lord vanquished Hiranyakashipu, the brother of the demon Hiranakshya, who fought with him in his Boar incarnation. Hiranyakashipu, the demon king was totally opposed to Hari but his young son Prahlada, was devoted to the Lord and constantly chanted *Hari Nama*. The demon king was furious that his son was devoted to his enemy and forbade him from doing so. His father in many ways tortured the child devotee without any success in changing his loyalty to Hari. The demon

king, who had himself done great penance had been granted a boon that he could not be killed by man or animal, in day or night and neither inside the house nor outside it. He therefore considered himself invincible. Prahlada saw God everywhere and his father challenged him by asking if he saw him in the pillar of the palace. On Prahlada's reply that indeed the Lord was present there, in a fit of rage, he kicked the pillar and the Lord taking the form of a Man-Lion, emerged from the pillar. It was the twilight hour, neither day nor night and the Lord carrying the demon in one sweeping movement reached the threshold of the palace. With one foot outside and one inside the house he gored the heart of the demon with his sharp nails and killed him at once. Prahlada and Dhruva, another child devotee, are considered as being the greatest of *bhaktas*. Narasimha is identified with Vishnu and as a cult deity predates Jagannatha. The making of the images of Srimandira was done after initially worshipping Narasimha and a temple dedicated to him exists close to the Gundicha temple to the east of the sacred Indradyumna tank at Srikshetra, Puri. This is known as the Yagna Narasimha temple. Within the Srimandira, a temple of Narasimha, to the south of the Audience Hall of the main temple stands even today and this is older than the main temple. This temple has numerous stone inscriptions inscribed over centuries. Some scholars believe that this was perhaps the original temple and site where Nilamadhava, the precursor of Jagannatha was worshipped.

<sup>5</sup> Vamana and Bali: Bali, a progeny of Prahlada, was a demon king who had terrorized the gods. He was well known for his charity and never refused anything asked for as a gift. The Lord took the body of a dwarf and approached Bali as a Brahmin seeking alms. When the demon king took a vow that he will not disappoint the holy Brahmin and give him whatever he asked

for, the Lord asked for land equal to his three footsteps. With his first step he covered heaven and with his next he covered the whole earth. The king had no more land to offer and proffered his own head for the Lord to cover his third footstep. The Lord placed his foot on the head of Bali and pressed him to the nether world and thus rid the world of the oppression of the demon king. At the same time the Lord emancipated Bali. This theme, too, is very popular in Orissan art. There are two variations -one showing the Lord as a dwarf Brahmin with an umbrella and a *kamandalu*, a water pot with a spout and another showing the Lord in his normal shape but with one of his legs raised to cover the skies. Sculptures of the latter, known as Tribikrama are ubiquitous in Orissan temples and one is worshipped as one of the three principal *parswa devatas* in the Srimandira.

<sup>6</sup> Parasurama: In his incarnation as Parasurama, the sage and priest, the Lord relieved the agony of the earth suffering from the excesses of the Kshatriyas, a warrior class. Parasurama means Rama with the Parasu or battle-axe. He was the son of sage Jamdagni, a descendant of Bhrigu. He was a great scholar and master of all the Vedas. His wife was Renuka, who bore him five sons, including Parasurama. Once her mind had been disturbed and excited by the sight of a pair of Gandharvas engaged in love play. As her thoughts were polluted, she lost her natural lustre. Jamadagni, on noticing this became wild and in a fit of anger ordered his sons to cut off her head. The first four sons refused to carry out this horrible command of their father but Parasurama promptly severed her head with one stroke of his battleaxe without the slightest hesitation. Jamadagni, pleased with his loyalty and obedience offered him a boon and Parasurama asked for the life of his mother to be restored and the sage granted this immediately.

Once the king Kartavirya visiting the hermitage of Jamadagni took away Kamadhenu, the sacred cow, which could fulfil any wish. Parasurama, on learning this fought with the king and killed him. The sons of the king, took revenge by killing Jamadagni when Parasurama was absent from the ashram. Confronted with this catastrophe, Parasurama took a vow that he would destroy the Kshatriya race twenty-one times from the earth. Eventually he fulfilled his vow. The sage, although a Brahmin, is considered as one of the greatest warriors of all times in the legendary accounts. Interestingly a few temples dedicated to Parasurama can be found in Kerala where he is worshipped as a cult deity by some.

He is supposed to have performed ritual purifications and offered oblations to the ancestors in tanks full of the blood of slain warriors. Several water tanks at Kurukshetra (site of the great Mahabharata war) in modern Haryana state are said to be relics of these tanks.

<sup>7</sup> Rama Avatara: Rama is the hero of the famous epic Ramayana. He was the prince of Ayodhya, the eldest son of King Dasaratha and queen Kaushalya. His stepmother, Kaikeyi wanted her son Bharata to become the king and Rama to remain in exile in the forests for fourteen years. She asked for this boon from Dasaratha in fulfillment of a promise he had made to her. Lord Rama left Ayodhya along with his wife Sita and younger brother Lakshmana to keep the words of his father. Ravana, the demon king of Lanka sent Maricha, who appeared in the forest as a golden stag and Sita asked Rama to get her this strangely beautiful animal. Rama reluctantly left her in the care of Lakshmana and chased the golden stag. Later the demon through his tricks pretended as if Rama was crying for help and Sita forced Lakshmana to leave her to help his elder brother. Taking advantage of this situation, the demon appeared in the guise of a mendicant seeking alms and cajoled Sita to step out of the

protective circle drawn to shield her. He then carried her away in his flying chariot to Lanka. Lord Rama came to know of this from Jatayu, an aged eagle who had fought with Ravana in the skies but was fatally wounded by him. Rama befriended the monkey prince Sugriva and after killing his brother Bali, took help of his monkey followers to build a stone bridge across the seas. Eventually Ravana, the ten-headed demon, was vanquished and Sita rescued.

Jayadeva in his presentation refers to this epic battle of Ramayana in which Ravana is vanquished. It is customary to offer prayers to the guardian deities of ten directions or the Dasa Dikpala, before any auspicious act. Here Rama is depicted as offering the ten heads of the demon Ravana to the ten directions. Dikpala Puja, or the worship of the presiding deities of the Directions, is an integral part of the rituals of the Puri temple. Many temples in Orissa are decorated with images of the Dasa Dikpalas on their walls. Those in the famous Lingaraja temple and the Brahmeswara temple in Bhubaneswar are among the best specimens of Orissan temple sculptures.

Lord Jagannatha is said to have given *darshan* to saint poet Tulasi Das in the form of Rama. The Lord dons the Raghunatha Veshha in memory of this. There is a small temple of Rama inside the Srimandira and a huge image of Hanumana; the monkey god devoted to Rama can be seen next to the Southern gate of the main temple. See Introduction for the concept of *vesha* in the Puri temple.

<sup>8</sup> Balarama: Balarama or Balabhadra, also known as Shankarshana, is the elder brother of Sri Krishna and had his part in the *Krishna Leela*. He represents the aspect of Shiva in the Jagannatha triad and the hood of a serpent is painted above his head. His *ayudha* is the

ploughshare and hence he is known as Haladhara. He was fond of Kadambari, a type of wine and once sitting under a Kadamba tree on the banks of Yamuna in an excited condition, he felt the urge to have a bath. He directed Yamuna to come close to him so that he could take his bath. Noticing the slight hesitation on the part of Yamuna, he threatened to strike her with his mighty plough and Yamuna, scared ran to his feet and the Lord had his bath. Lord Balarama is depicted as one with a fair but huge body and as wearing blue apparels. He is thus known also as Nilambara. His chariot has a distinctive cover of blue and red cloth, the latter being a colour common to all the three chariots. Lord Balarama has his place in the Ratna Simhasana to the extreme right or south. The birthday of Balarama is celebrated in the Srimandira. A special *vesha* commemorates his slaying of the demon Pralambasura.

<sup>9</sup> Buddha: Buddha is accepted as an incarnation of Krishna-Jagannatha. Adi Shankaracharya who visited Puri in the early ninth century restored the pride of traditional Hinduism and effectively eclipsed the influence of the Buddhists. Perhaps he was also responsible for the eventual assimilation of the Buddhist faith in the Hindu belief and acceptance of the Buddha as a god in the Hindu pantheon. This is clear from the depiction of Buddha as the ninth *avatara* in the sequence of *avatars* in the walls of the Deul in Srimandira and in other Orissan temples and other sculptural depictions of the ten incarnations. Some scholars believe that the Puri temple originally contained the sacred tooth relic of the Buddha and others believe that the Brahma material in the bodies of the principal deities transferred during the Navakalevara festival is in fact a relic of the Buddha. The present state of research however does not support either of the theories. However traces of the Buddhist influence in the Jagannatha faith cannot be ruled

out. The egalitarian tradition of sharing the Mahaprasada may well be a legacy of this. Sarala Das, the poet of the Oriya Mahabharata and many poets after him, directly identify Jagannatha as a manifestation of Buddha in the Kali age.

Jayadeva here refers to Buddha's opposition to animal sacrifice, which was part of the earlier Vedic form of worship and an integral part of the tantric system, quite popular in Orissa in the medieval period.

<sup>10</sup> Kalki: In his final. Avatara, yet to be, the Lord is depicted as Kalki, riding a horse and wielding a huge sword. In this incarnation the Lord will destroy everything evil.

<sup>11</sup> This is a signature verse known as *bhanita*, wherein the poet gives his name. This is a tradition followed by later poets in the Oriya hymns too. In this stanza Jayadeva directly states that Krishna-Jagadeesha is an *avataari* or creator of the ten incarnations. He reaffirms this concept in the *sloka* that follows.

<sup>12</sup> Ravana was the son of sage Pulasti and he is referred to as such here.

<sup>13</sup> In the main song Jayadeva refers to Jagannatha as Jagadeesha in the refrain at the end of each stanza. Here for the first time he makes an overt identification of Krishna and Jagannatha. This *sloka* also acts as a link between the first invocatory song or the *Dasa Avatara* song and the second invocatory song of *Sri Geetgovinda*, the latter focussing more on the Krishna aspect.

<sup>14</sup> Kamala is another name of Lakshmi, the spouse of Vishnu. Throughout *Sri Geetgovinda*, Jayadeva uses Kamala, Rama, Lakshmi, Padma and Radha interchangeably as he uses Krishna and appellations of Vishnu without distinction. Thus he clearly and unambiguously establishes the essential unity of the Supreme Godhead in his manifestations as Krishna, Vishnu and Jagannatha.

The present description refers to a very tender image of Sri or Kamala or Lakshmi sitting lovingly on the lap of Vishnu and the lord fondly cradling her breast with his left hand. There are at least two well known representations of this theme in Orissan sculptures, one in a small temple attached to the Bhoga Mandapa on the north-eastern corner of the great Lingaraja temple at Bhubaneswar and another in the Prachi valley. In Orissa joint representation of Lakshmi and Narasimha is also quite common. An image of Lakshmi-Narasimha is also found in Kenduli village, the birthplace of Jayadeva in the Prachi valley. Similar visual representations of Shiva and Parvati are also common in Orissan temple sculptures. See also earlier note on Rama.

Kamala (the second 'a' in the word is a long vowel) means one with a *kamala* (here 'a' is a short vowel in both positions), a lotus, in hand. She is normally represented with a lotus in traditional icons.

<sup>15</sup> Krishna is always associated with the Vrindavan gardens and pastoral surroundings. He sports garlands of wild flowers, which can be the literal meaning of Vanamala. This frequently refers to a garland extending well below the knee. Krishna is also known as Vanamali, on this account, an appellation, which Jayadeva uses frequently in *Sri Geetagovinda*.

<sup>16</sup> The imagery used by Jayadeva reminds us of the description of the Virata Purusha, the Supreme Being in the *Srimad Bhagavad Gita* and the *Purusha Sukta*. It also echoes the description of Jagannatha in the *Ganga Prasasti*, the eulogical verses recording the genealogy of the Ganga dynasty.

<sup>17</sup> The soul is frequently compared to the swan, *Hamsa*, in the scriptures and also in Oriya devotional literature. '*Ham sa*' reversed also stands for '*so aham*', the mystical phrase literally

meaning, 'I am He or It', indicating that the human is but a manifestation of the Supreme. Jayadeva reminds us that when the mind is stilled, the Divine is reachable without effort. Some commentators link '*Manas*' with the mythical Manasa Lake or the Manasarovara, beyond the Himalayas.

<sup>18</sup> This refers to *Kaliya Dalana*, one of the many miraculous deeds performed by Krishna as a child and adolescent and recounted vividly in the *Srimad Bhagabat*, the *Harivamsa* and various Puranas. Jayadeva's *Sri Geetagovinda* has numerous references to these episodes in the songs and *slokas*.

Kaliya was a deadly serpent that inhabited the river Yamuna with his kinsmen and poisoned its pure waters. The people of Vrindavan could no more use this water and were thus greatly inconvenienced. Krishna, still a child, entered the waters of Yamuna and challenged the serpent. After tiring out the serpent in fierce battle, he stepped on its hood and danced merrily, torturing and subduing Kaliya. The wives of Kaliya fervently prayed to Krishna to spare the life of their husband and Kaliya too sought his compassion. Finally Krishna released the serpent and asked him to leave Yamuna with his entourage and go to the ocean. Thus Krishna helped the Yadavas, the cowherd tribes living along the Yamuna. The people were greatly pleased. Jayadeva describes the joy he provided to the Yadukula, the clan of Yadavas as similar to that given by the sun to the lotus, which blooms in sunlight.

<sup>19</sup> Madhu, Mura and Naraka are names of three demons vanquished by Krishna in his *Bala Leela*, his exploits as a child. Hence Krishna is also called Murari and Madhuripu, appellations frequently used by Jayadeva throughout *Sri Geetagovinda*. Narakasura, or Naraka, had imprisoned sixteen thousand princesses whom Krishna rescued after killing the demon. He later married all of them.



<sup>20</sup> Garuda is the celestial eagle and the carrier of Vishnu. A statue of Garuda stands on a fossilized pillar in the Hall of Dance on its eastern end in the Srimandira and is revered by the devotees. The pillar known as the Garuda Stambha, is a favourite location for getting a glimpse of Lord Jagannatha on his bejewelled throne and devotees place lighted earthen lamps at the base of the pillar as offerings.

<sup>21</sup> All the Gods eagerly observe the progress of various incarnations as the Lord takes birth to rid the world of evils and restore the preponderance of truth. The gods rejoice at the destruction of the demons or *asuras*, their traditional rivals and enemies.

<sup>22</sup> Janaka was a saint-like king, Rajarishi and the father of Sita, the wife of Lord Rama.

<sup>23</sup> Dushana was an *asura*, a demon and the brother of Raavana, the king of Lanka. Lord Rama defeated him in the epic battle of *Ramayana*.

<sup>24</sup> Giri Govardhana: This refers to an episode of *Krishna Leela* in which the Lord curbed the pride of Indra. The latter, king of heaven and the rain god showered torrential rains on the land of *gopalas*, the cowherds for many

days and troubled them, as they did not offer him worship. Lord Krishna gave shelter to the people and animals of Vrindavan under the Govardhana Mountain, which he held up with his little finger. Finally Indra realised his folly and sought forgiveness. The poet uses name Mandara for the mountain and this is the name of the mountain used as the staff during the churning of the milk ocean. The Lord in-the Tortoise incarnation held it on his back. In the present context, the interpretation that this refers to the Govardhana Mountain appears more appropriate as indicated in some major commentaries.

<sup>25</sup> Chakora is a bird, which supposedly feeds on the moonbeams and eagerly waits to get a glimpse of the latter. Sri is another name of Lakshmi who is called Sri Devi in the form in which her image is worshipped on the Ratna Simhasana. The poet implies that the Lord is thirsting for a glimpse of the moon-like face of Sri.

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Dr. Subash Pani is an erudite scholar who has undertaken extensive research on the Cult of Lord Jagannath & Kabi Jayadev.



Hon'ble Chief Minister Shri Naveen Patnaik launching a new scheme "Navajyoti" under IMR Mission at Jayadev Bhawan on 1.4.2005. Shri Bijayashree Routray, Minister, Health and Family Welfare and other dignitaries are also present.

# Management of Community Resources in Watersheds

*Dr. Sanjeeb Kumar Mohanty*

*Dr. Souvik Ghosh*

*Pradeep Kumar Gan*

Farmers constitute the major population living in watersheds of remote area and they are the main stakeholders in a watershed management. They have been utilizing and managing land and water based resources for generations. They exactly know what is going on in their surroundings and determine the fate of their environment on which their future livelihoods depend. As key decision-makers, farmers will check, investigate, test and accept or reject the technical package for watershed development propagated by the Government Organizations (GOs) or NGOs. Self-Help Group (SHG) ensures voluntary and active involvement of partners in all decisions related to objectives and activities as well as direct involvement in the execution of the works under Water Management Programme. It develops a process in which effected populations collectively discuss and find out ways and means to tackle their own problems rather than waiting for others.

## **Self-Help Groups**

Self-Help groups play a determinant role in achievement of sustainable watershed management. The success and achievements depend on

- i) the extent to which the nature and functioning of the project address the problems and needs of the farmers
- ii) the extent to which the farmers have been mobilized and organized in SHGs with

- participation and empowerment culture for group action and sustainability
- iii) the extent to which the improvements can be made in the strategies for effective group mobilization
- iv) the extent to which the personal and socio-physiological characteristics of individual members influence the group effectiveness in irrigation management.

## **Benefits of SHG**

Formation of SHGs/ resource user group is useful for following reasons:

- \* Farmers in group feel easily empowered compared to individually where they may feel powerless.
- \* Group decisions tend to be observed and last longer. Nature of the interests is common among the farmers.
- \* In a group situation, farmers have an opportunity to raise and clear up issues that are important to them.
- \* Once a collective decision is made each member of the group tends to conform to that decision.
- \* Natural resources management is by nature beyond the work of individuals and thus collective effort by all farmers concerned is required for successful watershed management.

- \* Group formation makes farmers know and trust one another, thereby working more closely with less formality.
- \* The farmers in group can exchange views, ideas and knowledge among themselves and choose the best options.
- \* The farmers in group are able to combine and make best use of their skills and limited resources.
- \* Group formation paves the way for fair and equal sharing of responsibilities, rights, and benefits among the members.
- \* Organization or groups usually receives more attention and greater regard from outside parties or development agents.

However, care should be taken in deciding the size of groups to avoid the shortfalls and drawbacks by formation of too big or too small groups. The experience from traditional farmers' organization shows the important role spiritual aspects play in sustaining these on a long-term basis.

### **Search of the Location**

Before we focus on SHG formation, we need to know where and in which village to start the work. However, the work can only be facilitated when there is a demand for it. Hence, keen interest among the people is a pre-requisite to selection of areas. It is important that a general information campaign is made to make the people aware of the need for SHG for watershed management. Two steps are involved in deciding where to begin in the area of interest:

### **Preliminary Study of the Interest for the Watershed**

When resources available for management of the interested watershed are limited, the first thing to do is to identify priority areas in the watershed to make use of most of these scarce resources. Therefore, preliminary study of the

watershed is necessary to identify the priority areas from ecological perspective. The available information about the watershed of interest, such as aerial photographs, land-use map, forest type classification map, and inventory data can be used in preliminary study.

### **Selection of Priority Villages in the Watershed of Interest**

A priority village for a development project is selected based on their environmental and socio-economic indices. Since socio-economic survey is conducted only in the villages, which fall in the most devastated area of the watershed, selection of the poorest villages based on socio-economic indices and the most environmentally degraded villages is made.

These first two steps are not directly involved in the general procedure for beneficiaries association / SHG strengthening or building. Instead, these two steps may be rather technical and managerial for allocation of limited resources in a participatory watershed management project or programme.

### **How to Strengthen/ Reformulate/ Build SHG/ Resource Users Group**

Four major steps are identified from analysis of case studies to illustrate overview of the process of strengthening existing farmers' organizations, reformulating them for participatory watershed management or for building a new SHG/ resource users group. They are:

### **Learning about the Village Community**

This is the first and most important task of a group promoter to gain acceptance by the general community. Sometimes it takes a long time to achieve the public acceptance. This is to be accomplished through following:

1. Preparing yourself
2. Acquiring initial information

3. Entering the village and introducing yourself
4. Holding a public meeting in the village
5. Gathering more information
6. Building people's confidence and community's trust

### **Development of Local Understanding**

Passive participation (for gaining subsidy or other monetary inputs or food for work or due to project pressure etc. only) in a new SHG will not keep it sustainable and functional for long. Soon after a project, such SHG or organizations become defunct and get dismantled. In other words, only active participation for self-development of farmers and for their own motivation can help create an effective and sustainable SHG. There must be some higher motive for the farmers to participate in a program. The steps to be followed are:

1. Organizing meeting
2. Participatory awareness building
3. Conceptualization of local geographical features
4. Participatory need assessment
5. Prioritization of common needs
6. Analysis of causative problems
7. Drawing commitment from villagers
8. Discussing the need to strengthen traditional farmers groups or forming new groups
9. Highlighting advantages of working together in groups for community action
10. Encouraging beneficiaries association / SHG and their formation
11. Arranging observation tour

### **Strengthening/Formation of SHG**

After the villagers have gone through these steps, they can be reckoned to have been furnished with preparatory measures to go on with strengthening their traditional organizations, if they

choose to do so or for formation of new SHG. Following is a process for SHG strengthening/building.

1. Holding a meeting to establish groups
2. Setting specific objectives
3. Grouping the specific objectives
4. Determining groups size
5. Structuring beneficiaries association / SHG
6. Establishing group work plans
7. Executing a group work plan

### **Sustainability of SHG**

While helping to strengthen or build SHG their prolonged integrity and functionality should be always kept in mind. All the efforts and resources invested in forming SHG will be meaningless if they do not sustain themselves for long. The objectives of SHG cannot be realized overnight and it takes time. Therefore, it is of paramount importance to keep it functional and effective for a long time. In fact it should become a part of the tradition of the village over time, as is the case with the already existing traditional village organizations. For this reason it is important to try to use traditional organizations (if already existing) themselves by strengthening them to achieve the goals of participatory watershed management.

### **Managing Common Property Resources**

Farmers often depend on natural resources beyond the farm, like, grazing land, forests, wasteland, water bodies, rivers and banks. These common property resources (CPR) comprise a substantial part of the resource base of the economy and play a crucial role in providing goods and services to rural population. Currently these natural resources are becoming scarce and degraded and it is necessary that these are managed properly and their productivity

maintained at a high level. Since a large number of people, particularly the rural poor, depend on CPRs for their livelihood, it is crucial that CPRs are managed properly and their productivity maintained at a high level. Three alternative management systems have been used for resolving CPR problems, viz., privatisation, nationalisation and co-operative/collective management. Privatisation and nationalisation of CPRs have been resorted as solutions to arrest degradation. However, according to evidence, these have neither helped to preserve the environment nor helped to the poor to gain control over the resources. Collective Management is now advocated as an appropriate strategy for managing CPRs, the arguments being that

- \* co-operative management of common resources ensures equity in the distribution of the benefits among the members of the community and inculcates among them the attributes of collective action and reciprocity
- \* collective management is more cost effective
- \* it is more flexible and sensitive to changes in the local environment
- \* it's easier to enforce and monitor
- \* it's self-sustaining

Leadership in co-operative management of CPRs has utmost significance. Seven critical roles that leaders play in the co-operative management of natural resources are:

- \* Generation of ideas
- \* Motivation and inspiration of people to implement the idea and enlist their participation
- \* Acquisition of resources around which an organization is to be established

- \* Holding negotiations with governmental and non-governmental organisations
- \* Mobilization of resources
- \* Development of management system
- \* Conflict resolution

### Conclusion

For the success of any natural resources / CPRs management strategy, involvement of local people is essential as the use of resources by any user has side effects on other co-users. Lack of sufficient degree of people's participation in most of the effort result into rapidly shrinking CPRs, which needs to be reversed through positive policies. The key elements of such an approach are

- \* Sensitization of public welfare and development programmes to common resource issues.
- \* Reduce mining of CPRs by users, introduce technological investments and create economic incentives to conserve CPRs.
- \* Regulate the usage, enhance the regeneration and raise the productivity of CPRs by involving users groups and mobilizing a community strategy.

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## Orissa : An Emerging State in Steel Sector

*Er. Suryanshu Choudhury*

Iron ore is the most important raw material of the steel making process comprising about 5% of earth's crust. The ore minerals do not occur in pure form, always being associated with varying amounts of silica, alumina, phosphorus, sulphur. In Orissa the minimum iron content of ore that is being mined at present generally 58% and it is essentially hematite with minor proportions of goethite. Other vital uses of iron ore are in direct reduced iron (sponge iron), ferroalloys, cement, ferrites etc. In the meanwhile a sudden inrush of steel investors has taken place to the Orissa since last two years. All roads and flights are bringing in dozens of investors into the state of Orissa due to the boom of iron ore in world market especially in countries like China, Korea and Japan etc.

### Geology and reserve :

The iron ore bodies are considered to be products of surface alterations of Banded Hematite Jasper (BHJ), the percolating surface and ground water leaching out the silica and fortifying the BHJ with additional iron.

The iron ore deposits of the state occur in five distinct geographic zones.

1. Bonai-Keonjhar, 2. Gandhamardhan, 3. Tomka-Daitari, 4. Gorumahisani-Badampahar, 5. Hirapur.

Out of these zones the main iron ore deposits of the state are found along the classic

Bonai-Keonjhar horse-shoe shaped iron ore synclorium in which the tops of iron contain high grade deposits.<sup>1</sup>

Estimation of iron ore deposit in Orissa has so far been confined to hematite and goethite containing minimum 56% iron. The Orissa state has about 30% of the country's resources of hematite ore. The Keonjhar district is alone contributing 75% reserve of the state. Next is Sundergarh district with about 22% reserves of the State.<sup>2</sup>

### Iron Ore reserves in Orissa as on 1.4.2000 are as under

(All the figures are in million tons)

Category of Reserves	Lease holds & freeholds	Lease hold Area	Free hold Area
<b>In situ reserves</b>			
Proved	1,824	1,778	46
Probable	763	403	360
Possible	1590	775	815
<b>Total</b>	<b>4,177</b>	<b>2,956</b>	<b>1,221</b>
<b>Recoverable reserves</b>			
Proved	1,528	1,503	26
Probable	518	313	198
Possible	1,158	604	553
<b>Total</b>	<b>3,204</b>	<b>2,426</b>	<b>778</b>

*Source* : IMYB, 2003, publication of IBM)

In the last two years, about 40 proposals poured in for setting up steel plants in the state. They include a projected 44 million tonne capacity build-up, at a massive investment of around Rs.108,000 crore. Out of these, five major national and international players alone are pumping in Rs.95,400 crore to build 32.5 million tonne capacities. The Australian BHP-Billiton, the world's largest mining company, has tied up with Korean steel major Posco to invest Rs.39,000 crore for a 10 million tonne capacity. The Tata group's Tata Steel will put up six million tonne (Rs.15,400 crore investment), Anil Agarwal's Vedanta Group will put up five million tonne (Rs.12,500 crore investment), the Ruia's Essar Steel aimed at putting four million tonne (Rs.10,000 crore investment), and Murugappa group's TI Cycles will invest Rs.6,000 crore for a 2.5 million tonne capacity. Japanese conglomerate, Mitsui and Co owns mining leases in Orissa through its Indian subsidiary Sesa Goa (Mitsui has a 51 per cent stake) at Thakurani sector in the Keonjhar district.

As part of the herd mentality, entrepreneurs of all hues are suddenly taking a shine to steel as the state provides assured long term reserves of high quality iron ore, surplus and cheap electricity and easy access to major steel consuming markets and raw material sources. Tata Steel is in the position of the company's expansion plans to reach a 15 million tonne annual capacity by 2010. Along with that Jindal Stainless Steel in investing Rs.7,000 crore to set up a 1.6 million tonne facility in Orissa. With 3,204 million tonne of recoverable iron ore reserves, around 30 per cent of India's reserves are in Orissa. Orissa has substantial reserves of other minerals which go into steel making, like coal reserve around 51,571 million tonnes (24.37 per cent of the national deposit), dolomite reserve is 434 million tonnes

(10 per cent) and limestone amounting to 1,032 million tonnes (1.36 per cent). One of the challenges for a steel company is the level of integration, and therefore it is very important that the manufacturing facility is close to the raw material base.

On the eve of this situation in the state Padmanab Behera, Minister, Steel and Mines, Orissa Government expressed his views that "more importantly, we have a transparent policy in allotment of mining leases in the state". Also, there are abundant water resources, surplus availability of power, a reasonably good road and rail network, an existing port facility at Paradip, two more new ports coming up at Gopalpur and Dhamra, and a comparatively better law and order record. In the mid-90s, Orissa witnessed a similar rush of investment proposals. About a dozen steel projects were then lined up-Tata Steel and Larsen and Toubro at Gopalpur, and Swaraj Paul's Kalinga Steel at Duburi. But they fizzled out latter. The revised mines allotment policy of the State Government is a different picture today. With a focus on captive use and mineral processing, the policy stipulates that an application for allotment of mining lease will be considered after the applicant invests substantially in a value addition project within the state. As per the norm, the lease will be allotted only after the promoter has committed 50 per cent of the proposed investment. This has helped to weed out non-serious promoters and improved the ratio between proposals and actual implementation.

The Orissa government has already signed 11 memorandums of understanding (MOU) over the last one and half year for medium size projects, with a combined capacity of 4.5 million tonnes at a projected investment of Rs.4,500 crore. Of this, Rs.500 crore investment has already been committed by the promoters of four projects Aarti

Steel (0.5 million tonne), Bhusan Steel and Strips (1.2 million tonnes) etc. All these proposals and MOUs have now made a question mark to the support of build up capacity of Orissa in terms of raw material linkage and infrastructure facilities. A rough estimate shows that one million tonne of steel production results in three tonnes of raw material movement. So a 40 million tonne capacity will result in almost 120 million tonnes of raw material. No doubt it's a big challenge for a state like Orissa. Then, the production of one tonne of steel requires 100,000 cubic litre of water per day, 800 units of power, 1.6 tonne of coal, 600 kg of coke and 1.6 tonne of iron ore. To transport raw material, a 1 km rail line or a one km four-lane road costs about Rs.4 crore. And the construction of a 20 million tonne handling capacity port means an investment of about Rs.2,000 crore.

However, steel makers are particularly concerned about the fast depletion of resources through a sharp rise in ore exports. Last fiscal, India exported 5.5 million tonne of ore, a 185 per cent jump over the previous year. This surge is due to the Chinese demand, which accounted for half of India's ore exports. In such a scenario, steel producers are uncomfortable about the long term supply of the raw material for domestic use. That's why the government should clamp down on exports. Meanwhile, the government is reportedly considering doing just that. This is to augment raw material supplies to domestic steel producers at cheaper costs and promote value-added exports like finished steel. Also, there is going to be a likely ban on the export of high grade ore (with an above 64 per cent iron content) soon. It also means developing marshalling yards by the railways build truck terminals and construct delivery channels for water and power supply at

various locations where steel projects are coming up. There is also a proposal to develop few strategic road networks with private participation.<sup>3</sup>

The per capita steel consumption in India is 28 kg to 30 kg compared to 350 kg to 400 kg in developed countries. If India has to stay in the race, our per capita consumption has to increase to at least 150 kg. Now it is found that steel making is once again being bandied as a vehicle for Orissa's industrialization. In the present situation two steel facilities have come up in Orissa. Steel Authority of India set up its Rourkela plant in the sixties, and then there is the recently commissioned Nilachal Ispat Nigam at Jajpur Road.<sup>4</sup>

The state currently contributes around 16 percent of country's production. This is not in conformity with the reserve base of the state which is 30 percent of total country's reserve. In the current existing iron ore boom, Orissa should take the advantage of steel demand in world market.

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# Impact of Present Environment on the Health of Modern Urban Women : A Study

*Dr. Padmalaya Mahapatra*

Human beings are at the centre of concern for sustainable development. They are entitled to a healthy and productive life in harmony with nature. Women have an essential role to play in the development of sustainable and ecological sound consumption and production patterns and approaches to natural resource management. Awareness of resource depletion, the degradation of natural systems and the dangers of polluting substances has increased markedly in the past decade. These worsening conditions are destroying the fragile ecosystems and displacing communities, especially women from productive activities and are an increasing threat.

While poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries. Environmental risk at home and work place may have profound impact on women's health because of their susceptibilities to the toxic effects of various chemicals. These risks to women's health are particularly high in urban areas as well as in low income areas where there is a high concentration of polluting industrial facilities.

## **Poor Maternal Health Care :**

Women being the secondary citizens in the eyes of society, their reproductive health is the

neglected lot. In our male dominated society women become vulnerable to chores of diseases like AIDS, abortion, problems of child birth, side-effects of contraception and so on.

The high incidence of depression, anxiety, neurosis, psychosomatic disorder, increasing rate of suicides among women clearly shows that in keeping of the projections of World Mental Health Report this is emerging as a major cause of morbidity.

A recent study reflects;

## **Status of Women in India**

Infant mortality rate	: 75/1000 live births
Maternal mortality rate	: 570/100,000 live births
Female literacy	- 58%
Female school enrolment	- 47%
Earned income by females	- 26%
Underweight children	- 53%
Total fertility rate	- 3.4%
Women in government	- 6%
Contraception usage	- 44%
Low birth weight babies	- 33%
Women in domestic work	- 98%
Women in unpaid work	- 60%
Anaemia in pregnant women-	50-90%

Source : V Shanthi and N. Raja - Lakshmi, "Women and Environment", an article published in *Empowerment of Women and Ecological Development*, ed, A. Ranga Reddy, New Delhi, Serials Publications, 2002, p.512.

Modernisation of Kitchen is a boon for the working women but at the same time it becomes a set-back in the long run. The modern gadgets such as washing machine, grinders, mixies, computers and robots set relief for women between the domestic chores and official duties but ultimately make women medically unfit.

The relaxation rendered by the modern gadgets also forces women to seek for a job to make use of the partly available time. Proper training and education is needed for modern women to remain healthy.

Modern urban women encounter newer problems with the changing environment. Transgenic plants and synthetic chemicals for pest management and food preservatives enter into the market before being validated for their ecological acceptance. Drugs and injections used for family planning are sometimes introduced without proper experiment. Working women depend more on readymade food and have lost control over their own traditional skill. The congested dwellings and inadequate sanitary facilities make cities breeding ground for various ailments. The various chemicals sprayed as controlling agents and effluent from industries and hospital wastes wipe out the immunity in the already emaciated women.

The cellphone menace, micro-oven, X-rays and sonography etc. have both positive and negative aspects. In-Vitro fertilization and Caesarian operations help women to become a proud mother. At the same time mankind becomes more dependable on the artificial intervention, which is against, nature's choice. Human rights relating to the environment are set out in basic human rights treaties and include the human right

to safe and healthy environment, the human right to highest attainable standard of health and the human right to ecologically sustainable development etc. Women and environment is the main concern of all human rights treaties.

### **Working Environment of Women and Gender Inequality :**

It has been found that more than 90% of women are engaged in the unorganized sector. The labour force in this sector is characterized by high incidence of casual labour, low wages at very uneconomical return. They work under unsatisfactory working conditions with occupational health hazards.

In almost every country women are poor and less educated than the male folk and enjoy fewer legal and political rights. This inequality has greater consequences for any effort to reduce poverty and environmental degradation. The United Nations Development Programme (UNDP) and Human Development Report (HRD) for the year 2003 focused on gender disparities in development. Gender Empowerment Measure (GEM) determine the basic idea of measurement of women in development which include the following : (1) Per capita income does not reflect women's access to resources. (2) Economic empowerment of female work force in India based on share in profession; managerial and technical lines. (3) Political empowerment of women based on scheme of parliamentary seats. The inference corroborates the government's women reservation policy which needs to be implemented with letter and spirit.

### **Conclusion**

The historical mainstay of agro-ecological systems have been women. Women provide sustenance to family and community by their

judicious use and management of natural resources. Women as consumers, producers, educators and caretakers of their families play a crucial role for sustainable ecosystem for the present and future. In both rural and urban area, environmental deterioration imposes negative effect on the health and quality of life especially of girls and women. The policy of conservation of natural resources will be successful only if women are integrated in eco-friendly programmes and policy making.

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### MINORITIES LOAN SCHEME

The Orissa Scheduled Caste and Scheduled Tribes Development Finance Co-operative Corporation Limited is implementing various economic development scheme for uplift of poor belonging to minority Communities.

During the year 2004-05, 32 beneficiaries have been given loan assistance to the tune of Rs.30.12 lakhs, as per the source of ST/SC Development Department, Government of Orissa.

# Industrialisation in Kalahandi District - A Study

*Dr. G. Rajgopal Rao*

*Dr. R.N. Misra*

## Introduction

Despite deposits of vast mineral resources like iron-ore, manganese, chromite, coal, bauxite, gem stones and granite etc. the State of Orissa continued to remain backward even after five decades of independence. The State is also blessed with a long coast line and fertile land with adequate rain fall. The State Government have been formulating industrial policies from time to time keeping in view the changes taking place in the industrial front. As a result, Rourkela, Angul, Damanjodi, Rayagada and Paradeep port are growing very fast. But Kalahandi, one of the thirty districts of the state continued to remain as "No industry area". With a view to making the state industrially advanced, the Government has classified the entire state into three zones in order of their backwardness. As per this classification, Kalahandi comes under Zone-A and given top priority for industrial growth. But the progress in this direction is quite slow. An attempt has been made here to analyse the industrial scenario of Kalahandi district in the following paragraphs, followed by few measures as suggestions for improving the scenario.

## Scope and Methodology :

The scope of the study is confined to the district of Kalahandi only. The data used for analysis is purely secondary in nature, and as such the limitations of using such data could not be completely eliminated, inspite of all possible care, statistical tools namely percentages have been

used in the analyses extensively. This paper presents the following : (a) Features of Kalahandi, (b) Infra-structure available in the district, (c) Industrial policy of the state, (d) Industrial scenario of the district (e) Scope for growth of industrialisation, (f) Reasons for industrial backwardness, followed by suggestions for improvement of the scenario.

## Features of Kalahandi :

The land area of Kalahandi district is 7,920 km representing 4.68 per cent of the area of the Orissa State. Since 2nd October, 1992, the erstwhile Kalahandi has been re-organised into two districts viz., Kalahandi and Nawapara. The present Kalahandi district occupies 115th rank in India so far as its land area is concerned. The relevant data of the district is exhibited in table-1.

**Table - 1**

### Demographic Features of Kalahandi and Orissa.

Particulars	Orissa	Kalahandi	Percent
Area (sq.kms.)	1,55,707	7,920	4.68
Population	3,67,06,920	13,34,372	3.63
Male Population	1,86,12,340	6,67,126	3.58
Female Population	1,80,94,580	6,67,246	3.69
Sex Ratio	972	1,000	-
Rural Population	3,12,10,602	12,34,095	3.95
Urban Population	54,96,318	1,00,277	1.82
Rural-Urban Ratio	85:15	92:8	-
Population density	236	168	-
Literacity rate	63.61	46.20*	-

\* Male literacy rate is 63% and that of female is 22%.

**Source :** Census-2001. Series 22-Orissa, Directorate of Census Operations.

The district is inhabited by more rural population with less literacy rate than the corresponding figures of the state as a whole.

#### **Infrastructure available in the district :**

So far as the infrastructure is concerned, 134 kms long National Highway NH-201 passes through the district connecting Borigumma (Koraput district) and Sambalpur, leading to Rourkela, the only industrially developed area of the state. The State Highway SH-6 connects this district with Bhubaneswar, the state capital and the silver city of the state, Cuttack. 74 km railtrack under East Coast Railway zone passes through the district covering five rail heads namely : Kesinga, a commercial centre, Rupra Road, Kandel Road, Lanjigarh Road, Narla Road. A new rail track is under construction from Lanjigarh Road, a prospective area of industrial growth, to Junagarh passing through the district headquarters-Bhawanipatna. Three perennial rivers viz., Mahanadi, Tel and Indravati wash the area giving ample scope for irrigation and agricultural operations. The annual rainfall accounts for 1100 mm which is at par with State's average. The Hirakud hydel power project in Sambalpur district supplies 20 MW power to the Kalahandi district and the Upper Indravati Power Project is about to be completed soon. This will help the district to supply its surplus power to other districts. The forest cover of the district accounts for 42 per cent of its land area and the forest produce provides livelihood to many rural people.

Finance is the life-blood of an industry. In Kalahandi there is one branch of OSFC, 35 branches of various nationalised commercial banks, 37 branches of Kalahandi Anchalika Gramya Bank (an RRB) which are catering to the credit needs of the rural poor. Besides this, there is abundant supply of human resources.

However there is only one industrial training centre (ITI) in the district.

#### **Industrial Policy of the State :**

The Government of India during 1991 had announced a new industrial policy for the country. A series of measures to liberalise the economy and to increase its competitive strength have been incorporated in the policy. On this background, the State Government of Orissa formulated the Industrial Policy for the state with a view to fully utilising the resources of the state and to overcome the problems which are unique to the state of Orissa. This policy was ammended during 1996 and 2002 keeping in view the changing circumstances. This policy had opened the doors for foreign nationals as well as NRI investors, whose proposals for setting up of industries in the state were to be given top priority. This policy has announced many incentives for the promising entrepreneurs. For the purpose of providing incentives-- the state has been classified into three zones basing on the industrial growth and backwardness. Kalahandi has been grouped under Zone-A -- representing 'No-Industry Area'.

#### **Industrial Scenario of Kalahandi District :**

Kalahandi happens to be a bowl of rich resources with regard to agriculture, mineral and minor forest produce. The prismatic view of available resource-potential alongwith processing facilities is reflected in Tables 2(a), (b) and (c).

**Table - 2 (a) Agro-based Industries in Kalahandi**

Sl. No.	Items	Average annual production	Processing facility available
1.	Paddy (MT)	5.2 lakh	2.5 lakh
2.	Cotton (Qntl)	1.2 lakh	50 thousand
3.	Arhar Dal (MT)	9000	2400
4.	Onion	Huge quantity	--

**Table -2 (b) Mineral-based Industries in Kalahandi**

Sl. No.	Minerals	Available working mines	Available non-working mines
1.	Gem Stone	02	01
2.	Graphite	11	03
3.	Quartz	35	06
4.	Bauxite	Huge deposits	-
5.	Granite	Huge deposits	-

**Table-2(c) Forest-based Industries in Kalahandi**

Sl. No.	Items	Potentiality (per annum)
1.	Char seed	1,000
2.	Mohua seed	1,000
3.	Thorn broom	50
4.	Tamarind	2,000
5.	Anla	1,000
6.	Bahada	3,000
7.	Harida	1,500
8.	Hill broom	1,000
9.	Siali leaf	2,000
10.	Siali fibre	500
11.	Babul seed	500
12.	Neem seed	800
13.	Kusum seed	250
14.	Karanja seed	50

**Source :** Business plan meet for development of non-farm sector in KBK region - organised by the D.I.C., Kalahandi, Bhawanipatna - The Report - 2003

### Scope for Industrial Growth in Kalahandi :

There is an ample scope for the growth of SSI units in Kalahandi. The industrial estate at Kesinga, FCI and RMC godown facilities at Kesinga, Junagarh and Bhawanipatna will surely brighten the scope of rural industrialisation. A survey made by the DIC, Kalahandi reveals the following :

1. 40 more rice mills will be viable and 10 such mills are in the offing,
2. 6 more cotton ginning units will be viable and 2 such units are in the making,
3. 3 more dal-mills (arhar) will be viable and 2 such projects are in the line,

4. One onion-storage unit will be viable due to huge production of onions in the district,

5. Aluminium industry is viable due to huge deposits of Bauxite in the district. Two large scale industries are going to be set up at Lanjigarh and Thuamul Rampur area. The work has already been approved and started at Lanjigarh,

6. Lastly, there is abundant supply of human resource.

### Reasons for Industrial Backwardness in Kalahandi :

Despite ample scope for industrial growth in Kalahandi, the district still remain backward in this respect. On analysis, the following reasons are revealed.

1. Due to inflow of multinationals, the local entrepreneurs express their inability to compete with them with regard to quality and marketing
2. Secondly, the remoteness of the district from the industrial epic-centres and commercial capitals play a significant role.
3. Thirdly, shyness among the local entrepreneurs is yet another major reasons. Though talented entrepreneurs are there in the district, yet they lack self-confidence. Further, there is no encouragement from their parents, friends and relatives. Moreover, they discourage the existing entrepreneurs which make their units sick.
4. The existing industrial units are unable to maintain quality standards of their products.
5. The entrepreneurs do not possess the technical knowhow of the profession of management.
6. Untimely release of funds by the credit agencies is yet another major reason.

7. Due to forced credit sale of their products, they suffer from heavy amounts of bad debts.

8. In addition, there is tough competition from within and outside the state, which the existing units are not able to withstand.

#### **Overcoming the Reasons of Backwardness :**

Though, there are many a number of genuine causes for the backwardness of the Kalahandi district, yet one should not loose hope. Because, the task of overcoming the situation may be difficult yet not impossible. With this idea in mind, the District Industries Centre of Kalahandi, Bhawanipatna organised a workshop on "Development Non-farm Sector Industries in KBK Region" during the year 2003. In that workshop, a draft proposal of industrial development in Kalahandi district was made and submitted to the Government for necessary approval and implementation. The details of the proposal are exhibited in Table-3.

#### **Suggestions for Improvement :**

To make the Kalahandi district industrially advanced, the following measures may be adopted after careful analysis of the situation :

1. The Governmental agencies of Industries Department and the non-government organisations be entrusted with the task of educating the youth of the district about the present industrial scenario and encouraging them to become entrepreneurs. These agencies should provide all sorts of help and support to such entrepreneurs.

2. The reasons of sickness of each individual units be analytically studies and identified and corrective measures are to be found out.

3. An IIT and a number of management institutes are to be set up in the district and manned with experts in order to produce skilled manpower both in managerial as well as labour areas.

4. Seminars, symposia and workshops are to be organised in various parts of the districts to train the unemployed youth to become future entrepreneurs of the district. Of course, the KVIC and other agencies of Industries Department of Orissa have started organising "Entrepreneur Development Awareness Programme" in different colleges of the state. But they should also arrange such workshops in rural areas to trace out the talented personnel.

#### **Proposed Industrial Development in Kalahandi District**

Sl. No.	Type of Industry	No.of units	Invest-ment	Working capital	Project cost	Techni cal man power	Non-tec. hnical man-power	Total man power	Power reqd.	Land reqd.
			in P & M	Rs.	Rs.	Rs.	No.	No.	No.	Kw
1.	Agrobased & Food based industries	28	426.60	474.60	1357.70	78	339	417	734.00	48.50
2.	Mechanical based Industries	10	33.20	48.00	119.00	26	75	101	69.00	8.10
3.	Chemical based industries	5	88.42	99.90	274.73	17	111	128	52.00	3.25
4.	Forest & Mineral based industries	14	89.30	41.25	205.34	23	156	179	272.00	16.60

5. Electrical & Electronics Units	5	10.50	50.10	104.60	9	24	33	12.00	2.10
6. Paper & Plastic industries	4	70.00	12.60	111.60	9	119	128	57.00	4.70
7. Glass & Ceramic industries	5	52.85	18.50	98.35	11	60	71	62.00	9.50
8. Repair & Service industries	14	128.00	13.10	356.10	26	107	133	114.50	12.80

**Sources :** Business Plan Meet for Development of Non-farm Sector in KBK Region - workshop organised by the District Industries Centre, Kalahandi, Bhawanipatna, 2003.

5. The State Highway No.6 and National Highway No.201 are not in good condition. These two high ways need immediate repair.

6. The railway track construction from Lanjigarh Road to Junagarh is pending since 1992. Its progress is slow owing non-allotment of adequate funds by Central Government. The Central Government be impressed upon for quick allotment and sanction of required funds for its completion.

By implementing the above suggestions, the present Kalahandi district which is still backward would become a leading industrial district. There is no doubt about it.

### References :

1. Industrial Policies of Orissa for the years 1986, 1989, 1992, 1996 and 2002.

2. Records of District Industries Centre, Kalahandi, Bhawanipatna.

3. Kalahandi Utsav-2003 booklet and seminar papers presented on "Kalahandi Vision-2010".

4. Assessment of infrastructure facility alongwith their problems and future prospects of Kalahandi District -- Santosh Kr. Das - M.Phil. thesis submitted to the P.G. Department of Geography, Govt. Autonomous College, Bhawanipatna.

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*Hon'ble Chief Minister Shri Naveen Patnaik laying the foundation stone of TCS Development Centre at Chandrasekharapur, Bhubaneswar on 20.4.2005. Shri Surjya Narayan Patro, Minister, Energy, Tourism, Information Technology and Shri Debasis Nayak, Information & Public Relations, Sports & Youth Services are also present.*



## Mahima Dharma, Bhima Bhoi and Biswanathbaba



*Bhagirathi Nepak*

If you happen to see a man clad with saffron robe, having knotted hair on his head, a bag dangling from his shoulder, a palm-leaf umbrella over his head, walking with down-ward glance, singing Bhima Bhoi's *Bhajans* to the music of his castanet, prostrating before sunrise and sunset, smearing his forehead with dust or eating from an earthen pot or leaf plates, sleeping beneath the open sky beside a burning log or *Dhuni*, you can instantly conclude, here is a Mahima Baba or a Kumbhipatia Baba, (*Satya Mahima Dharma 12-18*).

Mahima Dharma is a religion founded by one Mukunda Das alias Mahima Swami who hailed from Baudh ex-state and belonged to a Brahmin family. At first he was in charge of Balasingha Math of Baudh. He attained *siddhi* at Kapilas hill in 1862 A.D., founded Mahima Dharma, from there came to Balasingha and initiated his first disciple, Jagannath Das of Balasingha and renamed him as Govinda Das.

The poet prophet of this religion was Bhima Bhoi, whose *samadhi* at Khaliapali village situated at a distance of around 12 km to the west of Sonapur town has become a place of pilgrimage for the followers of his faith.

The Mahimaitees touch no *prasad* or tulsi leaf or medicine. They entertain no casteism or idolatry or belief in spirits. They play no games,

move with no *sanyasini*, sit under no canopy, domesticate no birds or animals. They do not accept alms from astrologers, prostitutes, barbers, Brahmins, Kshatriyas (*Rajas*) and *Chandals*.

Like the *Vaishnavas*, they wear no sacred threads, no *tilak* or mark of Vishnavism, no garland of beaded *tulsi*.

They take no dinner, touch no food which is too salty or too sweet or too bitter.

They perform *sarana* and *darsana*, beg food only once from a family, stay only a day in a village.

They practise truth, non-violence and believe in immortality and rebirth.

Born in an atmosphere of suppression and distrust, Mahimaism opposed the spread of Christianity and Vaishnavism.

It resembles Christianity in its belief in one God and one caste and also in bridal and funeral ceremonies. But unlike Christianity its God is Alekh.

Like Vaishnavism, it is based on faith, but it runs to philosophic abstraction. (To scholars like B.C. Mazumdar and L.N. Sahu this religion is the culmination of Jainism for its saffron robe, its non-violence, its code of conduct and its custom of fasting at night, while to others, it is the

modern form of crypto-Buddhism for its theory of the void, its projection of Mahima as Buddha, non-attachment and rejection of casteism, idolatry and the *Vedas*.

But to Dr. N.N. Basu and Professor A.B. Mohanty, Mahima religion evolved from Mahayana Buddhism.

To Pandit Vinayak Mishra, it is a branch of *Sahajayana*. To Pandit Nilakantha Das, it is *Tantrayana* which developed into a distinct cult.

The Buddhists believe that in the ultimate there is Nothing, but to the Alekhists, there is only One after all the appearances disappear. That again has no appearance. Like Sankaracharya, the Mahimaites believe in Monism, but they have no place of *Maya* in their scheme of things.

Though Mahima religion bears the stamps of Jainism, Buddhism, Christianity and Hinduism, it has its own indissoluble identity.

Mahima Dharma contains the essence of all cults of the world. Orissa during the 19th century, in the context of the Indian renaissance and the social and political changes which took place all over the world was indeed a virgin land for the rise of the Mahima Dharma.

Mahima Dharma originated in Orissa in the second half of the 19th century. It took its birth out of the two great religions i.e. Hinduism and Buddhism.

Mahima Dharma is the last protest of saints against the established Hindu religious order.

The great *Prabuddha Guru* Mahima Gosain founded and preached the religion called "Mahima Dharma".

Mahima Dharma is also called '*Satya Sanatan Mahima Dharma*'. It is *Satya* and

*Sanatan*, being a branch of the Sanatan Hindu Dharma.

The philosophical truth on which Satya Mahima Dharma is founded is that, "The ultimate reality is One and the only One. The human mind through ages has worshipped the One as manifested in many. But the true worship is, in the words of Bhima Bhoi "to come down to the stem leaving the branches". In other words, to withdraw from the many to One and the only One.

This theory of oneness of the Supreme Reality of the One and only one God is known in Indian philosophy as *Advaitabada*. *Advaitabada* has been the doctrine of many great philosophers of India like Shankaracharya (9th century) and Ramanuja (11th century). Shankara's *Advaitabada* is termed as *Nirbishesa* where *Brahma* or Ultimate Reality is One and the only One. Ramanuja's *Advaitabada* is termed as '*Visistha Advaitabada*' or the special theory of *Advaitabad*.

Mahima Dharma's *Advaitabada* is termed as *Visuddha* or pure *Advaitabada*. It is based on both Shankara and Ramanuja's theory of *Advaitabada*, It states that *Brahma* is *Advaita*, but the world he has created is not *Maya*. The world has a separate existence, but only as *Brahma's Mahima* or glory, says Biswanath Baba.

But Prof. Ganeswar Mishra, the eminent philosopher of Orissa pointed out that *Advaita Vedant* does not become dualistic just because it talks of the world being created by the power of *Maya* or *Brahma* nor does *Satya Mahima* philosophy become pure Non-Dualism because of its claim that the world is created by the grace of the formless and shapeless being. *Advaita* philosophy in believing that the world of name and forms is due to ignorance remain as much

monistic as the *Satya Mahima* philosophy which believes that the creation of many things and being is real even though the ultimate reality is One, non-dual, formless and shapeless.

According to Dr. A.Echmann, Mahima Dharma takes up the Buddhist concept of emptiness and identifies it with the Hindu conception of *Param Brahma* and '*Isvara Purusa*'. *Sunya Param Brahma* is characterized more precisely with the concepts of *Alekha*, *Nirakara*, *Anadi*, *Niranjana* and *Mahima*, all of which already appear in the medieval Oriya Literature for describing *Sunya Brahma* or as synonymous for him.

Ultimately *Sunya* came to be treated as the attribute of a personal God who can be attained through devotion. This God infact was supposed to have the twin attributes of "being no where" and "being everywhere".

### **The Source of Mahima Dharma**

Mahima Dharma was propagated by Mahima Gasain alias Mukanda Das of Baudh during the 19th century. The religion which he preached through some of his disciples is pure monotheism identical with the doctrine of the *Vedanta* or Upanishad.

The movement of Mahima cult was not an isolated movement. Chaitanya Das of Khadial is regarded as the originator of Mahima cult. He has cited *Brahma Purusa* as the Creator of the Universe and like *Mahima Dharma* discarded idolatry and caste system and idol worship in his "*Nirguna Mahatmya*" and "*Vishnu Garva Purana*". Later on Sadhu Chandramani Das of Baghapali, Sonapur explained the illogicality of Hindu Caste system and idol worship in his "*Sudhasara Gita*". Both Chaitanya Das and Chandramani Das were senior to Bhima Bhoi.

Mahima Dharma protested against the evils in the social sphere. The revolt was against the

prevailing social order and against the prevailing religious ideas. It tried to teach the people a simple set of doctrines to liberate the souls from the bondage of sufferings. This cult rested on indigenous foundations and had nothing to do with external forces.

In short, Mahima cult is a revivalism of the Vedantic thrust and a reformist movement of Orissa within the *Sanatan* Hindu fold.

The synthesis existing in Mahima cult comprehends many opposites such as Brahminism and anti-Brahminism, eastern and western traditions, Hinduism and Islam. In spite of all traditions, the basic Indian tradition is not completely lost. It is a unique synthesis since its uniqueness does not lie in merely placing together but in bringing up a complete harmony of the divergent philosophical and religious trends and exhibit the emergence of a new light which is a class of its own type.

Mahima dharma in incorporating all the higher values cherished by the values of past thinkers e.g., compassion, love, tranquility and detachment, and by giving a personal God in the Mahima Gosain himself, who is to be attained more through a fullness of heart than through pedantic learning, met all the claims of a theistic religion. (Mentioned in an article by Dr. N. Padhi.)

### **Mahima Gosain**

It is revealed from the Proceeding of the Asiatic Society of Bengal, January 1882 that the founder of Mahima Dharma is Mukunda Das. He appeared at Puri in 1826 and lived for a long time, there as an *Achhari-Vaishnab* and was known as *Dhulia Babaji* from the fact of smearing his body with ashes.

He left Puri and came to Dhenkanal where he selected the Kapilas hills near a shrine of

Mahadev as his dwelling-place. During the first twelve years of his residence at Kapilas, Mukunda Das lived on fruits and accordingly was known as the *Phalahari Babaji*. The next twelve years passed on by taking milk and water which secured him cognomen of *Khira-Nirahari*.

During his sojourn at Kapilas, he was known to be a devout worshipper of the local deity and took much pains in improving the place by cutting the jungle, making gardens, looking after the *Bhog* or sacred food of the idol and taking care of the pilgrims who were visiting the place periodically. This procured him the respect of the mother of the late Maharaja of Dhenkanal who supplied him milk as food every day.

He gradually succeeded in securing the respect of the people of the surrounding villages, and there developed a popular belief that he was in secret communion with the idol.

After remaining at Kapilas hills for several years and finding that he had sufficiently established his reputation and commanded respect of the people, Mukunda Das left the place and began to preach that various idols worshipped by the Hindus were nothing else but stone and wood and that the worship of these were articles was useless and of no avail, that the Creator of the Universe was *Alekh* or *Mahima*, a spiritual being without form and that he alone could hold communion with him and get his prayers granted. He eschewed his *Kaupin* and *Kanthi* and wore *Kumbhipat* to cover his nakedness.

Afterwards he came to Daruthenga where he built a *tungi* and commenced to propagate the new doctrine. It was at this place that Mukunda Das was deified and began to be addressed as the Mahima Gosain.

The then manager of Dhenkanal pointed out that the man who was at first called the

*Phalahari Gosain* was afterwards designated *Mahima Gosain* and was believed to be an incarnation of the Almighty God.

Mahima Gosain breathed his last in 1876 A.D. The death of Mahima Gosain gave a great shock to his followers who used to look upon him as the Creator of the Universe and Surya Brahma.

The followers of Mahima cult were divided into three sects even at the time of Mahima Gosain. They were *Kumbhipata*, *Kanapatia* and *Ashrita*.

The annual festivals held at Mahulpada and Joranda were generally attended by *Kanapatias* and *Kumbhipatias* respectively. After the death of Mahima Gosain the followers were divided into three groups, known as *Chhapanmurtia*, *Tetis murtia* and *Kodie murtia* according to number of Sanayasis in the group. The reason of the division was due to wearing of *Balkala* and *Kaupina*.

### Gradation of Sanyasis

There are no gradation of Sanyasi-hood among the followers of *Kaupindhari Mahima Samaj*. But *Balkaladhari Mahima Samaj* have three successive stages known as *Bairagi*, *Apara Sanyasis* and *Para Sanyasis*. These stages have been newly created by the *Balkaladhari Sanyasi* Biswanath Baba and not by Mahima Gosain, the founder of Mahima cult. The *Kaupindhari Mahima Samaj* of Joranda do not accept such distinction. This is also not found in the literature of Bhima Bhoi.

In course of time, a large number of people in Orissa became devotees of the cult. Gradually it also spread to the neighbouring states like Andhra, Assam and Bengal.

The early history of Mahima Gosain was shrouded in mystery due to lack of proper

research. He appeared for the first time in 1826 at Puri as Dhulia Gosain and Hindu Baishnaba. He was born in the last part of 18th century in Baudh ex-state as a son of Ananta Mishra. He was Brahmin by caste as mentioned in *Mahima Vinod* of Bhima Bhoi in Vol.11. He attained *Siddhi* in 1862 A.D. at Kapilas hill of Dhenkanal and propagated his newly founded *Mahima Dharma* for the last fourteen years of his life.

Besides the Sanyasis, there are lay devotees of this cult and the latter constitute the bulk of Mahima followers.

Hindus worship Brahma and all other minor deities whereas Mahima Dharma is based on the Philosophy of *Brahma* worship only.

The first convert to the Mahima cult was Govinda Baba alias Jagannath Das of Balasingha, Baudh. Bhima Bhoi, the first poet of the cult was the second disciple of Mahima Gosain. It was chiefly owing to the exertion of the disciples of Mahima Gosain that the religion was propagated.

The followers of Mahima Dharma belong to various castes and tribal sections.

Mahima Gosain, the founder of Mahima cult wrote no books. He preached his teachings by oral instructions. He has been described by Bhima Bhoi to be old having emaciated body, matted hair, sometimes clad on *Kaupin* or loin cloth and sometimes on bark.

Both Bhima Bhoi and his Guru Mahima Gosain have been turned into legendary figures by the followers of Mahima cult.

### **Bhima Bhoi**

Bhima Bhoi was born at Jatasinga near Subalaya of Subarnapur district. Previously Jatasinga village was in Rairakhol ex-estate. There is a palm grove on the bank of a pond on the

outskirts of this village where the infant was abandoned by his mother. Later on he was initiated by his Guru Mahima Gosain in his own cottage. A considerable knowledge of his Guru's teachings is handed over to us by the writings of Bhima Bhoi.

The very essence of Mahima Dharma is echoed in the writings of Bhima Bhoi. The obvious advantage that he enjoyed was that he had the company and *darshan* of his guru. His writings are, therefore, the only original source materials of Mahima Dharma. The writings of the poet are second to none, being original, authentic and real. It is learnt from the writings of Bhima Bhoi that Mahima Gosain himself blessed him and asked the poet to give expression to the basic teachings of Mahima Dharma in his poetry.

The philosophy expressed by Bhima Bhoi is "*Bhakti Yukta Gyana Marga*" and not "*Gyana Bhakti Marga*" as expressed by Biswanath baba.

Mahima cult, as expressed by Bhima Bhoi is basically a humanist cult. It believes that a house holder and a worst sinner can attain deliverance through devotion to *Alekh*. Thus he has drawn a synthesis between the life spiritual and life temporal.

Bhima Bhoi modified the tenets of Mahima cult and became himself the "*Guru*" of a new form of Mahima religion.

It is a phenomenon of great significance that Bhima Bhoi belonging to the Kandha tribe and became the progenitor of a religious system which disowns caste system and idolatry.

He declared for the first time in the field of religion that "*Yoga*" or meditation and "*Bhoga*" the pleasurable are one and the same. He maintained the same status for both. He himself practised it during his life time. Although he became a "*Gruhi Bhakta*" or householder disciple after

the death of his Guru Mahima Gosain in 1876 A.D, he was doing the duty of a Mahima Sanyasi by preaching Mahima cult and initiating thousands of disciple. The following illuminating lines of Bhima Bhoi have made him world famous.

" Boundless is the anguish and  
misery of the living  
who can see it and tolerate  
Let my soul be condemned to Hell  
But let the Universe be redeemed."

It was believed that Bhima Bhoi was born blind. But now it has been proved that he was not blind.

After the death of his Guru Mahima Gosain in 1876, he returned from Joranda to Khaliapali with a broken heart and tried to reorganize the Mahima Dharma in a different way. Bhima Bhoi in Khaliapali did not live the life of a Sanyasi. He

made up his mind to organize a monastic institute after his own idealism. Annapurna, his spiritual consort was a Sanyasini and was living with him in Khaliapali Ashram and was initiating the female devotees. Besides Annapurna, there were four other consorts of Bhima Bhoi.

Bhima Bhoi died in 1895 A.D. when he was hardly 45 years of age. A Samadhi temple was constructed at Khaliapali after his death in his sacred memory.

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### GOVERNOR VISITS HISTORIC SHAHI QUILLA MOSQUE

Shri Rameshwar Thakur, His Excellency the Governor of Orissa visited the historic Shahi Quilla Mosque, inside Barabati Fort at Cuttack on the occasion of Prophet Day Celebration . He was given a warm welcome on reaching the Mosque. Addressing on the occasion of '*Jashn-E-Siratun Nabi*', Governor told that India, through her Vedic scriptures, for thousands of years has preached '*Basudhaiva Kutumbakam*' while Holy Quran preaches the Universal Brotherhood. Complimenting the people of Cuttack, often called as *City of Bhaichara* for maintaining communal harmony and sharing each other's joys and sorrows, cutting across religions and faiths. Governor told that this culture should be an inspiring example for other cities to emulate. He appealed all to know the importance of Prophet Mohammed's words and try to bind the whole mankind through a common chord of love, tolerance and brotherhood. Governor also recollected his own close relationship with his Muslim friends right from 1942.

Guest of Honour, High Court Judge, Hon'ble Justice Shri I.M. Quddusi, noted physician Dr. Mustaque Ali, Former Minister Shri Mustafiz Ahmed, Prof. M.Q.Khan and Md. Moquim also addressed the gathering. Shahi Quilla Committee presented a memento to Governor on this occasion.

## Cultural Profile of Khurda Kingdom

Saroj Kumar Panda

The origin of Bhoi dynasty and formation of Khurda kingdom can be traced back to those days when the power of Suryavansi Gajapatis declined with the breaking of the Orissan Empire. But all these happened under the force of circumstances. The degradation of administration under the Suryavansi kings were slow and gradual. The first ruler of the dynasty Kapilendra Dev was an able ruler and empire builder. His son and successor Purusottam Dev, though was a great defender of foes, lacked proper vision. He was followed by Prataprudra Dev, who was largely responsible for the downfall of his own empire. He bought peace by selling his freedom. His patronage to Vaishnavism became instrumental for devastation of military power, giving a scope for decline and dissolution. The death of Prataprudra, weak successions to throne, internal squabbles and foreign interventions brought disaster. The first two weak successors were Kalua Dev and Kakharua Dev, who were sons of Prataprudra Dev. Taking advantage of their weakness, Govinda Vidyadhar, the Prime Minister became the de facto ruler of Orissa. But he was followed by still more weaker rulers, like Chakrapratap, Narasingha and Raghuram, who were killed one after another due to acquisition of power and treachery of Mukunda Harichandan, Commander of Cuttack Fort. After a political assassination, Mukunda Dev captured the throne. But his

authority was challenged by another minister and General, Danardana Vidyadhara. Meanwhile, the Afghan intrusion to Orissa made the situation more critical. However, Mukunda Dev could retain the power. After the death of Mukunda Dev, Ramachandra Dev; son of Danardana emerged as the natural leader and retrieved the lost glory of his father. He founded a new kingdom and a new dynasty. The dynasty is known as 'Bhoi Dynasty' and the kingdom as 'Khurda Kingdom'.

The suitable place that was chosen by Ramachandra Dev-I for his capital was Khurda, which had natural and strategic importance. It was situated in between Puri and Cuttack. During this period, the Khurda kingdom was covering an extensive area of 13,935 sq. miles that was stretching from river Mahanadi in the North to the borders of Khimidi in the South and from Khandapada Daspalla region in the West to present Jagannath Road in the East. So geographically, it was forming the Gateway between the North and South. It was therefore, during the period of Ramachandra Dev-I that, Khurda kingdom became the largest territorial entity in Orissa. The territorial disintegration of Khurda began during the rule of Ramachandra Dev-II by passing over of areas spreading from Tikali Raghunathpur to the Chilika lake to Nizam of Hyderabad. Finally, it was during the reign of Birakishore Dev that, major portions of Khurda

kingdom, beginning with four Parganas like Rahanga, Limbai, Sirai and Chabiskuda to Chauda or fourteen Garjats were ceded to the Marathas.

From 1568 to 1817 AD, during the long period of 250 years, Khurda witnessed the rule of thirteen kings among whom twelve were from the Bhoi dynasty. However, first the Mughal, followed by the Maratha and finally the British rule over Orissa had its repercussions on Khurda kingdom. It was attacked several times by different Muslim Subedars. Especially, Srimandir of Puri and Khurda fort were the targets of the invaders. During the reign of Purusottam Dev, Mukunda Dev-I and Ramachandra Dev-II, the kingdom was severely affected by the incursions of the Mughals. In many cases, it is found that, the rulers had to leave the capital for a temporary period to save their lives from the atrocities of the enemies. Finally, Khurda passed to the British administration during the reign of Mukunda Dev-II and his able advisor Jayi Rajguru.

In spite of repeated Muslim attacks, whenever the kings got the opportunity of enjoying peace and tranquility, they spent their resources in building forts, temples and other monuments, which are now existing in and around Khurda in dilapidated conditions.

Balabhadra Dev, the Bhoi ruler, erected a fort in a place, 16 kms to the south-east of Khurda which was named after him as Balabhadrapur garh. It worked as a second line of defence to the main fort at Khurda. The Khurda fort itself was reconstructed by the last Bhoi ruler, Mukunda Dev-II. It is now in ruins. Some traces of its walls and the ramparts are still remaining. Similarly, Lalita Devi, mother of Birakishore Dev had constructed a Vishnu temple along with many Mandapas inside the temple compound. Birakishore Dev himself was

responsible for renovating the old royal buildings at Puri. Divyasingha Dev-II brought the Aruna Stambha from Konark and installed it in front of Singhadwara of Puri Jagannath temple. Ramachandra Dev-II was instrumental for the construction of a mosque at Kaipadar. Because he gave shelter to Bokhari Baba, who became famous as a saint subsequently attracting admirers both from Muslim and Hindu communities.

Within the Khurda kingdom, there existed a good number of forts, temples and Muslim monuments which directly or indirectly carry the glory of the Bhoi kings. On the top of the Aragarh hill, a Buddhist Chaitya was as watch tower to determine the movements of the enemy forces. Commanders and Chiefs, stationed at Ghatikia garh, Kalupada garh, Kanjia garh, Rathipur garh and Rameswar garh along with many others actively supported the Khurda kings at the time of their crises. Therefore, they played a very dominant role during this period under discussion. The temple and mosque architectures of the Khurda kingdom were really note-worthy. The Hindu temples were mainly constructed in *Pancharatha Rekha* order, with all its characteristics of *Jagamohana*, *Natamandir*, *Pabhaga*, *Vimanika*, *Angasikhara* and *Amalaka*. Every temple were also consisted of the images of *Dwarapalas*, *Parswadevatas* and *Navagraha* icons. The Islamic mosque, mainly seen in and around Pipili were regarded as *Pir Asthanas*. Those were constructed during the reign of Aurangzeb, the contemporary of Divyasingha Dev-I. The architectural style of the Muslim shrines were by and large the same having the arches, the minarets and the domes. In many cases we find a tank existing in the close vicinity of the mosque.

The rulers of Khurda kingdom were also great patron of art and culture. Ramachandra



Dev-I provided his patronage to literary activities also. It was during his reign that the famous work *Durgastab Chandrika* was written. He restored the idols of Jagannath, Balabhadra and Subhadra in Srimandir, which were earlier hidden during the Orissa invasion of Kalapahara. Narasingha Dev-I revived the rites and rituals and ceremonies of Srimandir, which were not observed for a long time due to constant Muslim attacks on the temple. He also set up Neelachakra at top of the temple of Lord Jagannath which was blown earlier due to a cyclone. During the reign of Hari Krishna Dev, Hinduism was promoted. Many literary works, mostly epical were composed for this purpose. Divyasingha Dev-II organized *Jhulana Jatra*. Except these, some rulers of Khurda kingdom carried out the plastering and white washing of the Jagannath temple of Puri.

The cultural and constructional activities of the rulers of Khurda signify their ardent interest

for the promotion of learning and building of monuments. But due to repeated Muslim invasions, they could not undertake the building activities upto their expectation. They were successful only to a certain extent. They have left their contributions in shape of forts, temples and mosques of the kingdom. But it is a matter of regret that, most of these forts and religious shrines are in ruins now. Although, Orissa State Archeology has declared some of these shrines as protected monuments, under the Act of 1956 (2), still these remains need to be repaired and renovated to retain the cultural heritage of Khurda intact.

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### **EXTERNALLY AIDED PROJECT (EAP)**

Orissa Tribal Empowerment and Livelihood Programme (OTLEP) has been launched on 2nd October-2004. It has an outlay of Rs.430 crores and is a DFID-IFAD-WFP assisted Project. The programme aims at empowerment of tribals, providing them Livelihood Support and Food Security through Watershed mode approach.

In the first phase, ten blocks in four districts namely Koraput, Kalahandi, Kandhamal and Gajapati are being covered. The programme is being implemented through NGOs who have already been given the schedule of activities to be completed within a particular time frame. At present bases line survey in the villages is going on through participatory approach.

During the Year 2004-05 an amount of Rs.83 lakhs has been spent by the end of January-2005, according to the sources of ST & SC Development Department, Government of Orissa.

## Sustainable Agriculture for Food Security

Dr. B.B. Mishra

Indian agriculture has witnessed a spectacular breakthrough in food grain production over past few decades through adoption of intensive agriculture that implies harnessing of soil and water resources, genetic potential of plants and scientific inputs and technology. The production of food grains was 208.87 million tonnes in 1999-2000, which was the highest achieved ever earlier. Increased food production- a boon of green revolution has led the country to a state of self-sufficiency and our *ship to mouth* existence has been transformed into a farm to *ship to reality*. Ironically enough however, the modern intensive agriculture which has been responsible for a quantum jump in the food grain production has also brought in several environmental problems through over exploitation of natural resources like soil, water, forest, atmosphere and the genetic base which put together has led to a fragile ecosystem. Water and air pollution due to indiscriminate use of agrochemicals such as inorganic fertilizers and pesticides, soil degradation, depletion of soil fertility and extinction of plant species are among the glaring problems that raise question about the feasibility of the technology being currently pursued to meet the challenges of current and future food demand.

The World Commission on Environment and Development in its report published in 1987 stressed the importance of ensuring that today's

economic progress is not at the expense of tomorrow's developmental prospect. Development, leading to lasting benefits must be sustainable over time.

An abstract of the address of Dr. M.S. Swaminathan to the National Science Congress held at Varanasi in January 1968 is cited below which explains the gravity and seriousness of indiscriminate exploitation of agricultural base and inputs:

*"We are now entering an age of exploitive agriculture. Exploitive agriculture offers great possibilities if carried out in a scientific way but possesses great danger if carried out with only an immediate profit or production motive. Intensive cultivation of land without conservation of soil fertility and soil structure would lead ultimately to the springing of deserts. Irrigation without arrangements for drainage could result in soil getting saline or alkaline. Unscientific tapping of ground water could lead to the rapid exhaustion of this wonderful resource. The rapid replacement of numerous locally adapted varieties with one or two strains in large contiguous areas could result in spread of serious diseases capable of wiping out entire crops. Indiscriminate use of pesticides could cause adverse effects on biological balance and lead to the presence of toxic residues in food. Scientific multiple cropping could become a great blessing for all farmers; while unscientific*

*multiple cropping could become an unmitigated disaster."*

In the recent years there has been increasing concern about the fatigue of green revolution resulting in irreversible damage to the natural resources base like land, water, forest and the biodiversity, which are the foundations for both food security as well as environmental sustainability.

### **Depletion of Biodiversity :**

Existence of the strains with vast genetic diversity within the same crop species provides basis for crop improvement. India has the privilege of being one among the twelve centers of origin and diversity of plant species in the world. Out of about 2,400 plant species of economic importance accounted for in these 12 mega gene centers of diversity, 160 species belong to Indian center of diversity, besides 320 wild related species. Floristic asset of Indian flora is around 17,000 species of higher plants including 160 cultivated and 320 wild taxa of the cultivated species. There are many rare plants and wild species of great economic importance useful to the plant breeders. Enormous exploitation of the forest resources has given rise to loss of valuable gene pools of different crop species including their wild relatives. It is well evident that genetic improvement of plants to enhance their production potentiality has a spectacular contribution to increased productivity. However as high yielding superior genotypes responsive more to fertilizers and other scientific inputs are adopted for cultivation, the farmers shift to monoculture and consequently the old cultures and the progenitors are rapidly pushed out of cultivation. In the present intensive agriculture, continuous cultivation of a limited number of high yielding and economically profitable cultivars of choice often results in narrowing of genetic biodiversity. It in turn not only aggravates the infestation of insect pests and

diseases but also raises concern about the stability of production. There are evidences of extinction of a large number of indigenous species so far and many are still at the verge of extinction. Depletion of genetic diversity, an unfettered outcome of the present day cultivation seriously threatens the future progress of the genetic improvement of crop. Pests and diseases have become more serious problems than ever before mostly due to continuous monoculture with a few selected cultivars. Carryover of stem borer and build up of soil borne pathogens in continuous cereal system and *Phalaris minor* weed problem in rice-wheat system are examples of it. Many pests, which were minor earlier, have now emerged as major ones.

### **Effect of Agro-Chemicals**

#### **Pesticides**

There has been a phenomenal increase in the use of pesticides in India over past three decades to combat pest attack. The pesticide consumption in 1960-61 was only 8.62 thousand tonnes, which increased to as much as 75 thousand tonnes in 1990-1991. However with increased awareness on the ill effect of pesticides, a decreasing trend in the extent of pesticide use has been observed since 1990-91 and it has been reduced to 43.38 thousand tonnes in 1999-2000. Although pesticides have always played an important role to prevent crop losses caused by crop pests, their indiscriminate use has given rise to grave consequences such as residual toxicity in food, feed, fodder, environmental pollution, development of resistance in pests to pesticides, destruction of predators and parasites and pest resurgence etc.

#### **Fertilizers**

Since 1966-67, with coming up of high yielding cultivars, expansion of area under

irrigation and adoption of intensive cultivation there has been a vast increase in the consumption of fertilizers. The consumption of fertilizers which was only 2.92 lakh tonnes during 1960-61 increased to as high as 180.70 lakh tonnes in 1999-2000 with an increase in the food grain production from 82.02 to 208.87 million tonnes in the corresponding period. Despite the fact that an extensive use of fertilizers has been largely responsible for a quantum jump in the agricultural production, their injudicious use has given rise to issues of environmental pollution such as eutrophication and nitrate contamination of the surface and ground water resources. Among the nitrogenous fertilizers, urea is most commonly used due to its low cost, high solubility and non-polarity. Available data reveal that about 30-50% of the applied Urea-N is lost through various nitrogen losses mechanisms such as ammonia volatilization, leaching and denitrification etc. contributing to environmental pollution and health hazards.

### **Soil Erosion**

Intensive cultivation raising more crops from unit area of land gives rise to fast depletion of organic matter content of soil and adversely affects the soil's physical condition causing deterioration in soil aggregation. The lighter soils become more vulnerable to erosion by wind and water which gives rise to loss of top soil and aggravates the problem of landscape degradation.

### **Depletion of Soil Fertility**

There has been a spectacular increase in the use of chemical fertilizers over past three decades with coming up of intensive cropping system as the high yielding cultivars are extremely fertilizer responsive. Replacement of organic manures by inorganic fertilizers is being increasingly realized to alarmingly deplete the soil

organic matter content. Depletion of organic matter in soil discourages activity of soil micro flora responsible for decomposition of organic matter to enrich soil fertility. Inherent fertility of soil is thus seriously imbalanced due to our sole dependence on chemical fertilizers.

The problems discussed above and other related problems have now given rise to the necessity of reorientation of the present exploitive agriculture that has been practiced for more than three decades, solely aiming at maximizing production with little or no attention on its ecological implications. In this context, sustainable agriculture is the only solution to the challenges of food security and environmental stability. According to Dr. M.S. Swaminathan, "sustainable agricultural development implies that the environmental capital stocks should be held constant over time. Maintaining the natural capital stocks leads to protection of both environmental functions useful to human being and the habitats and ecosystems essential for biological diversity".

Sustainable agriculture has been conceived differently by different persons and authorities. According to FAO (1989) sustainable agriculture mainly involves 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. In a nutshell it refers to an agriculture that aims at meeting the current food demand of the present generation without endangering the resource base for the future generation. In other words sustainable agriculture envisages successful management of resources for agriculture production to satisfy changing human needs, while maintaining or enhancing the quality of the environment and conserving natural resources, The American Society of Agronomy defines sustainable agriculture as one that over long term

(1) enhances the environmental quality and the resource base on which the agriculture depends (2) provides for human fiber and food needs (3) is economically viable and (4) enhances the quality of life for farmers and the society as well. Thus it emphasizes on increasing trend in productivity without tempering with the sustainability and integrity of the biosphere. It relies on diverse inputs to maintain the ecological balance and enhances economic viability of the farming. The Technical Advisory Committee of the Consultative Group of International Agricultural Research (CGIAR) has also emphasized that for sustainability in agriculture, agricultural researches on global basis must be directed towards maintaining agricultural production at levels necessary to meet the increasing needs and aspirations of the expanding population' without degrading the environment. Sustainable agriculture includes economically viable system that reduces use of the off-farm inputs such as chemical fertilizers and pesticides and relies more on on-farm resources. The goal of sustainable agriculture is to feed the expanding population while farming profitably in an ecologically sound, regenerative way. In order to be sustainable, agriculture needs to be (i) technologically feasible, (ii) economically viable, (iii) socially acceptable and (iv) environmentally sound.

Sustainability in agriculture can be achieved broadly through:

- Efficient management of natural resource base.
- Integrated approaches to crop management.

Agricultural production can only be sustained on a long term basis if the resource base like land, water and forest on which it is based are not degraded.

### **Land resource and its management**

The constant increase in the demand of the burgeoning population for food, fodder, fuel and shelter puts a tremendous pressure on our land resources always resulting in a continuous decline of the cultivable land area at a very fast rate. Clearing of vegetation for varied human activities results in accelerated run-off. The later in turn gives rise to soil erosion and landscape degradation. Soil erosion and land degradation are among glaring environmental problems badly affecting soil productivity and continuously turning productive lands into wastelands. It is irony that while nature takes some 300 years to form only one cm. of top soil it is estimated that as much as 5334 million tonnes of soil gets eroded every year on a national basis accounting for about 16.4 tonne / ha. / year. Of the soil so eroded 29% is permanently lost into sea, 10% is deposited in reservoirs resulting in loss of their storage capacity and rest 61 % is transported from one place to another. More over it causes depletion of about 8.5 mt. of major plant nutrients (2.5 mt of nitrogen, 3.4 mt. of phosphorus and 2.6 mt. of potash) apart from other plant nutrients. Thus it itself becomes a potential threat to agricultural sustainability.

Among the different processes responsible for land degradation, erosion of soil (through water and wind) is the most destructive and is responsible for degradation of about 49.4% of the geographical area of the country of which water erosion alone is responsible for degradation of 45.3% of the geographical area. The important forms of water erosion accelerating degradation of land include sheet erosion, rill erosion, gully erosion, stream bank erosion, seashore erosion, landslide and roadside erosion etc. Large-scale erosion besides causing loss of productive top soil, results in siltation of reservoirs resulting in

loss of their storage capacity. Wind erosion is dominant in the western part of the country and about 4.1 % of the geographical area of the country is estimated to be suffering from wind erosion. The other important processes leading to land degradation include salinization and water logging.

### **Factors causing soil erosion and land degradation**

**Soil:** Structure, texture, organic matter, infiltration capacity, permeability etc.

**Water:** Heavy rain and run-off. It is the most spectacular force of soil erosion

**Wind:** Movement of sand-dunes from deserts towards productive lands.

**Biotic:** Deforestation, overgrazing and clearing of vegetation expose the soil surface to various forces of degradation. Micro-organisms which help in soil aggregation are subjected to destruction.

Efficient land resource management needs to be given adequate attention to increase the productive capacity of land and to prevent it from deterioration. Suitable location specific soil conservation and land reclamation measures based on soil survey on watershed basis needs due priority.

### **Water resources and its management**

About 72% of the cultivated area of the country depends entirely upon rainfall. Hence efficient rainwater management plays a vital role in ensuring stability and sustainability in agricultural production. The National Water Policy of 1989 declares water as scarce and precious natural resource to be planned, developed and conserved as such and in an integrated and environmentally sound basis. Agriculture consumes nearly 80% of the total water resources of our country and it

will decline in future due to increased urbanization and industrialization. As it is the natural resource that cannot be created as per desire, efficient management of the water resources is the need of the day.

India is among few countries endowed with abundant land and water resources. Considering average precipitation of 1250 mm over 329 m ha. geographical area, the total water resource of India is 400 m ha m. At present we are able to store only 17.4 million ha m. in reservoirs and tanks. The utilizable portion of the surface and ground water resources is 70 and 35 million ha m respectively of which only 77 million ha m will be available for irrigation purpose. The ultimate irrigation in our country is estimated to be 113 million ha of which 58 million ha m is from major and medium irrigation projects and 55 million ha m is from minor irrigation projects. At present only 38% of the gross cropped area in the country is irrigated. But the irrigated area has contributed 60% of the total food grain production with average productivity of 2.2 ton per ha as compared to 0.7 ton per ha in rainfed area.

A World Bank Survey reveals that most of the India's irrigation projects suffer from deficiencies of design, construction and maintenance. In efficient utilization of water resources in agriculture is also largely attributed to the flooding system of irrigation, currently under practice having a number of limitations causing:

- \* Poor drainage resulting in water logging, developing salinity and deteriorating soil physical condition
- \* Loss of a large volume of water through seepage and during conveyance
- \* Enhanced soil erosion
- \* Low water use efficiency. The water use efficiency is merely about 30-35%.

- \* Loss of a large amount of fertilizers and plant nutrients through leaching
- \* Uncontrolled weed growth
- \* Uncontrolled, uncertain and uneven distribution of water

Some of the suggested steps for management of water resources for sustainable agriculture include:

#### **Engineering Measures**

- ◆ Prevention of conveyance losses by renovation of field channels
- ◆ Artificial recharge of ground water through series of check dams in natural streams, percolation tanks and recharge wells etc
- ◆ Precision irrigation including sprinkler and drip irrigation system in water scarcity areas
- ◆ Due provision of drainage facilities in command areas

#### **Agronomic Measures**

- ◆ Adoption of recommended production technology and crop planning to increase water use efficiency
- ◆ Scientific scheduling of irrigation: irrigation at critical growth stages
- ◆ Integrated watershed development to use rainwater, ground water, soil water and runoff water efficiently
- ◆ Crop diversification
- ◆ Contingent crop planning for climatic aberration

#### **Management of forest resources for sustainable agriculture**

Although indirectly, forest significantly contributes to sustainable agriculture with various ameliorative and protective functions played by

it, it helps in conservation of soil and moisture, prevention of land from degradation, preservation of soil fertility, conservation of biodiversity and regulation of temperature and rainfall etc. Unfortunately our forest resource is depleting very fast due to profound growth of industrialization, urbanization, mining and other activities like construction of dams, roads and reservoirs etc. Deforestation of forest invites serious consequences endangering agricultural sustainability such as depletion of biodiversity and gene pool, abnormal climatic fluctuations, drought, flood and massive soil erosion etc. Erosion of top soil accelerated by massive deforestations is among glaring environmental problems badly affecting agricultural productivity and continuously turning productive lands into wastelands. A devastating impact of deforestation is that a large amount of rainwater from the watershed gets accumulated in the nearby rivers and streams beyond their carrying capacity causing heavy floods. On the other hand as infiltration of rainwater into the sub soil is drastically reduced due to accelerated run-off, it causes depletion of ground water storage. As the consequence the local streams and rivers cannot be replenished and they quickly dry up once the monsoon is over, giving rise to severe droughts. The so-called drought-flood cycle is a serious outcome of over exploitation of forest resources both of which are detrimental to agricultural sustainability.

Loss of forests being an important factor detrimental to agricultural sustainability, adequate emphasis needs to be given on forest management through conservation of existing forest resources and as far as possible compensation of loss of forests through massive afforestation programmes with plantation of location - suitable effective tree species. It necessitates a joint effort of the government and non-government agencies with the local people living around.

### **Integrated approaches to crop production**

Extensive and irrational use of chemical inputs, particularly inorganic fertilizers and plant protection chemicals have given rise to the necessity of an integrated approach for management of plant nutrient and crop pests. Integrated plant nutrient management and integrated pest management are realized to be two vital steps towards the unified objective of both food security as well as environmental sustainability.

### **Integrated plant nutrient management**

Integrated plant nutrient management system encompasses a combined use of different sources of plant nutrients for maintaining and improving the soil fertility for sustainable crop production without degrading the soil resource on long-term basis. It helps in reducing our over dependence on chemical fertilizers and consequently its load on the environment is reduced. It relies on a combined use of organic manures including green manures, recycling of crop residues, bio-fertilizers, vermicomposts and a judicious and need based use of chemical fertilizers rather than solely depending on the later.

### **Integrated Pest Management**

The multifarious harmful consequences of indiscriminate use of pesticides have posed a serious threat to the ecosystem. In view of the fact that increased use of pesticides has been seriously endangering the environmental sustainability, integrated approach to pest management needs adequate importance to make the agriculture eco-friendly.

Like integrated plant nutrient management, IPM also makes use of an ideal combination of physical, chemical, biological and cultural methods to contain pest damage with minimum ecological implication. It takes the utmost advantage of

natural mechanism of pest suppression. Modification of crop environment to make it unfavourable for infestation of pests, use of resistant cultivars and transgenic, conservation of predators and parasites together with a judicious and need based use of preferably safer chemicals are the major components of IPM.

Development of resistant varieties through conventional breeding procedures has remained as the most effective tool to overcome pest menace since long. Further, biotechnology has also played an important role in pest management in the recent years through developing transgenic. Development of transgenic has been the latest achievement in pest management. A transgenic plant is simply a normal plant with one or more additional genes from diverse sources. They produce insecticidal or antifeedant proteins continuously in the plants under field conditions. Bt. (*Bacillus thuringensis*) endotoxin genes are most commonly used in conferring insect resistance to plants because they have an established safety record, act rapidly and completely biodegradable. Of all the biological agents evaluated so far, *Bacillus thuringensis* has been the most successful insect pathogen.

Transgenic plants carrying Bt. genes have now been produced in a large number of economically important crops such as cotton, egg plant, maize, potato, rice and sugarcane and any other crop species.

Biocontrol is another integral component of integrated pest management strategy. It employs natural mechanism of pest suppression in which the natural agents like predators, parasites and microbial agents suppress the pest population. In a stable ecosystem, a balance between the pests and natural enemies is always maintained and the pest population remains at sub injury level. Success in biological control largely



depends on its efficacy in management of the pest population and complete success is achieved when the population of the target pest is maintained below those causing an economic injury to the crop. It reduces the requirement of pesticide use. Biocontrol includes three major components such as (i) introduction, (ii) augmentation and (iii) conservation of natural enemies. Introduction implies release of natural enemies in such areas where the regulatory forces of nature have failed to control the pests. Natural enemies are therefore released in such areas to restore the balance between the pests and the natural enemies. Augmentation implies increasing of the population of the natural enemies and their beneficial effects by suitable modification of the environment so that it favours the natural enemies. Conservation refers to protection of the natural enemies from adverse agricultural practices particularly, the pesticide use. The later is the most important step in biological control crop pests if the natural enemies can be effectively conserved, the need of other control will automatically reduce.

The potential role of integrated plant nutrient management and integrated pest management are now well recognized to be important contributing factors to economical viability in short run and environmental sustainability in the long run. Blending of the traditional wisdom of conservation based farming practices with modern technologies for management of renewable resources and natural resources together with sustainable approaches to crop production emphasizing

integrated plant nutrient and pest management are the key to sustainable agriculture.

- Some important components of the strategies for sustainable agriculture include:
- Specific water and land use strategies on watershed basis to optimize production and profit from cubic volume of soil and water
- Joint forest management strategies with adequate emphasis on social and agro-forestry
- Researches on resistance to biotic stresses. Development of cultivars with in-built, multiple resistance to insect pests and pathogens needs utmost priority.
- Researches on resistance to abiotic stresses, development of tolerance to moisture stress as well as moisture excess conditions may help to get stable yield under unfavourable weather conditions
- Establishment of biosphere reserves and botanical gardens for conservation and maintenance of plant biodiversity and gene banks for preservation of germplasm.
- Integrated approaches to management of plant nutrients and crop pests.

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# Preservation of Aonla (Anla) and Ber (Zizuphas) by Indigeneous Method

*Dr. Saswati Parichha*

Aonla and Ber are nature's most natural foods having all the nutrients and are rich sources of Vitamin C. To increase the self life of surplus fruits like Aonla and Ber for meeting the off-season demand we can preserve them by traditional methods i.e. sundrying and pickling.

100 gms. of Ber contains 1 gm. of protein, 17 gms. of Carbohydrate, 76 mg. of Vitamin C, 2 mg. of Iron and gives 174 K. Calcium 100 gms. of Aonla contains 13 gms. of carbohydrate, 50 mgs. of Calcium, 20 mgs. of phosphorus, 1 mg. of Iron, 600 mgs. of Vitamic C and gives 58 K. Calcium.

- (i) It provides resistance to common cold and other infectious diseases and constipation.
- (ii) It prevents scurvy, bleeding of gums, healing of wounds, keeps bone and teeth in good condition.
- (iii) Aonla has medicinal property. Used in aurvedic medicine of Chavanprash.
- (iv) Aonla acts as a blood purifier, appetiser and tonic for liver, kidney and brain.
- (v) Aonla if used in combination with iron, it is used as a remedy for anaensia and Jundice etc.

## Methods of Preservation

### 1. Sun Drying :

Good quality of fruits are collected. Wash and clean them spread evenly and thinly in a wooden tray. Keep the tray covered with a polythene sheet having holes to provide hot air inside. The inner lining of the box is provided with a black polythene sheet to increase the temperature of the inside box. Keep in hot sunshine for 2 days. The whole fruit may be stored in case of Aonla by removing the seeds (cut vertically). Aonla and Ber are rich in Vitamin C and pectin content, and can be stored for 2 years after sundrying if properly stored in glass container.

### Ber Pickle

Ber	12kg.	Fenu greek	1 spoon
Salt	25 gm.	Hing	one pinch
Mustard oil	100ml.	Red Chilli	50 gm.
		Mustard seed	1 spoon
		Tamarind pulp	250 ml.

Take raw and matured fruits. Cut into small pieces and roast all the masala to splutter. Add Ber pieces and try. Add salt and tamarind juice and mix well. Stir on fire for 15 minutes. Store in

a jar after cooling. Keep it under sunlight for few days.

### Aonla Pickle

Aonla	100 gm.	Red Chilli	5 gms.
Salt	10 gm.	Mustard seed	1 spoon
Hing	1 pinch		
Mustard oil	1 ml.		

Take Aonla and salt in a glass container. Keep it under hot sunlight for 5 days. Put mustard grinded seeds, hing, red chillies fried, grinded and put it in sunlight for another 3 days, then store in a dry place.

### Aonlajam

Aonla - 100 gm., Sugar - 100 gm.

Cut Aonla into small pieces. Remove the seeds. Cook in one cup of water. Crush them. Add equal quantity of sugar cook in slow fire. Constantly stir till it sets to Jelly form. Cool it and store in dry glass Jar.

It is a healthy practice to keep Ber and Aonla for longer period and for off season use, for which it is known as poor man's apple.

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## DIFFERENT SCHEMES FOR THE URBAN DEVELOPMENT OF THE STATE

54.96 lakhs people are living in the urban areas of the State out of the total population of 3 Crore 67 lakhs as per the Census of 2001. More drinking water projects and construction of roads, sewerage and cleaning facilities and construction of shelters for the homeless programmes have been given priority in the infrastructure development of urban areas due to the entry of more people through migration from the rural areas to the towns and cities.

At present 651 million litres drinking water has been provided to 42 lakhs people of 120 towns and cities of the State. 1,73,752 home connections for 11 lakhs urban people and 17,183 water points for 31 lakhs people have been provided in the urban areas of the State. 16,503 hand pumps are functioning to fulfil drinking water demand of the urban population.

In addition to the above drinking water facilities, 29 rapid urban drinking projects have been sanctioned by the Government of India as well as Government of Orissa. 66 proposals to set up drinking water projects have been approved in the financial year 2004-05. 42 lakhs people will be benefitted after the functioning of these projects.

Self-employment opportunities have been created by providing free land to build kiosks to the educated men and women of the State. In Valmiki Ambedkar Awas Yojana 21 urban bodies have deposited 228.60 lakhs rupees from their own fund and Government of India has given central assistance of Rupees 112 lakhs to 13 Urban bodies as per the sources of Urban Development Department of the State.

# Self-Employment in Rural Areas

*Dr. Ashish Kumar Dash  
Mohima Prasad Behera*

It has been observed that the employment opportunity has been squeezed in the Government sector due to scarcity of funds as well as imposition of restriction by different financial agencies. Statistics indicated that during 1997 out of total registered unemployed in our country only 4.37% employed in Government sector whereas during 2001 that figure reduced to 1.85% and it will decrease further. We observed that the financial growth rate during 1983-1991 i.e. pre financial reform time was 5.7% whereas this rate was reduced to 1% during post-financial reform time. It indicated that the financial reform reduces the average financial growth rate as well as decreases the employment opportunity. In India, 70% of the total population depends upon the agriculture and allied sector directly or indirectly. So self-employment opportunity can be created easily in rural areas through agriculture and allied sector. In this context we will discuss some of the projects related to agriculture and allied sector in detail which provide self-employment to the rural youth. Before going to detail of the individual project, we will discuss some of the general principles for smooth management of any project. These principles are as follows :

## **Availability of Fund**

Presently most of the nationalized banks, NABARD, Co-operative banks and Co-

operative societies are providing loan for establishment of different projects related to agriculture and allied sectors. These loans are sanctioned as per the norms and guidelines fixed by the financing agencies. When a person or group of educated unemployed persons will start any project they should arrange the funds at nominal rates and care should be taken for efficient utilization of funds in the projects to get maximum profit out of this investment.

## **Availability of Raw Materials**

Before establishment of any project one has to assess the availability of the raw materials required for the particular project. Depending upon the availability of raw materials in a particular area, necessary physical facilities such as processing unit, store room for the raw materials as well as for the end products should be created. As the projects are on agriculture and allied sector, we have to depend upon the agricultural produce of the local area and one has to create awareness among the people of that locality for a particular produce. For example if a person of particular area is interested to establish a fruit preservation unit for tomato, he should directly or indirectly create awareness among the farmers for cultivation of tomatoes in that particular locality so that it will be easier for him to collect raw materials for that preservation unit.

### **Availability of Necessary Machinery**

For different projects different machineries are required. The persons who is interested to start the project should gather sufficient knowledge regarding the availability, cost and working principles of the machines. After gathering information in all these aspects one has to plan for the arrangement of funds, acquisition of land area, procurement of machines and engagement of trained personnel to run the machine and maintenance of the machines.

### **Availability of Marketing Facilities**

Before establishment of any projects, one has to study the marketing facilities of the products in particular locality. Depending upon the survey report one has to develop marketing network for easy and efficient marketing of the product. In this connection one has to consider the road and transportation facilities in that particular area. Emphasis should be given on the formation of marketing team with the existing facilities in that particular area for smooth marketing of the products.

### **Availability of Improved Knowledge or Technology**

Before starting of the project one has to gather sufficient knowledge regarding the improved practices and technologies relating to the particular project. New information and improved technologies related to the use of raw materials, function of the machinery, processing of the raw materials and marketing of the products should be collected. The person who is interested to establish the project he should go for exposure visit of the similar kind of project in order to create confidence within him.

The important characteristics of these projects are : (i) Investment is less (ii) Availability of raw materials is easier (iii) Less skill is required

for these projects (iv) Small and simple instruments are utilized which requires less maintenance and (v) Comparatively easier marketing of the products. Now we will vividly describe some of the self-employment projects related to agriculture and allied sector for easy implementation. These projects are as follows :

#### **(a) Mushroom Cultivation**

There are different types of edible mushroom out of which generally two types are commercially grown in great extent in most of the area. The cultivation of these two types of mushroom is discussed below.

#### **Paddy Straw Mushroom**

Paddy straw mushrooms are cultivated when the temperature varies between 25-35°C. Before starting of the project one has to assure the availability of mushroom spawn, paddy straw, water, space for growing of mushroom and required man power. The paddy straw of 45 to 60 cm. are selected and disinfected by the help of hot steam or with the solution of 100 ml. Formalin with Bavistin. These disinfected straws are placed layer by layer on the raised bed and in between two layers of straw, mushroom spawn alongwith powdered pigeon pea are placed. The entire mushroom bed has to cover with big polythene sheet for 5-7 days. After ramification of the fungi the polythene is removed and water is applied two to three times in a day depending upon the temperature of the area. Mushroom will come out of the bed after 8-10 days. From one bed 2 to 2.5 kg of mushroom will be harvested.

**Oyster mushroom cultivation:** Oyster mushroom can be cultivated during winter season in a polythene bag of size 80cm x 40cm. Paddy straw are cut into 10-20cm size and disinfected by the help of steam. The wheat is boiled. These disinfected straws are packed in the polythene in

4 layers and mushroom spawn along with boiled wheat of three layers placed in between the straw layer. The polythene was tied tightly and 10-12 nos. of small holes are prepared on the polythene bag. This polythene should be kept preferably in dark room for 12-15 days. Then the beds are taken out of the polythene. These beds are placed on the plastic rope and if possible, these should be hanged. After hanging of the bed the water is applied 2 times daily and mushroom will come out from the bed after 6-7 days. About 1 to 1.5 kg of mushroom is produced from one oyster mushroom bed in 2-3 phases. For mushroom cultivation the important raw material is paddy straw and oyster mushroom spawn. In this project one can invest more capital through different nationalised banks which will provide employment directly and indirectly.

#### **(b) Mushroom Spawn Production**

In this project one can produce spawn for paddy straw mushroom as well as oyster mushroom. But methods for preparation of spawn for both the mushroom are same. This project requires a lot of machinery as well as good trained personnel for preparation of media, disinfection of the media and transformation of fungus from pure mother culture. Important machineries required for this project are Auto claves, shakers and laminar flow etc. One has to procure mother culture from different sources and it can be transferred to the glass bottle under aseptic condition for marketing as mushroom spawn.

#### **(c) Broiler Poultry Production**

In this project one has to procure chicks of 1-2 days from different reliable sources and these should be reared scientifically with proper vaccine, feeds and water. These birds are the age of 6-7 weeks attain the maximum growth of 1.5 kg. For this project investment is required for

preparation of house for the birds, procurement of chicks and feed required for the birds. If more capital is invested in this project, the profit will be more and more person will be engaged in this project directly or indirectly. One may establish a hatchery to produce chicks for which investment will be more for the procurement of hatching machine.

#### **(d) Egg Producing Poultry Production**

This type of project requires investment in preparation of house for birds, feed and water system. One may invest more money to procure good quality egg laying chicks as well as provide good housing facilities and good quality feed to chicks so that the egg production will be more. The birds should be vaccinated properly and vitamins should be supplied for good growth of these birds.

#### **(e) Fruit / Vegetable Processing Unit**

India occupies second position in the vegetable production and first position in the fruit production in the world. Out of these, 30-40 per cent of vegetables and fruits are destroyed due to lack of proper facilities for storage of fruits and vegetables. The fruits and vegetables so produced can be efficiently utilized by different processing methods i.e. by dry processing method in which pickle, chips and nodules are produced and processing by chemical preservatives in which sauce, squash, jam, jelly etc. are produced. Depending upon the availability of raw material in a particular locality one has to establish the particular processing unit which requires more investment. Each processing unit mainly consists of grading section, washing section, peeling section, grinding section, processing section and packing section. More employment is created directly and indirectly if this unit is established on co-operative basis.

**(f) Bee Keeping**

Bee keeping is another way of additional income. Any person can start this unit by putting 10-15 Bee boxes. For starting this project one has to procure bee boxes and bee colonies. Initially one has to survey the area and visualize the different crop area available because the flowers of the crop as well as the forest trees will act as the raw material for the bee colonies. For establishment of one bee colony with a bee box and their subsidiary investment is around Rs.3000/-. generally it has been observed that a person managing 20-30 bee boxes scientifically and plenty of flowers will be available for the consumption of bees around 2.5 km. radius of the placement of boxes, one will earn Rs.10,000/- annually.

From the above discussion it can be concluded that the educated unemployed person will start any of the above projects in rural areas

easily by utilizing the facilities available from different agencies and they will get self employment alongwith provide direct and indirect employment to many people of rural area. In this connection, emphasis should be given for establishment of any unit on co-operative basis for smooth management, more profit and more employment directly or indirectly which will improve the socio-economic condition of the rural poor as well as to make the project viable one. Let us hope for the establishment of more self employment projects in rural areas for strengthening the rural economy and improving financial status of the rural poor.

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**HELP LINE TO HELP WOMEN IN DISTRESS**

Women and Child Development, Government of Orissa has set up a "Help Line" around the clock, toll free telephone service in collaboration with Ruchika Social Service Organisation (RSSO) and United Nation's Fund for Pop - Activities (UNFPA) to address the problems of women in distress.

Help Line is Bhubaneswar's non-profit Hotline (Telephone No.10920) to respond to the needs of women in trouble and also those requiring immediate medical attention and counselling. Help line has come to symbolise a successful partnership between Government Sector and Non-Government organisations.

In Help Line the trained volunteers are engaged for listening and responding to women in distress. Help Line ensures immediate rescue and actions.

Help Line also gives free up-to-date information and referrals to shelters for distressed, abandoned and elderly woman.

Indian Red Cross Society, Bharat Scout and Guides, Swabhimani, People Forum, Sanjivani, Marwari Yuva Manch, Gurudwara - Prabandhak Committee, Lion's Club, Bhubaneswar are linked with Help Line.

## Strategies in Good Governance : A Case Study of Karnataka, Kerala and Orissa

*Kulamani Padhi*

The managerial orientation that is making way into the domain of public administration with thrust on economy, efficiency and effectiveness, is also emphasizing the pursuance of governance for development by governments. This is a global phenomenon, our approach to development is now acquiring a new holistic orientation, integrating economic aspects, political elements and social processes. The human dimension to development based on accountability, responsiveness, decentralization and empowerment is gaining importance. It is being increasingly realized that governance for development has to orient towards building and strengthening human capacities and capabilities and creating a conducive environment that fosters individual dignity and equality and achieving sustainable human development. This calls for unfolding various issues of concern in governance and devising suitable strategies for human governance.

### **Good Governance**

Kautilya in his treatise *Arthashastra* elaborated the traits of the king of a good governance state as "in the happiness of his subjects lies his happiness, in their welfare his welfare, whatever pleases himself, he does not consider as good, but whatever pleases his subjects he considers as good" (*Sharma, L.N. and Sushmita Sharma, 1998*). Plato is credited with developing

the concept of the philosopher king as the ideal ruler Aristotle was perhaps the first political theorist to deal with the term "governance", when he classified political organizations by indicating the manner in which they were ruled by a kind of numerical court of rule by one (dictatorship), a few (autocracy), or many (democracy) (*Sinclair, 1962*).

Kautilya mentions the following few imperatives of good governance for a king (*Sharmasastry, R.1929*) :

1. Merge his individuality with his duties.
2. Guide administration
3. Avoid extremes without missing the goal.
4. Lead a disciplined life with a code of conduct.
5. Pay fixed salaries and allowances.
6. Maintain law and order
7. Stress on *lekhaks* (writers)
8. Carry out preventive / punitive measures against corrupt officials.
9. Replace bad administrators by good ones
10. Emulate administrative qualities.

The World Bank in its document *Governance and Development 1992* defined



governance as the manner in which power is exercised in the management of a country's economic and social resources for development. The bank came to realize that "good governance is central to creating and sustaining an environment which fosters strong and equitable development and it is an essential complement to sound economic policies. It has defined good governance as the one epitomized by predictable, open, and enlightened policy making, a bureaucracy imbued with a professional ethos acting in furtherance" of the public good, the rule of law, transparent process and a strong civil society participating in public affairs. Poor governance (on the other hand) is characterized by arbitrary policy making, unaccountable bureaucracies, unenforced or unjust legal, a civil society unengaged in public life and widespread corruption. It identified the following three distinctive aspects of good governance.

1. The form of the political regions, military or civil, parliamentary or presidential, authoritative or democratic.
2. The process by which authority is exercised in the management of a country's economic and social resources for development.
3. The capacity of governments to design, formulate and implement policies and to discharge government functions.

The characteristics of good governance laid down by UNDP are as follows.

1. Participation, 2. Rule of Law, 3. Transparency,
4. Responsiveness, 5. Consensus Orientation,
6. Equity, 7. Effectiveness and Efficiency
8. Accountability and 9, Strategic Vision.

### **E-Governance**

In the fast changing scenario, e-governance has become not only necessary but essential in a setup where people are the biggest stakeholders.

In this direction, the Union Ministry of Information Technology has already made a number of initiatives, including the setting up of a center for e-governance at Massachusetts Institute of Technology (MIT) which will function as a forum for government officials, legislators, industry, and various other key players to come together, discuss learn and explore issues of shared importance.

Some of the objectives indicative of a road map for e-governance are as follows :

1. Develop a system for the seamless transfer of information between offices dealing with proper administration, both at the center as well as the states.
2. Set-up and /or facilitate specific communication networks for the government sector.
3. Assist central and state governments in identification and implementation of suitable hardware and software packages for e-governance.
4. Establishing links worldwide, among the institutions engaged in similar activities so as to optimize and for benefits by builders / sustaining platforms for interchange of ideas and experiences.
5. Develop special pilot projects or paperless government on like through an electric intelligent government concept by extensive use of electronic forms and data entry interface through the use of the web and internet technology.
6. Build convergence into connected services delivery programmes related to citizen devices.
7. Develop commercial and governmental systems for issues and managing signatures / electronic signatures and smart cards.
8. Identify measures for suitable protection of data during filling up, transmission and alterations by using a combination of security measures.

9. Establish Industry Consultative Committees (ICC), Citizen Consultative Committees (CCC), Ministries Consultative Committees (MCC) to provide a forum to various users, implementation groups and organizations to contribute towards the 25 percent goal and beyond.

The e-government solution strongly supports digitization of government administration by using network technology and security technology to meet the needs of both the people providing services and those receiving them. As the internet spreads throughout the society, and in public as well as private sectors, operations such as e-applications and e-procurement become common place. Internet access is thus a prerequisite to the e-government solution.

#### **Strategies for Reaching out to people**

Undeniably, in order to reach people and with a view to making them partners of the systems and processes of governance, greater emphasis needs to be laid on school education, especially computer education. The biggest challenge for this is making personal computers (PCS) available at an affordable cost. The Hardware Vision 2005 Plan envisages PC penetration to 26 per 1000 people by 2005 from the present 6 per 1000. According to a Confederation of Indian Industry (CII) paper, the best way of achieving this would be to go local in terms of local needs, local problems, local solutions and local contents while making PCs affordable. Next to Government and business establishments, schools would be the biggest consumers of PCs. The CII estimated that 18 million PCs would be needed at the rate of 20 sets in each of nine lakh schools in the country. To be affordable, the price needs to be brought down to below Rs.15,000 per computer.

The Massachusetts Institute of Technology (MIT) and the Government of India have agreed to collaborate on a one year project to create the

media laboratory Asia, which is conceived as an independent, non-profit organisation. MIT plans to develop the technology to bring the benefits of the most sophisticated emerging technologies to the daily problems of India's poorest and least educated people. The Media Lab-Asia in collaboration with IIT, Mumbai has also under taken an agro explorer programme so that farmers can benefit by various relevant information. The Ministry of Information Technology is very sensitive to the problem of language barrier and has therefore introduced a scheme of languages and IT localization. Once the scheme becomes operational, it will go a long way in reaching out to and empowering the masses. This is an important strategy for the country's development.

#### **Strategies of Karnataka**

The IT initiative of Karnataka aims to provide direct citizen interface, improve human resources and connectivity and improve the efficiency of government officials. IT has been applied in the following areas.

##### **Secretariat Local Area Network (LAN)**

This Programme envisages computerisation of all secretariat departments. It enables citizens to know the status of their file and the number of days they took to be cleared at various stages. It is a significant step in delivering good governance to the masses.

##### **Khajane**

This Rs.45 crores project is in an advanced stage of implementation. The system keeps accounts for all payments of the state, which totals to approximately Rs.24,000 crores a year. Besides government payments, the system makes payments to 6 lakh employees, 3 lakh pensioners, 13 lakh aged, widowed and handicapped pensioners. The accounts, available, real time, are stored in data centers in Bangalore and a disaster

center in darwad. The STP is the network partner. The major benefit of the project is the instantaneous reconciliation of government accounts. In addition the system displays the money spent on all government schemes in every village. This enhances transparency and improves quality.

### **Bhoomi and Nondani**

Bhoomi is the state's computerized land records project. It aims to cover 60 lakh farmers in 175 taluks. Operational in 12 sub-registration offices in Bangalore, it accounts for about 40 percent of the total revenue. This computerised registration is operating in 48 taluks of the state.

### **Yava.com**

This programme envisages 225 training centers all over the state run by prestigious firms like Aptech, NIIT, SSI etc. The fees in the center are already reduced. The government gives subsidy of Rs.1500 for a three month course. A maximum subsidy of Rs.4500 is offered for a six month course. The programme aims to train over 1,00,000 rural youths in a year. Over 100 centres are operational at present.

### **E-Lottery**

The government has floated a tender to set up 10,000 terminals all over the state. Apart from running the electronic lottery the kiosks could be used to disseminate other public information.

### **Mukhya Vahini**

This is the Chief Ministers decision support system. Presently it tracks the C.M.S. instructions, the projects sanctioned under the Global Investor meet, the constituency management system, summarized data on major projects in health, housing, and other social sector schemes. Many modules are already in use.

### **Common Entrance Test**

Karnataka has numerous institutions of higher education and attracts students from other Indian states and countries. Every year the state conducts the common entrance test. Over 1,50,000 students take the exams and around 50 percent are from outside the state. The entire admission process is absolutely transparent. The fact that students from outside the state participate in large number shows their confidence in the local administration. Before computerization, the process attracted many questions from elected representatives and a lot of litigation. Now the system is so transparent that it has rid itself of both.

### **Other Initiatives**

The Commercial Tax Department tracks goods using check post entries. Information about movement of goods is automatically put in the dealers assessment file. In terms of tax collection per GDP, the state is one of the best in India. The Insurance Department uses computers to track all the government vehicle insurance details. Police salary bills are computerized. The irrigation department has a major project on e-tendering and e-procurement. Silk trading exchange in Karnataka has been computerized since 1985.

### **Friends Project of Kerala**

Friends is an extraordinarily successful project in Kerala where an IT enabled, single-window, front end interface called Friends (Fast, Reliable, Instant, Efficient, Network for Disbursement of Services) was set up for availing a range of popular public services like payment of taxes and utility charges and renewal of licenses without waiting for back-end computerization or systems integration in the government. In the span of 3 years, this project has expanded to serve 13 million people in 12 of 14 districts in Kerala.

### **Project Application**

Usually, a citizen in Kerala has to interact with at least eight to ten government departments / agencies for accessing routine services. Traditional payment systems necessitate visiting each of these government offices and waiting in tedious queue. Some transactions take as long as a day to be completed. Often staff are rude and some times bribes are demanded through touts and inter mediaries. The poor public perception of the government arises from these unpleasant experiences.

Each Friends center receives almost 1000 visitors every day and users are delighted with the service levels. The average waiting time is ten minutes. Unlike most government offices, the ambience here is pleasant and the service is courteous and corruption free. The project, likely to receive ISO certification soon. It has been a success largely because of its focus on training and motivates the employees manning these centres.

### **The Philosophy**

The philosophy of Friends is to treat the citizen, who is paying for the services, as a valued customer. The underlying concept is simple to provide an integrated electronic interface where by citizens can remit taxes, pay bills, access commonly required govt. services and obtain the latest information on government programmes. It was decided to focus on front-end computerization, rather than wait the completion of back end computerization of these departments to make these services immediately available. The pilot project was launched in Thiruvanthapuram in June. On the basis of its success, the project was extended to other districts.

### **An Innovative Approach**

At Friends, 20 computerized counters work from 9 A.M. to 7 P.M. on all days of the

week, in an any service any counter mode. A computerized queue management system eliminates queues and customers receive a token and await their turn in a pleasant setting. The services offered are free. Payments can be made in cash or by demand draft. A help desk is on hand for any required assistance. The center works on the principle of 'collect and remit' and 'receive and forward' by interacting with the concerned departments/agencies. Eventually, the computers at the center will be linked with the servers of the departments on a real time basis, once the back-end computerization is completed.

Friends Computers are equipped to handle more than 1000 kinds of bills or documents. The software is robust enough to handle these requirements and new modules can be incorporated when new department / service are added. The indicative list of services offered by Friends counters are water and power utility payments, bill payments, property tax, professional tax, traders license fee, building tax, land tax, revenue recovery, fee for new ration card, one time vehicle tax, motor vehicle tax etc.

A notable feature of the project is that its personnel have been drawn from the participating departments, and no new jobs have been created. There are 50 staff members in each center, and 500 people have thus been inducted. An innovative feature of the project is the employment opportunity it provides to poor women from self-help group, who manage the help desks and provide supplementary services.

### **Dramatic Impact on People**

Friends project has been the change in citizens perception about the government. Moreover, visitors have been impressed by the courteous and corruption free atmosphere. Friends has also demonstrated that ordinary government functionaries and poor women can

deliver high quality services in an atmosphere of excellence. The demonstration value of this project is inestimable. An unforeseen, but key outcome is that Friends has succeeded in providing positive feedback on the benefits of inducting IT in all the participating departments.

### **Orissa Gramsat Pilot Project**

The Gramsat Pilot project initiated by the Government of Orissa is a significant step in good governance. It addresses issues of transparency, accountability, responsiveness, reduction of corruption, training and skills development, peoples participation, project planning and monitoring, disaster warning etc. It also provides live communication between the state capital, districts and blocks.

### **Infrastructure and Functioning**

The Gramsat Pilot Project is a satellite based digital communication network. The segment is supported by INSAT-3B in extended C-band. The ground segment of the network consists of a hub center at Bhubaneswar, VSAT nodes at the district and block head quarters and DRS (Direct Reception System) nodes at gram panchayats. The hub center at Bhubaneswar will consist of a digital earth station providing satellite up link. The vsat hub will have electronics with a network manager and a series of server computers holding data base and software. There will be a proxy server acting to the internet. The center will also have a transmission studio to serve at the teaching and for interactive training and at the transmission end for broadcasting.

At each of these 314 blocks and 30 district headquarters, there will be vsat hardware consisting of vsat electronics with access router. The Gramsat network proposes to provide this connectivity to 314 blocks and 30 district headquarters, the network is capable of supporting

more vsat nodes. It is also proposed to provide direct reception system (DRS) to 800 gram panchayats in 8 KBK districts.

### **Application and Utility**

The project proposes to create a master data base which will include spatial data on land information such as land use, land form, ground water, geology, soils, water body, village and forest boundaries, rail/road network, river and drainage network, canal network, telecommunications and power distribution network and rainfall etc. It shall be applied for interactive training for skill development, technology transfer and dissemination of information. The development information can be broadcast to people, field functionaries at the grass root level. Spatial and non-spatial geographic data base information can be accessed especially relating to natural resources, environment and infrastructure development. Management information system for e-governance can be achieved. Disaster warning, relief and rescue operations and reconstruction can be monitored through this project.

### **End Note**

E-governance is good governance and every government is supposed to provide good governance to its citizens. Citizens want excellence in governance, high quality of governmental services delivered on time and minimum costs. They want governance to be citizen centric. The focus must change from procedure-orientation, to service-orientation from supply driven to demand-driven governance. Governments should try to give up ruling attitude and should endeavor serving attitude towards its owners, the citizens. Originality is good, we all pose to be original, but lack the originality to do something original. In that case, comparative governance studies and following the best and well

done can benefit the governments. Effective use of Information Technology (IT) is increasingly becoming synonymous with good governance. It is all about connectivity. Connectivity brings proximity, which improves the delivery of services by the government. Truly information is power and the informed are powerful. Citizen should have access to information related to various policies, procedures, development schemes, government order and official pronouncements on matters concerning their life and work.

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### COMPUTERIZATION / E- GOVERNANCE INITIATIVE OF PANCHAYATI RAJ DEPARTMENT

Panchayat Samities have emerged as powerful institutions for implementing schemes relating to poverty alleviation programme on Social Security Primary Education, Co-operatives, Welfare of SC/ST, Natural Disaster and MP/MLA LAD fund etc. Computerisation of 314 Blocks and 30 District Rural Development Agencies has been completed to monitor fund flow and project transparency. Steps have been taken to make the system more transparent for both project management as well as financial management by using "Rural Soft" and "Priasoftware" Software. PAMIS is being developed to maintain daily cashbook. A total of 344 computer operators have been engaged in Block and District Rural Development Agencies. This will help the citizens to access the data regarding financial and physical details of projects at the Block level easily. Further the Panchayati Raj Department have already implemented one software named BETAN, for drawing salaries of all the employees of Blocks & D.R.D.As.

## Women's March to Equality

*Braja Paikaray*

A human being is born free. In other words every individual has the right to a life of freedom. Women are neither ethereal damsels nor dolls nor bundles of passions and nerves. They are as much human beings as men are and they are filled with the same urge for freedom. But in the name of social customs and traditions the woman of this country is bound by the chains of slavery forged by men and her freedom is being negated.

The widow has to observe very hard rules in respect of her food, dress and habits. The peasant labour women do not get wages equal to those of men. The common women become victims to the cruelty of their husbands. They are even haunted by punishment here on earth and elsewhere in imaginary hell after their death for breach of duty towards their male counterparts. The old institutions like caste, patriarchal family, religious mores and dominant social value systems still reign supreme with considerable vigour. All these institutions and ideologies are surcharged with the spirit of male dominance. The dowry system, the bride burning, the exploitation of the sex symbol image of women in advertising are the proofs of gross injustice against women.

Manu, the ancient law giver of Indian society ordained that, a woman is not entitled to freedom and independence and that she shall be protected by her father in childhood, by her

husband in her youth and by her male children in old age. Hence the concept that women are inferior to men was universally accepted by people in the ancient period and the doors to self development were closed to them. But at the time of British rule, Mahatma Gandhi, knowing the potential of women, advocated the cause of womens' emancipation and influenced them to participate in the freedom struggle of India. Pandit Jawaharlal Nehru also supported womens' cause and declared that "In order to awaken the people it is the women who have to be awakened, when women are on the move, the village moves, the house-hold moves and the country moves."

After the independence, the crowning achievement of modern Indian History is the recognition and granting of equal status to women through the constitution of free sovereign India. The constitution has proclaimed the equality of man and woman in all domains of life. As declared in the constitution, "The state shall not discriminate against any citizen, on ground only of religion, race, caste, sex, place or any of them." Further in the 16th article it is mentioned that, "there shall be equality of opportunity for all citizens in matters relating to employment or appointment to any office under the state." In pursuance of the constitutional provisions, the Govt. has enacted a series of legislations relating to inheritance, adoption, marriage, divorce and maintenance to

ensure that women should be treated in equality and also to safeguard their rights. The constitution again has elaborated, in Directive Principles of State Policy which relates to a variety of issues like equal pay for equal work, human conditions of work for women, maternity relief etc. Action has been taken like the passing of the Equal Remuneration Act, which gives right for equal pay for equal work.

It is now high time to change our social outlook towards women. Their understanding, co-operation and effective participation are essential for bringing about the desirable social changes. To quote Smt. Indira Gandhi, "If women are neglected, humanity is deprived of half of its energy and creativity." Therefore for the development of community and nation, for reducing the male dominance and in order to minimise the discrimination against women, they should be brought into the mainstream of socio-economic field of the country.

To combat against male dominance and injustice, first of all, women have to become aware of their social positions. Unless they realise that they are in bonds, they cannot aspire for freedom. They should have to get rid of mental slavery and should cultivate a scientific out-look coupled with a spirit of modernism and develop thought, based on rationalism. When once, they begin to question age old beliefs and time worn ideas then solutions will automatically appear on their mental horizon.

In order that, women receive emancipation and equality of status with their male counterpart, it is imperative to impart vocational education to them. In the words of Pandit Jawaharlal Nehru, our first Prime Minister and architect of nation "Freedom depends on economic conditions even more than political and if the woman is not economically free and self earning, she will have

to depend on her husband or someone else and dependants are never free."

Swami Vivekananda, the famous India monk had declared that education is the only panacea for the upliftment of the nation. But we are having an outmoded system of education. This educational system was evolved by the British with a calculated objective of producing men and women suitable for white collar jobs in their administrative hierarchy. But now our thinking is that, our education should be programmed to train men and women not only who seek employment but also those who would create employment. Therefore the education should also develop such skill and attitude for potential employment. Women should be given proper vocational education and general education, consistent with the need of the society. By proper employment, the women will be able to enhance their family income, their standard of living and can thereby able to raise their social positions and respectability.

Though the Government has adopted some progressive legislation, the women have to take a lead in fighting for their rights and for this as the first step, they should have knowledge of their existing legal rights. The different women organisations and the privileged women should strive for developing awareness in the minds of their poor and illeterate sisters through mass media, such as folk dance, cinema, etc. about women's all round contribution to the family welfare so that men treat women with respect, understanding and equality.

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# Orissa Mining Corporation : An Overview

*Hemanta Kumar Nayak*

The Orissa Mining Corporation Limited (OMC) was jointly established by the Union and State Government in 1956. It was the first Public Sector Undertaking in the Mining Sector in India. By 1962, OMC became wholly State owned.

OMC's impressive growth over the decades is hinges on its philosophy and commitment towards quality and value addition. The Corporation's turnover has increased manifold over the years through optimum utilization of resources, cost controlling measures, computerised inventory management, energy audit, asset up-gradation and implementation of quality circles. Progressive mechanization and modernisation of mining operation with due care for the environment have paid rich dividends.

The skilled manpower and scientific business processes have been adding to the Corporation's productivity. Reputed Foreign Firms and global mining giants like Rio Tinto of U.K. and continental Resources of USA have entered into joint ventures with OMC. With Enterprise Resources Planning (ERP) and ISO 9001 : 2000 certification, OMC is on the highway to embrace global challenges and competition.

## **Mines**

OMC has been steadily adding to the Corporation's mineral inventory-today, OMC

possesses a reserve of 400 million tonnes of iron ore, 19 million tonnes of manganese ore, 28 million tonnes of chromite, 220 million tonnes of bauxite, 19 million tonnes of limestone and other minerals, OMC is acting as facilitating agent for development of Bauxite properties.

OMC operates eleven iron ore mines, five chrome ore mines, three manganese mines, and one limestone mine. Closed mines have been reopened and loss making mines have been turned around. Some more iron, manganese, granite and China clay leases are being opened up for mining.

Geologically, two thirds of Orissa is covered with pre-cambrian rocks which have long been known to harbour many metallic and non-metallic minerals including iron, chromium, manganese, bauxite, tin, vanadium, titanium, dolomite, china clay, granite, gemstones and many more. Orissa, truly, is a vast treasure trove of mineral resources. The State has about 98% of chromite, 71% of bauxite, 38% of Graphite, 33% of iron ore, 32% of manganese and 23% of coal resources of India.

South Kaliapani, Kaliapani, Sukrangi and underground mines of Bangur make OMC the leading chromite producer of the country producing high grade lumpy and friable variety. OMC is operating three leases in Kalahandi district for Semi-precious stone (ruby/corundum).

One under sublease and the other on raising and sale contract.

Some impure limestone bands inside Umpavalley lease Koraput district, having no industrial use, are being used to produce slab and tiles as a replacement to marble. OMC also owns few quarry leases for coloured and black varieties of dimension stone in the State.

### **Ore Handling Plant**

Daitari Iron Ore Plant is the flagship of OMC's operations. Fully mechanized with round-the-clock operation, Daitari is poised to produce 3 million tonnes of washed as well as dry screened calibrated iron ore and fines. The second Steel Plant of Orissa (Neelachal Ispat Nigam limited) principally out of sources its raw material's requirement from Daitari.

### **Beneficiation Plant**

Designed to upgrade chrome ores of lower grade to chrome concentrates of saleable grade, the 100% export Oriented Chrome Ore Beneficiation Plant (COBP) at Kaliapani has been substantially contributing to OMC exchequer with 100% capacity utilization. The plant has recorded a production of 1 million tonne (WMT) Chrome concentrate since commissioning in 1995. This has been possible due to addition of a new hydro Cyclone and modification of the Plant.

### **Exports**

OMC continues to maintain Orissa's global connection through export of minerals from Paradeep Port. In recognition of its superb export performance, OMC has bagged the Capexil Export award every year in a row since 1998-99. With its fool proof export network, OMC is in a position to handle direct export of iron ore,

chrome ore and chrome concentrates produced from its chrome Ore Beneficiation Plant.

### **Human Resources**

The employees and workers are the richest wealth of OMC. The Corporation has ensured that its family of about 5600 workers, engineers, geologists and professional managers are happy and committed to multiplying its growth. Be it Bonus/Incentives, unpteen. Welfare measures or liberal medical benefits, the OMC employees enjoy a welfare package comparable to the best in the industry. Well equipped Vocational Training Centres and HRD Cell provide appropriate opportunities to share knowledge and experience through seminars, symposia etc. Professionalism and team work fused with autonomy and responsibility have been the hallmark of HR management.

### **Peripheral Development**

Keeping in tune with its public sector image OMC spends a substantial amount in shape of grants-in-aid to various educational institutions located in the surrounding villages of its mines for construction of Schools, College, Buildings, Laboratory, Library etc.

Besides, various developmental works like digging of tubewells, renovation of ponds construction and repair of village roads and culverts, plantation etc. have also been undertaken by OMC in the peripheral villages. OMC also contributes a substantial amount for development of Sports and Culture as well as for health, immunization and literacy campaigns.

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## Buddhist Remains in Western Orissa

*Dr. Byomakesh Tripathy*

### I

Orissa, the sacred land of Jagannath has the distinction of being the cradle land of all the major religions of India from a very early time of its history and culture. Among the geo-political units of ancient Orissa, Dakshina Kosala occupied a prominent place. During the early historic period, the territory of Dakshina Kosala, roughly comprising the upper Mahanadi valley i.e, western parts of Orissa, namely the erstwhile undivided districts of Sundargarh, Sambalpur, Bolangir and Kalahandi and the neighbouring areas of Chhatisgarh namely Raipur, Bilaspur and its adjoining region played a vital role in shaping the history and culture of Orissa and Central India, which is evident from its vast archaeological remains. The land has always provided a hospitable climate for the peaceful co-existence of various religions and sects. One can see with satisfaction the growth and popularity of Saivism, Vaisnavism, Saktism, Tantricism, Buddhism and Jainism in this area in one time or another which could be possible only because of the high eclectic attitude of the various ruling dynasties of Dakshina Kosala in ancient and medieval period.

### II

Buddhism, the religion propounded by Buddha, is a significant aspect in the history and culture of Dakshina Kosala. There is no dearth of literary and archeological data, corroborating

the popularity of Buddha who seems to have acquainted the people with his teachings. The Buddhist text *Asokavadana* further informs that the youngest brother of Asoka, named Tishya, who happened to be a *Buddha Bhikshu*, went from Kalinga to the neighbouring region of Dakshina Kosala and popularized Buddhism there. The text categorically refers to the flourishing of Buddhism in Dakshina Kosala by stating that it had as many as 10,000 *Stupas*, 5,000 *Sangharama*, and innumerable *Buddha viharas*. About c 7th century AD, the celebrated Chinese pilgrim Hiuen-Tsang said to have visited the country of South Kosala and spoken highly of the popularity of Buddhism in this region. Hieun-Tsang has recorded that the king of South Kosala, who was of Kshetriya race, generally honoured the Law of Buddha. There were about 100 *Sangharamas* and somewhat less than 10,000 priests, who all alike studied the teachings of the Great Vehicle (Mahayana). He further informed that Nagarjuna, the celebrated Mahayana philosopher lived in a cave monastery of South Kosala, at a place called po-lo-mo-lo-ki-li, which is identified by scholars as Parimalgiri in Gandhamandhana hill, on the border of Bargarh and Balangir districts of Orissa, and also spoke of a Buddhist *Stupa* of the time of Asoka near this place. This statement reveals the fact that Buddhism had its stronghold in Dakshina Kosala during 7th century AD. Late Professor N.K.

Sahu, in his magnum opus work '*Buddhism in Orissa*' on the basis of few Tibetan texts, have tried to identify Uddiyana, one of the greatest centers of Tantricism with Orissa. The scholar has tried to identify the famous Tantric places like Sambhala and Lanka as modern Sambalpur and Sonepur in western Orissa and holds the view that king Indrabhuti who was ruling at Sambhala in Uddiyana and his sister Laksmikara, who married the son of king Jalendra of Lankapuri were famous luminaries of Tantric Buddhism. It is told that in 8th century AD, one Buddhist *Acharya* Pitopada, who happened to be Guru of *Sambala Raja* Indrabhuti and originally from *Ratnagiri Vihara*, came to Sonepur area and introduced '*Kalachakrayana*' in the area. After the death of his Guru, Indrabhuti introduced the so-called Vajrayana cult and popularized it in the area. Prof. Sahu informs us that during 700 to 1100 AD, a number of Buddhist saints (84 *Siddhas*) lived and worked for development of Buddhism in the area. Prof. Sahu also believes that Indrabhuti was instrumental in organizing the Mahayana Buddhism into what is called Vajrayana while his sister is believed to be connected with initial development of Sahajayana. Be that as it may, these literary evidences amply provide an idea of the prevalence of Buddhism in Dakshina Kosala in early historical period.

A few references to Buddha and Buddhism can be noticed in the epigraphs of Dakshina Kosala. A stone inscription of the Panduvamsi king Nannaraja of c 5th century AD, states that one Suryaghosa originally built the temple of Sugata (Buddha) at Arang. A Malhar plate of the time of the Panduvamsi king Mahasivagupta Balarjuna (595-655 AD) refers that Kailasaparama of the Taradamsaka-bhoga was granted to the community of venerable (Buddhist) monks from the four quarters residing in a small monastery and established a *Sattra* (feeding house) for the monks residing in the monastery for the upkeep of which a wide rice field was

given. The Koni stone inscription of Prithvideva, the king of Kalachuri dynasty of Ratanpur also refers the three *ratnas* of Buddhism viz., the Buddha, the Dharma and the Sangha. Kasala, the composer of the Prasasti is said to be well known in expounding the multitudes of *Agamas* of Srighana i.e. the Buddha, while the Buddhist doctrines of *Ksana*, *Samanya* and *Pramana* are referred to in the Akaltara stone inscription of Kalachuri king Ratnadeva II and the Raipur museum stone inscription of Prithvideva II. Like that study of works of Dignaga, the celebrated Buddhist logician, can be noticed in the Ratanpur stone inscription of Jajalladeva, the Kalachuri monarch. The Maranjamura copper plate grant of the somavamsi ruler vayati II was issued, while the ruler was residing in a *Vihara* (Buddhist Vihara), situated on the confluence of the river Mahanadi and Tel indicating to the fact that there existed a flourishing Buddhist Vihara in Sonepur during the period.

### III

Buddhist remains are noticed throughout the length and breadth of Dakshina Kosala. The area is replete with Buddhist monasteries, *chaityagrihas*, and sculptures of Mahayana and Tantrayana phase, votive *stupas* and other Buddhist antiquities from c 5th century AD to c 11th century AD. The Buddhist remains have been reported from the sites like Boudh, Ganiapali, Nagraj, Sonepur, Ranipur Jharial, Amatgarh, Harishankar in western Orissa and at Sirpur, Malhar and other places of modern Chhatisgarh State.

Boudh and its adjoining regions have wielded valuable Buddhist antiquities of early medieval period, in the form of votive *stupa*, monasteries and Mahayana-Tantrayana sculptures. In the present town of Boudh, one can notice colossal images of Buddha and few exquisitely carved bronze images of Maitreya, Lokeshvara, Tara and Heruka. The Ramesvara

temple of Boudh premises contain a number of Mahattari Tara. A bronze image of Maitreya seated gracefully in *Lalitasana* holding a bunch of Nageswara flowers in the left hand and the nectar vase in the right hand is an excellent specimen of art. Another image belongs to a variety of Lokeswara. The four-armed deity is shown seated in *Lalitasana* on a lotus throne. The image is highly ornamented. The upper right hand is in *varadamudra* and the lower left is shown placed on the throne. This rare image has been identified as Sankhanatha Lokesvara by Prof. N.K.Sahu. Besides, one colossal image of Buddha, near the palace of Baudh sitting on a stone pillar in a *Vajrayanka* pose in earth touching posture of c 8th century, gives an idea of vajrayana Buddhist icons of this part of the country. It may be worth mentioned here that in adjoining Boudh area, like Syamsundarpur, Pargalpur near Puranakatak, Buddhist antiquities have come to light in form of votive *Stupas* and broken Buddha images in various poses. The colossal icon of Buddha from Syamsunderpur, of 5 feet height in *bhumisparsa mudra* is a fine specimen of Buddhist art. The image of Buddha alongwith an image of Tara at Pargalpur with debris of medieval period, do indicate the fact that during early medieval period, Buddhist establishments flourished in the area. A broken icon found in the premises of Rameswar temple, Baudh appears to be a Muchalindra Buddha.

Sonepur was another center of Mahayana Buddhism as revealed from the stray ruins. Though there was a Vihara in Sonepur, as reflected in the epigraph of Yayati II, there is no trace of it at present. However, a number of Mahayana sculptures are noticed in the premises of late Chauhan monuments of the area and those might have been carried off from the adjoining Buddhist establishment. It is believed that in early period the Buddhist goddess Tara was worshipped as the presiding deity in the Suresvari *pitha* of Sonepur and later on the Chauhans considered

Suresvari as *Rashtradevi* and started worshipping her in a temple. Till today Tara is considered as *Adirupa* of Suresvari and Chhinamasta image of Avalokitesvara is also noticed in the vicinity of the temple. Interestingly, in the *vedha* of Subarnameru temple, a Buddha icon of natural grace and charm in *Bhumisparsa mudra* is noticed as *Parsvadevata*. In the *vedha* of Manikesvar temple, and eight-armed icon of Buddhist god Marichi (Surya) with a chariot run by seven pigs can be identified, besides an icon of goddess Manjusri. The Marichi image has three faces, three eyes and eight arms. A few Buddhist symbols drawn in base-relief are noticed on the Lankesvari Rock near Sonepur and at Paikapali Pabli (situated 6 km. from Sonepur). The name of the neighbouring villages Buddhavar is interesting in this aspect. Besides, villages under the names of Tarapura and Marichipur indirectly speak of its link with Buddhist deities. These antiquities indicate that the place was a popular center of tantric Buddhism in the medieval period and the present name Baudh is most probably reminiscent of the Buddhist heritage of the past.

One of the most important centers of Buddhism in Dakshina Kosala was unearthed at Ganiapali, District Bargarh. The site was excavated under the auspices of P.G.Department of History, Sambalpur University, Orissa in 1978. The excavation has yielded a monastery known as Muchalinda Buddha monastery of Gupta period. The ruins of the said monastery, covering an area of one and half acres are located near the confluence of Ang and Magar rivers at Ganiapali. The excavator Dr. N.K. Sahu believes that the structure of the Buddhist monastery was originally a multi-storied one, made of well-burnt brick. However the foundation plinth in some places have been destroyed due to brick robbing. A *chaitya* hall, traces of the walls of the cells and chambers of the *Bhikshus* and mendicants of the monasteries are also noticed. The excavation has clearly revealed some dormitory like buildings on

the northern side and small chambers and cells clustered together on the southern side. Besides the monasteries, two life-size Buddha images, one the Muchalinda Buddha and the other depicting Buddha in the pose of delivering the first sermon at Sarnath, are found on a small stone *mandapa*. Both the images are magnificent and superb with classical simplicity. Infact, the scene of Naga (Muchalinda) sheltering Buddha is an excellent piece of Buddhist art. However, both the images are now in a dilapidated state. This Muchalinda Buddha is one of the earliest Buddha images in Orissa and a rare of its kind in the region of Eastern India. The other image of the Buddha in the pose of the first sermon at Sarnath has been badly moulded and smothered with cement. Stylistically, these images can be dated to the Gupta Period of c 4th - 5th century AD. Besides, a small stone plaque of reddish chlorite depicting Buddhist images of Hariti and Panchika, of early medieval period is also recovered from this site.

About 15 kms. From Ganiapali, there is another site at Nagraj, where trial trenches were undertaken by Sambalpur University. The remains of a headless Buddha carved on a coarse sandstone along with a few pieces of broken pillars are found lying on a mound covering an area of one acre at Nagraj. Some alignments of burnt brick walls were also noticed during the exploration of the site.

Another Buddhist site, as referred by Hiuen-Tsang is Parimalagiri in Gandhamardan hill. The Chinese traveller is said to have seen the doublestoreyed monasteries of Nagarjuna in this place, which was decorated with some golden Buddhist images. However, unfortunately, this place has not yielded any Buddhist antiquities so far. Some scholars have tried to identify this site with that of Ganiapali, as discussed above, which is located at a distance of only 45 kms. From Parimalagiri.

Some Buddhist remains are also noticed in different parts of western Orissa. In the region of Titlagarh (District Bolangir) Buddha images are found lying scattered in rice fields in Ghudar, Sihini, Udaypur and Kumda. These images are of two types - one showing *bhumisparsa* and other in *Dhyanamudra* pose. In Ranipur Jharial, the famous tantric *pitha* of Orissa, another beautiful image of Buddha in *Bhumisparsa mudra* is placed under a tree. It seems that this images of c 10th century A.D, belonged to the last façade of Buddhist art in western Orissa. A fine image of Muchalinda Buddha is also noticed under a tree near the entrance of Harishankar temple in Bolangir district. Besides, Buddhist remains are said to have been noticed from Amagorha, Paikapali Talpadar, Kansil, Naraghanta hills, Sonapur area, Manikband and other places in western Orissa. The Sambalpur University Museum has also preserved a beautiful icon of dhyani Buddha of 10th century AD, recovered from Bhajalpur.

Another important center of Buddhism in Dakshina Kosala flourished at Sirpur, on the right bank of the Mahanadi at a distance of 60 kms from Raipur in Chhatisgarh. The excavation conducted in 1953-54 at Sirpur revealed the existence of a large number of antiquities in the shape of coins, brick structures, Buddhist monasteries, *chaitya* etc. The site yielded Buddhist remains of the Panduvamsi as well as Kalachuri Periods. As many as five Buddhist monasteries and a number of Buddhist images in stone, bronze and terracota have come to limelight. Among the five Buddhist monasteries, two of them belongs to the Panduvamsi Period of 6th - 7th century AD, and notable for their architecture. These two Buddhist *Vihara* excavated at Sirpur, lie less than a mile south of the Laksmana temple. Largely brick-built with pillars, doorframes, and floor slabs made of stone, these *Viharas* are laid out on the rectangular plan

of a residential house with a central court open to the sky. The courtyard is fringed by pillars meant to support the roof of an enclosing gallery that provided access to cells for the residence of monks. Each *Vihara* is entered through a *mukhamandapa* that faces the main shrine chamber in the back row of cells. This enshrines a colossal image of Buddha seated in *bhumisparsa mudra* and flanked by life size figures of Padmapani and perhaps Vajrapani. A staircases close to the entrance porch suggests that each *Vihara* was a double storied structure to which was added an annex with smaller paved courts, pillared galleries and residential cells.

The main *Vihara* (Anandaprabha Vihara) is 89 x 62 with an annex of 65.5 x 53.5 ft. The excavation in the area has unearthed one Buddhist inscription of Mahasivagupta Balarjuna recording the donation a friar given by Anandaprabha for the Buddhist cause. This *Vihara* was a large Buddhist temple-cum-monastery, with a monastic annex and an enshrined colossal seated image of Buddha, attended by Bodhisattvas. The entrance to the shrine chamber is flanked by a large image of Ganga on the left; the corresponding figure of Yamuna on the right is missing. The figures of Yaksas, and the decorative designs of the *Vihara* strikingly agree with figures on the Lakshmana temple, which was built during c 7th century AD. Another monastery is noticed very close to the Gandheswara temple at Sirpur, where a large size Buddha in *bhumisparsa mudra* and an image of Padmapani are placed gracefully.

A number of Buddhist images are unearthed during the Sirpur excavation and many are kept in the site museum. Among them mention can be made of Buddha in *Bhumisparsa mudra*, Padmapani Avalokiteswara, Buddha in *Simhasana*, Manjusri and others. Besides, Sirpur has also yielded a large hoard of Buddhist bronzes of the eighth-century including exquisite figures of Tara, Padmapani, Vajrapani and

Manjusri, besides those of Buddha. These bronze icons are now preserved in Prince of Wales Museum, Bombay and in the Mahanta Ghasidas Museum, (M.G.Museum) Raipur. Besides, dozens of Buddhist stone images from Sirpur are also preserved in the site museum.

Buddhist images of Panduvamsi Period (6th-9th century) are found at Raipur Museum. In stone, Buddha is represented in various postures. In one example, on Dhyani Buddha is seated below an Asokan tree in *Padmasana* with an inscription attached to it. Paleographically, the image is dated to c 9th century AD. As many as ten Buddha images of stone are noticed. Buddha is depicted in *Bhumisparsa*, *dhyana* as well as *Dharmachakra Pravartana Mudras*. The Dhyani Buddha contains the letter 'Ye Dharma'. Two beautifully artistic Buddha in *Dharmachakra Pravartana Mudra* are found, one flanked by Avalokitesvara and Vajrapani and the other by Avalokitesvara and Tara respectively. As many as three stone images of Avalokitesvara are also found. Invariably the deity holds Kamala in right hand, while the left hand is in *varada*. Two beautiful icons of Manjusri are also noticed. The first image is mutilated, shown seated on Kamala, keeping right hand in *Varada* and holding *Kamandalu* in the left hand, above which a *Pothi* is placed. The other one, seated on Lalitasana, displays *vyakhyana mudra* in one hand and *kamandalu* in the other. These images are well decorated with various ornaments like the pearl strings, *Patra Kundalas*, *Kiritamukuta*, *bhujabandha*, *katisutra* and oval *Prabhamandala*. An image of Jambhala with a small inscription on *Prabhamandala* is also noticed. An image of seated Chunda Devi, recovered from the Pancham *Vihara*, Sirpur, is shown having an *akshamala* in upper right hand and the lower one kept in *Varada Mudra* and in the lower left hand, there is a pot, while the fourth hand is not visible. Just below the pedestal of the image, a devotee can be noticed.

A few bronze images from Sirpur are also preserved in M.G.Museum, Raipur. Among the Buddhist metal images, mention can be made of three images of Buddha, four images of Avalokitesvara, one image of Vajrapani and two images of Manjusri. Among the three bronze images of Buddha, two are in *Bhumisparsa* and the other in *varada mudra*. An inscription reading "*Ye Dharma Hetu Prabhaba*" is found inscribed in one *Bhumisparsa* Buddha image dateable to c 8th - 9th century AD. Even on its pedestal, the name of the sculptor Dronaditya is engraved. The image of Avalokitesvara are all shown in *Lalitasana*, having invariably a *Kamandalu* in one hand, on the top of which can be noticed a bud or a lotus flower. The images reveal some tantric influences. The sculptor of Vajrapani is shown seated on *Lalitasana* on a lotus throne, keeping the right hand in *Varada* resting on the right lap; while the left one holds a *Kamandalu*. In this image, a *Buddha Bijamantra* as well as the name of the sculptor Dronaditya have been engraved. Two images of Manjusri are well carved and artistically designed. Manjusri is shown holding a lotus stalk above which is placed a *Pothi* in both the examples. Besides, a fine bronze image of Tara is also preserved in the museum.

Some clay seals of Sirpur contain the representation of Buddha and Bodhisattva, to c 6th - 7th century AD. In some seals, the Buddhist *mantra* like '*Ye Dharma*' is engraved.

A few Buddhist images of stone of Kalachuri Period (c 9th - 12th century ) are also preserved in Raipur Museum. These images are unearthed from Sirpur. These Buddha images are small in dimensions but sometimes contain an epigraph. In one sculpture. Buddha is shown in *varada mudra*, while in another example, the seated Buddha is flanked by Avalokitesvara and Tara.

M.G. Dikshit believes that Sirpur was a strong centre of Mahayana Buddhism and the

architecture with some Buddhist relics bears a striking resemblance to those from Nalanda. Prof. D.R.Das however, thinks that these centers must have relation with those of Buddhist centers of coastal Orissa like Lalitagiri, Udayagiri and Ratnagiri through well-travelled route. The existence of link can be found from Vajrayana deity. As the evidence stand, Ratnagiri comes to view a few decades after Buddhism first appeared at Sirpur. The identity in visual representation of images shows that the Gupta plastic tradition travelled from Magadh to Orissa via Dakshina Kosala. The flowing grace, sensitive modelling liveliness of linear freedom of Lalitgiri and Ratnagiri sculptures can be seen in Sirpur sculptures. In this aspect, the Buddhist center of Sirpur would have played an important role in flourishing of Gupta sculptural art in coastal Orissa.

Excavation at Sirpur have unearthed a Chinese coin which belongs to the period of Kai-Yun (713-714 AD) of Tang dynasty.

Malhar, the ancient city of Mallala Pattana is situated at a distance of 14 kms from Masturi in Bilaspur district of Chhatisgarh. Excavations were conducted by the Department of Ancient Indian History, Culture and Archaeology, University of Sagar, which throws light on the history of Mallala Pattana from the Chalcolithic period to the Kalachuri rule. The excavation has unearthed the remains of Buddhist establishment like *Chaitya*, *Vihara* and *Stupas* along with a number of Buddhist sculptures which are at present preserved in Hari Singh Gour Museum, Sagar and also in the site museum of Archaeological Survey of India. In the site museum, images of Buddha, Avalokitesvara, Manjusri, Hevajra can be identified. The discovery of the icon of Hevajra shows that the shrines belonged to Vajrayana sect. Images of Buddha in *Bhumisparsa mudra* and of the Bodhisattvas nimbate and seated in *Padmasana* found from Jaitpur are two prized pieces of



Buddhist School of Art at Malhar. Stylistically both the images may be given a time period of c 8th - 9th century AD. The two-seated images of Avalokiteswara holding lotuses suggest a later date of c 10th -11th century AD. Recently an Archaeological Museum is established at Bilaspur, which also contains few Buddhist images of the area.

Images of Buddha are also preserved in various pre-Kalachuri and Kalachuri temples of the area. One broken image of Buddha in *bhumisparsa mudra* is preserved near the Derani Jethani temple near village Tala, Bilaspur district, datable to post-Gupta Period. Another image of Buddha in *bhumisparsa mudra* is noticed near the Gandai temple at Gandhevara, on the bank of the Mahanadi at Sirpur, with an inscription on the pedestal. Two images of mutilated Buddha are found set against Kirwai-Dhobini temple in Raipur district, datable to c 7th-8th century AD. Besides, two beautiful *dhyana-mudra* Buddha images of Kalachuri period are found on the walls of Siva temple, Deo Balod, Raipur and on the *Jangha* portion of the Narayana temple at Narayanapura, Bilaspur. The occurrence of independent Buddha images on the walls of *Saiva* and *Vaisnava* temples amply testifies to the popularity of Buddhism and the religious tolerance that was prevailing in Dakshina Kosala in early medieval period. In the Dasavatara panel found in the upper Mahanadi valley, Buddha is also depicted as the ninth incarnation of Lord Visnu.

In retrospect, a study of Buddhist remains in Dakshina Kosala reveals that Buddhist establishments flourished in this area, from Gupta period onwards. The Buddhist art activities continued up to circa 11th century AD. This area was famous for Mahayana-Varayana cult, as testified from the Buddhist images found at Boudh, Sirpur, Malhar and other sites. The bronze images

of South Kosala i.e. Western Orissa betray the classical art tradition.

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## Jaina Sculptures in Orissa State Museum

Jayanti Rath



Jainism, the ancient Indian religion has got a rich and vast connectivity with Orissa. It has exerted tremendous influence over this land for centuries together as has been reflected in art, literature and various concepts, ethical codes, rituals and philosophy. Even Lord Jagannath, the supreme deity is conceived as a Jina by some ardent admirers of Jaina Tradition.

Jainism was surely very much established in Kalinga (the ancient Orissa) by the age of the Nandas or 4th century B.C.<sup>1</sup> According to the Hathigumpha Inscription of Kharavela, (dated to 2nd half of 1st century B.C.)<sup>2</sup> he brought back from Magadha to Kalinga the image of Kalinga Jina, which had been taken away by a Nanda king.<sup>3</sup>

Kharavela was a devout Jaina and a patron of Jainism.<sup>4</sup> The above reference to the representation of Kalinga Jina which must have been an object of worship, may also indicate the popularity of Jainism in Kalinga.

Architecturally viewed, the sculptures depicted in the caves of Khandagiri and Udayagiri Hills, constructed by Emperor Kharavela mainly for the *Jaina Arhats* (saints) are certainly the superb Jaina monuments that Orissa still possesses with pride. The artistic endeavour did not end with Kharavela. It continued upto 12th - 13th century A.D. with a gap of few hundred

years. It sounds strange, but it is true that these rock-cut cave art portrays of the figures about twenty *Tirthankaras*. It is quite a rare phenomenon in the history of *Jaina Art*. Apart from this site, a large number of Jaina images have been identified in different parts of Orissa, i.e. Puri, Keonjhar, Bhadrak, Balangir, Nawpara and Koraput districts. etc.

The *Tirthankaras* occupy the most exalted position in Jaina worship. Tirthankara image has become the rucuse point for visualising the invocatory forms. The Orissa State Museum displays fourteen Tirthankara images. They include six Risabhanath images, two Mahavira images, two Parsvanath images, and the image of Ajitanath, Santinath, Chandranath and Padmaprabha (each numbering one).

### Risabhanath

The most notable image of Risabhanath is the one that has been discovered from Podasingdi of Keonjhar district. Here the Adi-Jina i.e. the first *Tirthankara* is seen to be in meditation pose (*Yogasana*). The image is carved out of a solid piece of chlorite stone and measures 2'.6" x 1'.11" in size. On the pedestal are two lotus flowers on either side of a standing bull worshipped by devotees with folded hands. The image has an oval halo (*Prabhamandala*) with two flying *gandharvas* on either side with garlands in their

hands. The unique feature of this image is that it has an inscription engraved on the right side of it. Written in *Kutila* script of 8th century A.D, it consists of 15 letters which read *Risabha Bhattaraka*. With the passage of time these letters have become invisible. The stone on which the figure is composed provides an impression of transparent upper garments. Hairs of the *Tirthankaras* are generally fashioned into the rolls of *Jata*. But in this case they are designed in curled knots. The composition of curled hair with long ears and half-closed eyes presents a beautiful meditative facial expression.

Another image of Risabhanath has been collected from the same place. Here the Adi-Jina stands in *kayatsarga* posture on a double petalled lotus pedestal supported by spirited lions. Representation of *chauri*-bearers, bull, *kevala* tree, trilinear umbrella, flying *apsaras* are carved in the usual place. So far the period of the image is concerned, it is presumed to be made in 9th century A.D.

In the image acquired from Keonjhar, Risabhanath has seated on a double petalled lotus pedestal in *yogasana* posture. His pedestal contains bull, the conventional emblem and devotees in *Anjalimudra* amidst heap of offerings. Among other attributes one can safely recognize the *chauri*-bearers, trilinear umbrella, *kevala* tree, plain elliptical halo, *divya-vadya*, flying *apsaras* with garlands. The hairs of the *Tirthankara* are arranged in *Jata* of which few strands fall on the shoulders. The image represents the Bhanja Art of the 10th-11th century A.D.

An image of Risabhanath, standing in *kayatsarga* pose has been recovered from Brahmesvarapatna, near by Bhubaneswar. Alongwith all other characteristic features it contains eight planets. It has been assigned to 11th century A.D. Superbly built this image has got a

beautiful contour with a very lucid and smiling face.

Another image of Risabhanath has been collected from Khajuriapara village of Puri district. The distinguishing feature of this image is its profuse sculptural ornamentation around the head instead of the traditional halo. The image stands in *kayotsarga* posture, alongwith his cognizance bull and other marks and eight planets. The date of this image has been assigned to 10th century A.D.

The image of Adi Jina brought from Charampa of the present Bhadrak district draws spontaneous attention of the visitors. It is depicted as standing in *kayotsarga* pose on a lotus pedestal flanked by Bharata and Bahubali, the two *chauri* - bearers. The mark of cognizance, the bull is found below the pedestal. On the two vertical sides of the image eight planets have been carved in sitting posture with their conventional attributes in hands. This fine image measures about 5'2" x 2'3".

Besides this image, three beautiful Jaina images have been brought to Orissa State Museum for display from this place. They include the images of Ajitanath, Santinath and Mahavir.

### Ajitanath

Ajitanath, the second *Tirthankara* of Jaina Pantheon has been carved in the *Yogasana* or *Padmasana* posture. He sits on a lotus pedestal. It measures 3'8" x 2'7" in size. Sitting image of Ajitanath is rarely found in other parts of country. Ajitanath is usually found in *Khadgasana* or *Kayotsarga* pose.

The origin of his symbolism and his name can be traced to the Jaina texts. The Jina's mother saw an elephant in several dreams. An elephant in India is always connected with kingly power. After his birth all his father's enemies were conquered (*Jita*), hence his name 'the invincible

one'. The *Svetambara* author Hemachandra interprets his name as not conquered by excrement of the bowels. The *Digambara* authoritative book explains the word '*Ajita*' as not conquered by sin or by all heretics.<sup>7</sup> Thus, all the facts and ideas primarily connected with the life and teachings of this Jina converge to one point - 'invincibility' 'conquest'.<sup>8</sup>

### Santinath

The Santinath image of this group is also carved on a lotus pedestal displaying *Yogamudra*. The pedestal is supported by lions. His emblem, the deer is carved below the pedestal along with a number of kneeling devotees and heap of offerings. Born in Hastinapura, Santinath, the sixteenth *Tirthankara* occupies a very high place in the Jaina history of pontiffs. He not only revived Jainism which was in tottering condition, but also consolidated the faith so that it never disappeared again. Another extra-ordinary fact about him is that he was the first *Tirthankara* to become a *Chakravarti* or the Emperor of the whole of India.<sup>9</sup> The last *Tirthankara* image of this group is of Mahavira. He stands in *Kayotsarga* pose on a lotus throne supported by spirited lions.

All these sculptures are provided with *kevala* tree, chauri-bearers, elliptical halo, flying *apsaras* holding garlands, trilinear umbrella, lion throne and heavenly music. From iconographic and artistic consideration these images can be safely placed in the 8th-9th centuries.<sup>10</sup> A peculiar feature of these four Jaina images brought from Charampa is that a number of out marks are found on their body. These cut marks are certainly deviation from the other school of Jaina art, if these are purposefully done by the artist.<sup>11</sup> The images remind the believer of the faith of the condition through which a *Tirthankara* passed to attain salvation and that affords him a strong incentive to follow the noble examples of *Tirthankaras* in life. All these sculptures are carved in chlorite stone.

Two remarkable images of Parsvanath, one of the greatest *Tirthankaras* of Jainism have been displayed in Orissa State Museum. In chronological order he happens to be the twenty-third *Tirthankara*.

One of them, has been brought from the village Vaidakhia of Keonjhar district. It is a unique image surrounded by four other *Tirthankaras*. each having two attendants in their either sides. All the images including the central one have been carved in *Kayotsarga* pose, while the central stele has the snake canopy over its head - the other four images have only *kevala* tree over them. The upper two images stands on lotus pedestal. The two images on either side of the main image stand on the same level. The central image is bigger than the four other standing images. This image shows the keen sense of proportion of the artist. The attendants and dancing *apsaras* of the four other *Tirthankaras* have been carved in miniature forms. The sculptor has also kept balance while carving the body of the *Tirthankaras*, the size of the bodies of the other *Tirthankaras* being less than half of the main image. Under the pedestal, figures of devotees singing with musical instruments in their hands, some *Jaina* monks and the lotus flower, the lion have been flawlessly depicted.

According to Dr. R.P. Mohapatra, the famous archaeologist, this image belongs to the 11th century.<sup>12</sup>

The find spot of the other Parsvanath image is Sisupalgarh. From the artistic point of view it has been assigned to 9th century A.D. Besides the snake canopy, the entire image has been attached with snake's body, which is a remarkable feature of this image.

An image of Chandraprabha or Chandranath, the eighth *Tirthankara* has been collected from Jeypur of Koraput district. The

image is carved in a *Padmasana* pose. Considering the artistic finish and the iconographic peculiarities, the imaged can be placed in 8th century A.D. The image is flanked by two dancing *apsaras*. It is a peculiar thing to be observed that there are two standing elephants above the head of both the *apsaras*.

A four armed female figure sitting in *Padmasana* is seen under the pedestal. She is flanked by two lions on either side. She is most probably Bhrukuti (Jvalamalini), the *Sasanadevi* associated Chandraprabha. She is one among the five most popular *Yaksinis*, the other four being Chakresvari, Ambika, Padmavati and Siddhayika.

The display of *Jaina* Pantheon includes Padmaprabha, the 6th *Tirthankara*. The find-spot of this image is not known. Its style says that it belongs to twelfth century A.D. It is carved in *Kayotsarga* posture, flanked by two attendants. The cognizance of the *Tirthankara* is red lotus. He is seen standing over a lotus pedestal, and below the pedestal there is a lotus too. The *prabhamandala* has been carved with floral designs.

An image of Mahavira, the twenty-fourth *Tirthankara*, belonging to the tenth century A.D. has also been displayed. The image is carved in sitting *yogasana mudra* flanked by two attendants. Like other images, it shows *apsaras* with garlands and devotees offering their worship. But a noticeable feature of this image is that it does not have a *kevala* tree. Here, again, the *prabhamandala* is not circular. Florally designed it is three petalled. Below the pedestal, there is a beautiful flower-vase alongwith the emblem-lion.

According to Jainism, a soul completely released from the bondage is a soul in state of *siddha* hood or godhood. In this state soul is free and it enjoys four infinities : Infinite knowledge,

infinite perception, infinite power and infinite bliss. The released soul is a conqueror - a *Jaina*.

A released soul possesses all the attributes of god. If we interpret god as the manifestation of the highest values, highest virtues and highest morals then such released souls are *Jaina* gods.<sup>13</sup>

The images of seven *Tirthankaras* starting from Risabhanath to Mahavira, displayed in Orissa State Museum look absolutely independent of all emotions and passions. Needless to say that these images epitomize self-realization and state of supreme bliss.

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## Barabati Fort : The Mute Witness to Orissan Glory

*Dr. C. B. Patel*

Barabati fort is situated at Lat.20° 19'N and Long.85° 52'E in between the two rivers Mahanadi and Kathajuri at a distance of 25kms from the state capital Bhubaneswar, Traditional history attributes the founding of this city to Somavansi king Nrupakesari. The Madalapanji indicates that the fort was built in the year 989 A.D. However many scholars like late Prof. P.Mukharjee believes that Ganga king Anangabhimadeva III founded the city of Cuttack. He ruled from 1211 to 1238 A.D. According to a local legend, when the king was going to worship Visvesvara Siva at Barabati village, he witnessed an unusual incident of a heron killing a hawk. He was impressed with this incident and the strategic location of the site and decided to shift his capital from Chudangagada (Chaudwar, Cuttack) to Barabati village and named the city as Abhinava Varanasi Cuttack. His Nagari copper plate grant was issued from this place in the year 1230 A.D. Recent discovery of various types of pottery in and around Cuttack points to an anterior existence of Cuttack and its antiquity. During the rule of the Bhaumakaras, the place was known to have existed. Various sculptural and archaeological remains explored in its vicinity testify to this contention. The Bhauma Kingdom was occupied by the Somavansis later on to consolidate their Kingdom in the

Eastern Orissa, Nrupakesari was known to have built a second capital city at Cuttack. Systematic exploration, excavation and research will definitely throw more light about the antiquity of this ancient township.

The fort is square in plan. It spreads over an area of 102 acres and surrounded on all sides with stone paved moat of 10 Mtr. wide in northern and western sides and 20 Mtr. wide in the eastern and southern sides. The entire fort wall except the entrance is missing. Since, 1915, in view of its national importance, the place has been declared as a protected site by Archaeological Survey of India.

At the centre of the fort we notice a high mound with a tank in the western side. It spreads over 15/16 acres of area. Now the site is extensively encroached. To the east of the mound, there is the Shahi mosque while in the west of the tank lies the *mazar* of Hazrat Ali Bukhari. In 1989 excavations were carried out by Archaeological Survey of India to ascertain the cultural horizon of the historic fort and the work is still in progress.

The first Muslim invasion of Barabati by Ghiyasuddin Iwaz Shah, Sultan of Bengal took place during the reign of Anangabhimadeva III. The Muslim forces occupied the frontier outpost of Lakhnor in Birbhumi. After that a

large troop under the command of his brother-in-law Paramardideva attacked Lakhnaor, capital of Muslim Bengal. The Orissan army secured a great success with the sacrifice of Paramardideva who fell in the battle field. His wife Chandrika Devi, in his memory built the Anantavasudeva temple at Bhubaneswar.

In the 14th century A.D. Ilyas Shah of Bengal invaded North Orissa. Later on Sultan Firuz Shah Tughluq invaded Orissa and occupied Barabati fort in 1361. He went back to Delhi with rich booty. Narasingha Deva IV was known to have issued two copper plates from this Varanasi Cuttack. In 1421, during the rule of Bhanudeva IV Sultan Hushang Ghorji of Malwa visited Cuttack in the guise of a merchant and overwhelmed the King. King Kapilendradeva overran the King and established the Surjyavamsi rule. His son Purusottamadeva brought the image of Lord Gopal from Andhra and enshrined that in Barabati fort. The great saint Chaitanyadeva was known to have visited the temple of Lord Gopal. Prataprudradeva has described the Barabati fort as *Bhukantakatakam Katakanagarim* i.e. girdle of the earth goddess.

In 1568 Kalapahad attacked the fort which became the undisputed seat of the Afgans thereafter. Daud, son of Suleman Karani was defeated by Muni Khan, the general of Akbar in 1575. Doud Karani surrendered to Mughal forces in this glorious Barabati fort.

To suppress Afghan uprisings, Akbar sent Mansingh in 1592. He stayed here and suppressed the Afghan uprisings. In the *Ain-i-Akbari*, we find graphic account of the fort which states that the city of Cuttack has a strong fort, which is the residence of the governor and contains some fine buildings. It

is believed that Mukunda Deva built a nine-storeyed building here. The fort has witnessed many celebrities. Raja Kalyanmal, son of Raja Todarmal was governor here. Prince Khuram, the rebel son of Jahangir visited the fort. In 1633 English merchants Bruton and Cartwright met prince Suja's Deputy governor Aga Mohammed Zamere. When Lalbag was constructed, the Muslim governors left Barabati and the fort remained neglected since then. It was finally demolished by the last quarter of the 19th century.

The excavations of Archaeological Survey of India at Barabati have yielded several antiquities, which include Seven iron arrow heads, one iron cannon ball, about four hundred broken architectural pieces, sculptures of erotic couple, musicians, female figures, heads of figures with ornaments and hair styles, images of Ganesha and Surya. A silver coin of Shahjahan (1627-1658) minted at Surat factory has also been found. Chinese procelain of medieval period, lead bullets and pieces of glass goblets have been recovered in course of the excavation.

Of the structures, the excavated ruins of a temple deserve special mention. It is believed that it was the temple of Jagannath then called Purusottama to have been built by Anangabhima Deva III (1211-1238) the builder of the fort. This temple was known to have been destroyed by Firoz Tughlaq during his invasion in 1361. The excavations have also yielded the grand pillars of the palace. Recently, the skeleton of a royal elephant has been excavated at the site.

The oldest structure discovered in course of the excavation in the Barabati fort is the portion of a temple with 3 mouldings at the base level on the foundation of laterite blocks. The

temple stood on sandy soil deposit where no habitational deposits were traced. However the excavator of the site Dr. Sinha has reported about the find of some pottery specimens datable to 13th century A.D. Nowhere structure, earlier than the temple was found which indicates that the temple structure within the Barabati fort was the oldest one. The sculptural fragments recovered from the site has close semblance with the proto type of fabulous Konark sculptures. The excavation further indicated that the structure was fully destroyed as the building in question was covered with debris and some pillar ruins of later period. A small lime plastered deposit noticed in the upper layer may be the part of a later date floor. The inscription of Anangabhimha Deva referring to a temple of Jagannath which was also known as Purusottama, speaks that it is a Ganga monument. This contention is strengthened by the reference in *Tarikh-i-Firoz* Shah by Afif in which the demolition of the Jagannath temple during Firoz Shah's occupation of Cuttack took place and he was known to have taken the idol of Purusottama to Delhi. All these evidences indicate that Anangabhimha Deva III built this temple during 1211-1238 A.D.

The pillar ruins found in the eastern corridor resting above the temple and laterite floor indicate that the palace was built when the temple was destroyed. A time span of 100-200 years might have taken place between the destruction of the temple and construction of the pillared palace complex. Thirty two pillars have been noticed during excavation belonging to two building phases. There is no change in the plan of the palace building during the second phase. Some evidences of repair works have been noticed. This construction was attributed

to Raja Mukunda Deva, who ruled from 1560 to 1568 A.D.

Abul Fazal in *Ain-i-Akbari* refers to nine *Ashiana* palaces built by Mukunda Deva who ruled for eight years only and therefore he seems to have not shifted and expanded earlier palace complex. It was also known that governor of Sultan Karani of Bengal occupied Cuttack in 1569. As the palace was deserted, it started crumbling and ultimately reduced into a heap of ruins. The whole area of the fort thus became a big mound of sand and debris with flat top and over this in the south-west corner a platform was made with khondolite blocks probably brought from the ruined temple. We find evidence of stone pavement and lime plastered floor around the structure and from the deposit over the pavement in the eastern side, wherefrom a coin of Sahajahan has been recovered.

In 1803 the Britishers occupied Cuttack when extensive stone robbing took place to build the Cantonment Road. William Brutton came to Cuttack in 1633 during the rule of the Mughals. He has narrated about a big square slope and bastion of stone which has been seen by Thomas Motte in 1786 and attested by Sterling in 1880 A.D.

The Archaeological Survey of India has partially excavated the site and it is hoped that on completion of excavations, a complete history of Barabati fort will be known which would throw further light on the glorious Barabati fort of Orissa.

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## EDITORIAL



*May is the month to remember the great saint-poet Kavi Jayadeva, who by taking birth in Orissa made this land proud for his immortal contribution 'Gita Govinda' to the entire Bharatavarsha. Inspired by the spirit of Jagannath Cult, immortal works of saint-poet Jayadev and the rare features of Mahima cult, propagated by the great tribal poet Bhima Bhoi, the state is vigorously pursuing to ensure the betterment of living standards of its people through implementation of various developmental schemes. In its effort to make available self-employment opportunities for unemployed youths the state government have gone ahead to evolve an appropriate mechanism. Modalities are being drawn up for target - specific approaches.*

*Orissa Review has tried to capture all these impressions in its present issue with a view to brief the readers with useful tips.*

*Govind Sekhar Panda*